CITY OF BIGGS

BIGGS WATER TANK PROJECT

CEQA-PLUS INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Prepared for:

CITY OF BIGGS
465 C STREET
BIGGS, CA 95948

Prepared by:

Michael Baker
INTERNATIONAL

2729 PROSPECT PARK DRIVE, SUITE 220
RANCHO CORDOVA, CA 95670

OCTOBER 2018

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5.0 COMPLIANCE WITH FEDERAL REGULATIONS

APPENDICES

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1.0
INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document contains an initial study, with supporting environmental studies, which concludes that a mitigated negative declaration is the appropriate California Environmental Quality Act (CEQA) document for the Biggs Water Tank Project (proposed project). This Mitigated Negative Declaration has been prepared in accordance with Public Resources Code Section 21000 et seq., and the CEQA Guidelines, California Code of Regulations Section 15000 et seq.

An initial study is conducted by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with CEQA Guidelines Section 15063, an environmental impact report (EIR) must be prepared if an initial study indicates that the proposed project under review may have a potentially significant impact on the environment that cannot be initially avoided or mitigated to a level that is less than significant. A negative declaration may be prepared if the lead agency also prepares a written statement describing the reasons why the proposed project would not have a significant effect on the environment and therefore why it does not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a negative declaration shall be prepared for a project subject to CEQA when either:

a) The initial study shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or

b) The initial study identifies potentially significant effects, but:

   (1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and

   (2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

If revisions are adopted in the proposed project in accordance with CEQA Guidelines Section 15070(b), including the adoption of the mitigation measures included in this document, a mitigated negative declaration can be prepared.

Additionally, the proposed project may be partially funded with a loan from the federal Clean Water State Revolving Fund (SRF) program established by the federal Water Pollution Control Act (Clean Water Act or CWA), as amended in 1987. This program is administered nationally by the US Environmental Protection Agency (EPA); in certain instances, program administration has been delegated to the states. In California, administration of the SRF program has been delegated to the State Water Resources Control Board (SWRCB). In turn, the SWRCB requires that all projects being considered under the SRF program comply with CEQA and certain federal environmental protection laws. Collectively, the SWRCB refers to these requirements as "CEQA-Plus." Therefore, this IS/MND has been prepared in accordance with the Environmental Review Process Guidelines for State Revolving Fund Loan Applicants and is expanded beyond the typical content requirements of an initial study to include additional CEQA-Plus information. The other CEQA-Plus requirements are fulfilled in the initial study analysis and associated appendices (see Section 5.0, Compliance with Federal Regulations, for a complete list of federal laws addressed in compliance with SRF Program requirements). The SWRCB, as a responsible agency for the project, will consider this CEQA document prior to any SRF loan authorization.

1.2 LEAD AGENCY

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. In accordance with CEQA Guidelines Section 15051(b)(1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." Based on the criteria above, the City of Biggs (City) is the lead agency for the proposed Biggs Water Tank Project.

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed project. This document is divided into the following sections:

1.0 Introduction – This section provides an introduction and describes the purpose and organization of the document.

2.0 Project Information – This section provides general information regarding the project, including the project title, lead agency and address, contact person, brief description of the project location, General Plan land use designation, zoning district, identification of surrounding land uses, and identification of other public agencies whose review, approval, and/or permits may be required. Also listed in this section is a checklist of the environmental factors that are potentially affected by the project.

3.0 Project Description – This section provides a detailed description of the proposed project.

4.0 Environmental Checklist – This section describes the environmental setting and overview for each of the environmental subject areas and provides an analysis of each checklist item in the Initial Study. A list of references that identifies documents and other sources consulted during the preparation of this Initial Study is included at the end of the checklist.

5.0 Compliance with Federal Regulations – Because of the federal nexus with the EPA, projects seeking funding through the SRF program are subject to federal laws and regulations (federal "cross-cutters"). This section summarizes these federal environmental laws and regulations, identifies whether there are aspects of the project that would be subject to the federal laws, and includes an impact evaluation, as necessary. In addition, an alternatives analysis in fulfillment of SRF requirements is included as an appendix to this document. These alternatives are provided to meet the CEQA-Plus requirements and are not required for compliance with CEQA.

1.4 EVALUATION OF ENVIRONMENTAL IMPACTS

Section 4.0, Environmental Checklist, is the analysis portion of this Initial Study. The section evaluates the potential environmental impacts of the project. There are 19 environmental issue subsections in Section 4.0, including CEQA Mandatory Findings of Significance. The environmental issue subsections, numbered 1 through 19, consist of the following:

1. Aesthetics
2. Agriculture and Forestry Resources
3. Air Quality
4. Biological Resources
5. Cultural Resources
6. Geology and Soils
7. Greenhouse Gases
8. Hazards and Hazardous Materials
9. Hydrology and Water Quality
10. Land Use and Planning
11. Mineral Resources
12. Noise
13. Population and Housing
14. Public Services
15. Recreation
16. Transportation/Traffic
17. Tribal Cultural Resources
18. Utilities and Service Systems
19. Mandatory Findings of Significance

The **Discussion of Impacts** addresses each environmental issue checklist question in detail. The level of significance for each topic is determined by considering the predicted magnitude of the impact. Four levels of impact significance are evaluated in this Initial Study:

No Impact: No project-related impact on the environment would occur with project development.

Less Than Significant Impact: The impact would not result in a substantial adverse change in the environment. This impact level does not require mitigation measures.

Less Than Significant Impact with Mitigation Incorporated: An impact that may have a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (CEQA Guidelines Section 15382). However, the incorporation of mitigation measures that are specified after analysis would reduce the project-related impact to a less than significant level.

Potentially Significant Impact: An impact that is "potentially significant" but for which mitigation measures cannot be immediately suggested or the effectiveness of potential mitigation measures cannot be determined with certainty, because more in-depth analysis of the issue and potential impact is needed. In such cases, an EIR is required.

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2.0
PROJECT INFORMATION

Project Title:	Biggs Water Tank Project
Lead Agency Name and Address:	City of Biggs 465 C Street Biggs, CA 95917
Contact Person and Phone Number:	Bob Summerville, City Planner (530) 868-6008
Project Location:	2837 West Biggs Gridley Road (portion of Assessor's Parcel Number [APN] 022-140-009)
Project Sponsor's Name and Address:	City of Biggs 465 C Street Biggs, CA 95917
General Plan Designation:	Agriculture Industrial (AI)
Zoning:	Public/Quasi-Public (P-Q)
Summary of Project: (see also Section 3.0, Project Description)	The project is the installation of a 1.5-million-gallon water storage tank, a pump/control building, an 8-inch water main extension to connect the new well and tank to the City water system, and a new water well that would replace an existing off-site well.
Surrounding Land Uses and Setting:	The project site is surrounded by agricultural land on the west and south, with West Biggs Gridley Road on the north. The City of Biggs Department of Public Works building and wastewater treatment plant are north of the project site, across the Main Drainage Canal. A single-family residential building is east of the project site, across West Biggs Gridley Road.

Other agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)

- Butte County encroachment permit for West Biggs Gridley Road
- Butte County Air Quality Management District Authority to Construct and Permit to Operate for emergency backup generator
- Butte County Environmental Health (exploratory well drilling, new production well construction, decommissioning of the existing C Street Well)
- State Water Resources Control Board (Notice of Intent for Construction General Permit coverage)
- State Water Resources Control Board, Division of Drinking Water (permit for modification of municipal water system)
- Reclamation District 833 (Main Drainage Canal encroachment permit)

2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "potentially significant impact" that can be reduced to a less than significant level through mitigation measures as indicated by the checklist in Section 4.0.

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

2.2 CEQA DETERMINATION

On the basis of this initial evaluation:

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

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

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

☐ I find that the proposed project MAY have a significant effect(s) 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, if the effect is a "potentially significant impact" or "less than significant impact after mitigation." An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project.

Bob Summerville, City Planner

10/30/18
Date

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3.0
PROJECT DESCRIPTION

3.1 PROJECT LOCATION

Biggs is located in southwestern Butte County, California, approximately 25 miles south of Chico and approximately 25 miles north of Yuba City (see **Figure 3.0-1, Regional Location**). State Route 99 is approximately 1 mile east of the city. Biggs is in the northern Sacramento Valley, which is dominated by agricultural uses, primarily rice fields and fruit/nut orchards.

The project site consists of a portion of approximately 5 acres along the eastern edge of a rectangular-shaped 40-acre parcel (APN 022-140-009) within the city limits at 2837 West Biggs Gridley Road (see **Figure 3.0-2, Project Site**). It also includes the bridge crossing at the Main Drainage Canal.

3.2 EXISTING ENVIRONMENTAL CONDITIONS

The project site is partially developed with hangars and buildings associated with a former airstrip. There are remnants of a building foundation on the southern part of the site. Undeveloped parts of the site are dominated by ruderal vegetation. Within the site, a chain-link fence separates the northern part of the site (with the hangars and buildings) from the southern part, which contains remnants of a building foundation. The Main Drainage Canal (a Reclamation District 833 facility) flows east to west through the northern part of the site. West Biggs Gridley Road is a two-lane local roadway that provides access to and from downtown Biggs at B Street, continuing several miles south. The bridge crosses the Main Drainage Canal.

The main portion of the site where the proposed storage tank and related facilities would be constructed is readily visible to the public traveling on West Biggs Gridley Road, but ornamental landscaping partially obscures views (Photo 1 and Photo 2). The Main Drainage Canal is an earth-lined feature under the bridge on West Biggs Gridley Road and contains perennial vegetation along the banks, except where there are concrete abutments for the bridge and some rock-lined sections containing culverts (Photo 3 and Photo 4).

Surrounding land uses are fallow agricultural fields to the south and west, and across West Biggs Gridley Road to the east. The City Department of Public Works building and wastewater treatment plant (WWTP) are located north of the Main Drainage Canal. The agricultural fields adjoining the site on the south and west are part of a planned WWTP enhancement project consisting of improvements to the City's WWTP treated effluent disposal process and changes in associated discharge practices. A single-family residence is located across West Biggs Gridley Road to the east. The residential portion of Biggs begins one-quarter mile to the north and northeast beyond agriculture-related industries.

3.3 PROJECT BACKGROUND

The City of Biggs operates its own water system for household and commercial uses and for fire protection. The existing water system consists of three groundwater wells, a network of water mains and pipes, a 40,000-gallon elevated water tank, and fire hydrants. The City has been evaluating its system and has determined improvements are needed to ensure a reliable domestic water supply under normal and emergency conditions. The City's engineering consultant for the project (Bennett Engineering) has prepared an assessment of existing conditions and provided recommendations for improvements. The following summarizes information about the system and the technical basis for the recommended improvements based on information developed by Bennett Engineering (2016).

WATER SUPPLY

Water for the City's domestic water supply is currently drawn from two wells: the Park Well (Well 1 – Bertha Well) and the 2nd Street Well (Well 3 – Henry Well). Due to water quality issues, the C Street Well (Well 2 – Willard Well) has been mostly idle since it was installed in 2005 and has served as only a standby source of water. The C Street Well is screened in three places, which allows water to flow into the well from three different water-bearing zones. Water samples taken from the C Street Well in late 2015 indicated levels of manganese and arsenic that exceed US Environmental Protection Agency (EPA) Secondary Maximum Contaminant Levels (MCL) for manganese and Primary MCL for arsenic. The City has been evaluating options for improving the quality of water delivered from the C Street Well, which could include wellhead treatment or using a different screening configuration. However, these modifications would not provide a substantial improvement and/or would not be economically feasible. Therefore, it has been recommended that the well be replaced at a new location with adequate source water quality. An exploratory well will be drilled at the project site to determine if the site is a good location for a production well. If it is a suitable location, the well will be implemented for production.

WATER STORAGE

The current storage capacity for the City is 40,000 gallons, with water stored in an elevated tank located in the city limits. The tank holds 2.67 hours of water at average day demand. A 10,000-gallon hydropneumatics tank adjacent to the elevated tank maintains the system pressure. When only relying on the elevated tank, the water system has about 40 pounds per square inch (psi) of pressure, which is adequate for delivery but below the preferred system target pressure of 55 psi. The American Water Works Association (AWWA) Small Water System standards recommend that storage systems hold an average day demand supply for between 0.5 and 7 days. It is expected that a 4-day supply would provide adequate storage for the City if all wells were off-line due to a disaster or major power outage and to provide for moderate growth in demand over the next 20 years. A 4-day supply of water for the City would be 1.44 million gallons.

FIRE SUPPRESSION

Water flow required for fire suppression (fire flow) is in addition to a community's maximum daily flow rate and typically needs to be available between 2 and 10 hours. With all three existing wells on-line, the peak pumping capacity of the City water system is 2,500 gallons per minute (gpm), and the current system has adequate capacity to fight two fires simultaneously if all three existing wells are available and on-line. If the C Street Well was off-line, however, the existing storage capacity would only be sufficient for approximately 1.75 hours of fire flow for two simultaneous fires. If all three wells were off-line, the existing storage capacity would only be sufficient for approximately 20 minutes of suppression for two simultaneous fires.

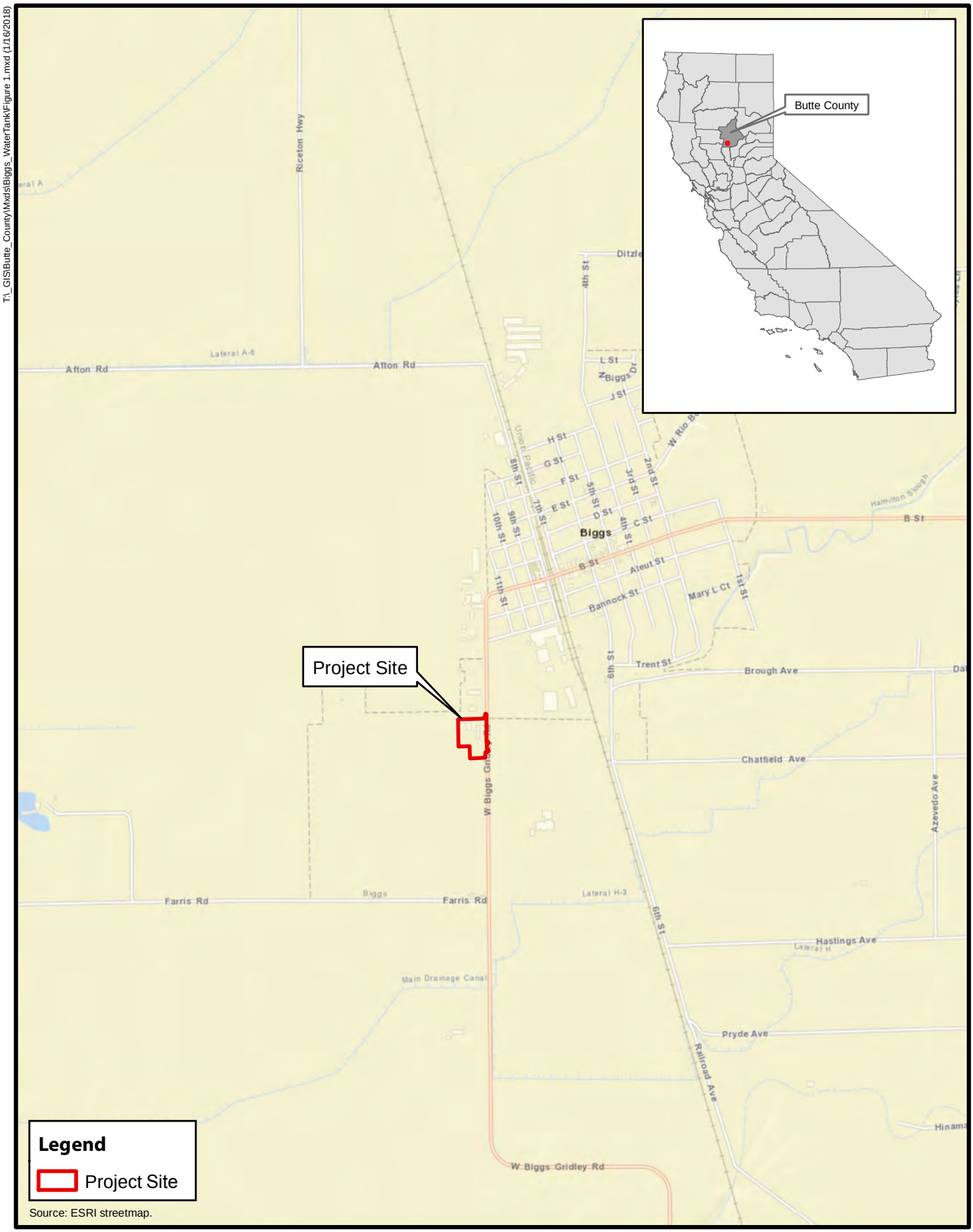

FIGURE 3.0-1
Regional Location

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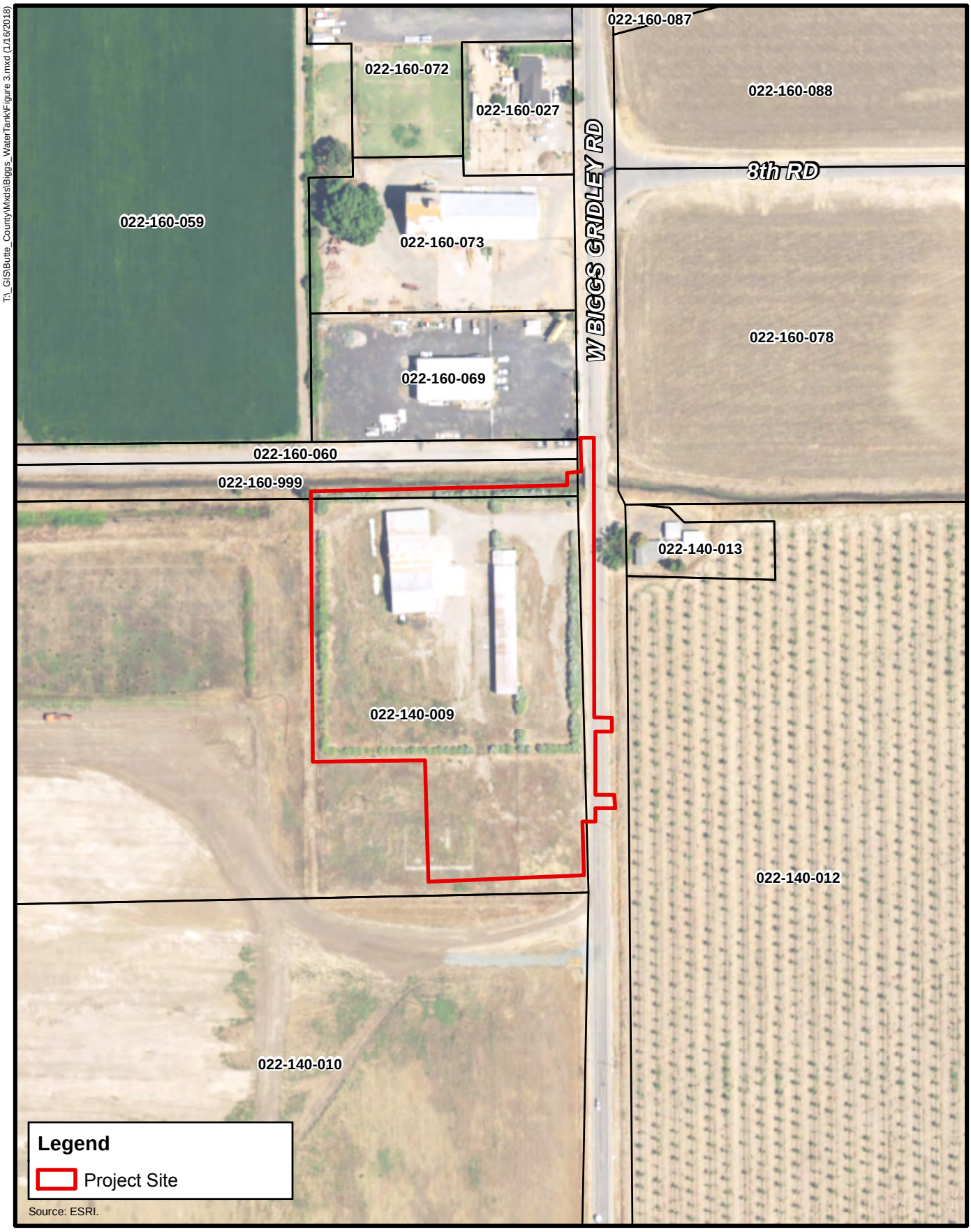

FIGURE 3.0-2
Project Site

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PHOTO 1: VIEW OF PROJECT SITE FROM WEST BIGGS GRIDLEY ROAD, LOOKING NORTHWEST

PHOTO 2: VIEW OF PROJECT SITE FROM WEST BIGGS GRIDLEY ROAD, LOOKING SOUTHWEST

PHOTO 3: BRIDGE CROSSING OVER MAIN DRAINAGE CANAL AT WEST BIGGS GRIDLEY ROAD, LOOKING NORTH

PHOTO 4: MAIN DRAINAGE CANAL AND BRIDGE ABUTMENTS, LOOKING EAST

3.4 PROJECT COMPONENTS

WATER STORAGE TANK AND PUMP

A 1.5-million-gallon ground-level storage tank would be constructed on the project site. The tank would be a cylindrical shape, approximately 133.5 feet in diameter and 24 feet high. The tank would be painted a neutral gray or tan color. A control/pump building would be constructed adjacent to the tank to house a booster pump system and an automated control system. The control/pump building would be approximately 80 feet long by 32 feet wide by 8 to 12 feet high and painted a neutral color. The pump and control system would allow automated control of the tank and maintenance of the City water system pressure. The storage tank would include a drainage overflow that would direct tank water (if any) toward existing ditches along the south and west sides of the project site.

Two options have been identified for the location of the water tank and control/pump building. Option A would locate the tank and control/pump building in the fenced area immediately south of the area containing hangars and buildings (see **Figure 3.0-3a**). Option B would locate the tank and control/pump building within the fenced area containing hangars and buildings (see **Figure 3.0-3b**). The hangars and buildings would not be removed.

NEW WATER WELL

If the exploratory well is suitable for a production well, a 400-foot-deep groundwater well would be constructed. The preferred location for the new groundwater well would be adjacent to the water tank location on the project site if the production well is installed. The existing C Street Well (Well 2 – Willard Well) would be decommissioned. No increased groundwater development or extraction is proposed as a result of installing the new production well.

UTILITIES

The proposed water tank, pumping station, and new well would be connected to the City water system by extending an 8-inch water main from its terminus at the Public Works yard south along West Briggs Gridley Road, then east to the control/pump building. The water main would be installed below grade along the west side of West Biggs Gridley Road. At the West Biggs Gridley Road bridge, the water main would continue over the canal and adjacent to the bridge, crossing over the Main Drainage Canal, then continuing underground to the control/pump building. A hole large enough to accommodate the 8-inch water main would be drilled on each side wall of the concrete headwall bridge abutments under the roadway (see Photo 4, which shows the concrete feature under the bridge), and the water main would span the canal, just under the bridge. No alteration or modification of the canal itself is proposed.

Electricity for operating the well, pump, and control system would be provided by the Gridley Biggs Electric Department via connection to the power lines that run along West Biggs Gridley Road. A diesel-powered 150-kilowatt (kw) backup generator near the control/pump building would maintain power in the event of a power outage. The generator would only be operated for periodic testing and in an emergency. Fuel for the generator would be stored in a 1,500-gallon aboveground storage tank equipped with secondary containment.

PROJECT PHASING AND CONSTRUCTION

Construction of the project is expected to commence in April 2019 and would be completed in approximately 6 months. During construction, all material imported to the site and trips to/from the site by construction workers and vendors would use County and City roads, in particular, West Biggs Gridley Road. There may be times during construction when one-way controlled traffic or short traffic halts on West Biggs Gridley Road are required. All construction staging (equipment and materials) and worker parking would be on-site.

No demolition of existing structures on-site would be required for either tank location option. Site preparation may require the removal of a small quantity of soil and vegetative material where the tank and control/pump building would be installed and where trenching for the underground portion of the water main would occur along West Biggs Gridley Road. The Main Drainage Canal banks under the bridge crossing would not be modified. For tank location Option A, concrete from an existing building foundation would be exported from the site.

The project will require preparation of a stormwater pollution prevention plan (SWPPP) in order to comply with the Central Valley Regional Water Quality Control Board's (RWQCB) General Construction Storm Water Permit. The SWPPP will identify best management practices (BMPs) to be implemented during construction to minimize the potential for grading and construction activities to contribute sediment and other pollutants (e.g., heavy equipment oil leaks) conveyed from the site into the irrigation/drainage canal. The City will file of Notice of Intent to comply with the general permit. BMPs would be implemented by the contractor during construction to minimize the potential for debris or other materials to fall into the irrigation canal.

Drilling and completion of the production well could proceed independently of the construction of the water tank, or work could be completed simultaneously with the water tank installation.

Consistent with the City of Biggs Municipal Code (Section 7.40.160), construction would only be allowed between the hours of 6:00 AM and 7:00 PM on weekdays, except for emergency work being performed by a public agency or a public utility.

LAND USE PLANNING

The parcel containing the project site was annexed into the city in 2016 (West Biggs Gridley Road Annexation No. 2). The land use designation is Agriculture Industrial (AI), and the parcel was pre-zoned for public quasi-public uses as part of the annexation process. The proposed use is consistent with the land use designation and zoning.

The proposed project is consistent with the City of Biggs (2014) General Plan Public Facilities & Services Element and implements goals and policies pertaining to the provision of water supply, specifically the following:

> Goal PFS-2: Ensure an ample supply of high-quality water and adequate treatment and distribution facilities are available to meet the present and future needs of the city.
>
> Policy PFS-2.1: (Water System) – Provide a high-quality, cost-efficient municipal water supply and distribution system that meets California Department of Public Health guidelines and standards.
>
> Policy PFS-2.2: (Fire Suppression) – Ensure water volumes and pressures are sufficient for emergency response and fire suppression demands.

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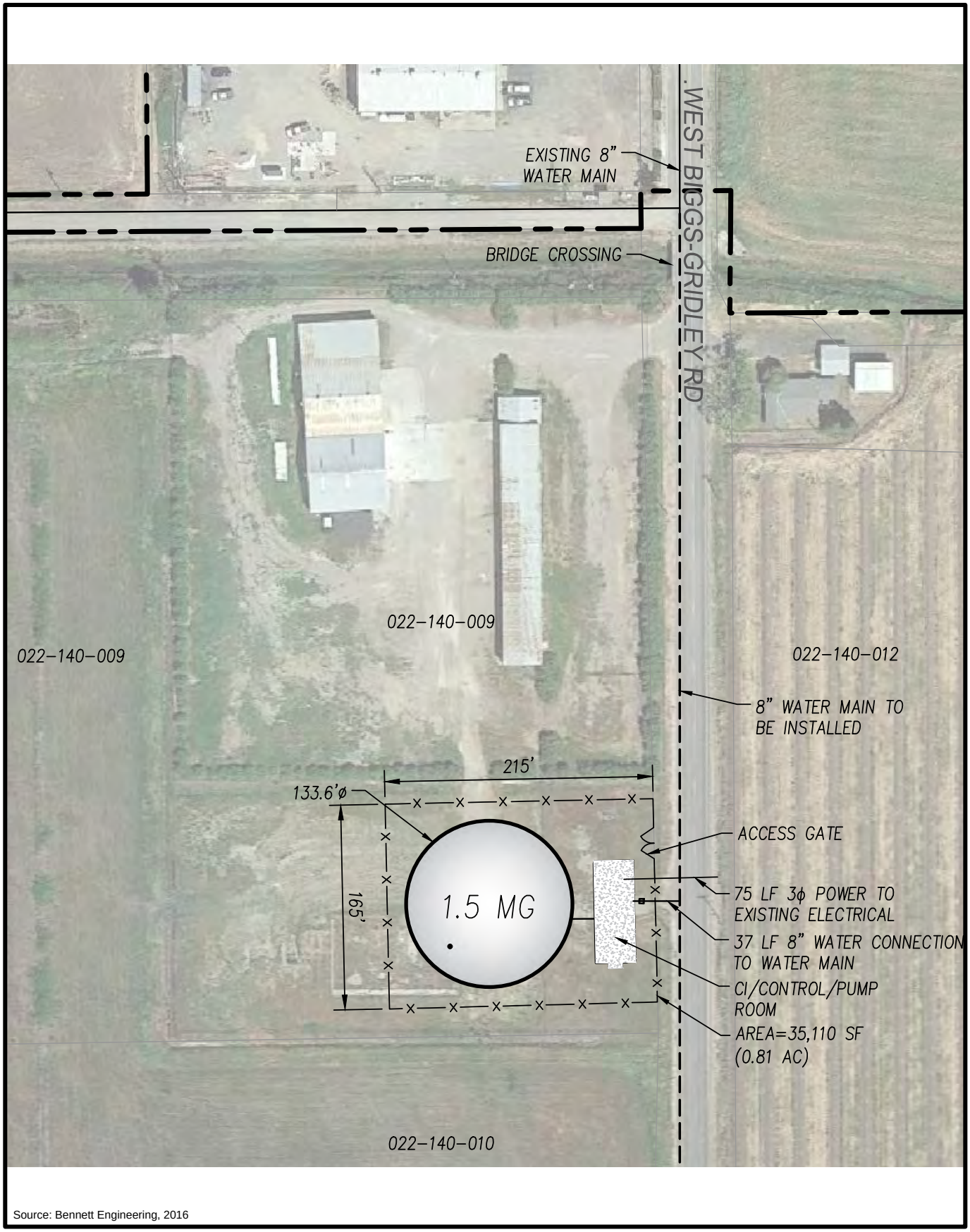

Source: Bennett Engineering, 2016

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Not To Scale

FIGURE 3.0-3a
Site Plan-Option A

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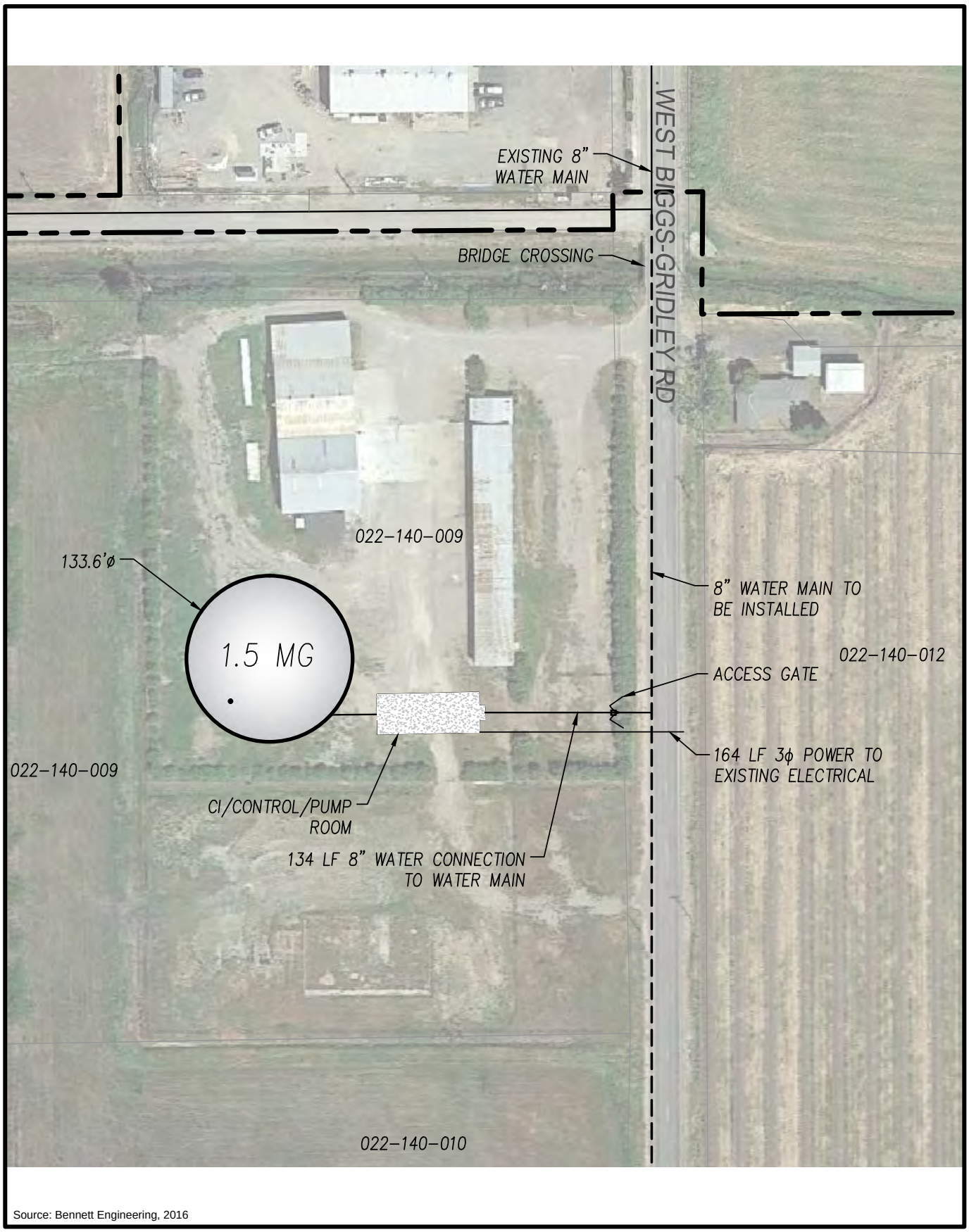

Source: Bennett Engineering, 2016

Not To Scale

FIGURE 3.0-3b
Site Plan-Option B

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3.5 PROJECT APPROVALS AND PERMITS

As the lead agency, the City of Biggs has the ultimate authority for project approval or denial. The following is a list of discretionary approvals and permits anticipated by the City for actions proposed as part of the project:

- Adoption of Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program (MMRP)
- Approval of the project and its design

The proposed project would require the following discretionary approvals and permits by other agencies to proceed with project implementation:

- Butte County encroachment permit for West Biggs Gridley Road
- Butte County Air Quality Management District Authority to Construct and Permit to Operate for emergency backup generator
- Butte County Environmental Health (exploratory well drilling, new production well construction, decommissioning of the existing C Street Well)
- State Water Resources Control Board (Notice of Intent for Construction General Permit coverage)
- State Water Resources Control Board, Division of Drinking Water (permit for modification of municipal water system)
- Reclamation District 833 (Main Drainage Canal encroachment permit)

REFERENCES

Bennett Engineering (Bennett Engineering Services). 2016. *Technical Memorandum: C Street Well – Long Term Strategy*.

Biggs, City of. 2014. *City of Biggs General Plan*.

4.0
ENVIRONMENTAL CHECKLIST

		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.1	**AESTHETICS.** Would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a, c) ***Less Than Significant Impact.*** The project site is in an undeveloped area that is characterized by flat topography and agricultural fields. Although there are no officially designated scenic vistas in the area, long-range views visible from the project area and surrounding properties may be considered scenic and important to the overall visual character of Butte County and the city. In the immediate vicinity of the project, the site is readily visible to the public traveling on West Biggs Gridley Road, but ornamental landscaping partially obscures views (see Photo 1 and Photo 2 in Section 3.0, Project Description).

The water tank would be a cylindrical shape approximately 133.5 feet in diameter and 24 feet high and installed at ground level. The tank would be painted a neutral gray or tan color. The control/pump building would be approximately 80 feet long by 32 feet wide by 8 to 12 feet high and painted a neutral color. The tank and building would be smaller in scale than the large agricultural/industrial buildings to the north and of a similar scale to the existing buildings (hangars from a former airstrip) on the project site.

The water storage tank and control/pump building are the only features that may be visible from public views, and such views would be limited to motorists on West Biggs Gridley Road and from a single residence to the northeast. The visibility of the tank and building to the public would depend on the location selected. For tank location Option A, the tank and building would be in an open field approximately 40 feet from West Biggs Gridley Road, surrounded by chain-link fencing (see **Figure 3.0-3a**). The closest residence to this location option is approximately 385 feet to the north. The tank and building would be substantially obscured from this residence by existing nonnative bushes planted around the area containing hangers associated with a former airstrip on the project site. The tank at location Option A would be most visible to motorists on West Biggs Gridley Road. For tank location Option B, the tank and building would be in close proximity to the existing buildings and surrounded by an existing chain-link fence and nonnative landscape bushes (see **Figure 3.0-3b**). Views of the tank and building at location Option B would be substantially obscured from the nearby residence and from motorists by the existing buildings and landscape plantings.

The metal hangars and other buildings on the site are modern features that give the site an "industrial" look. The visual quality of the site is not distinctive or unique. For either location option, the tank and control/pump building would be in scale with the nearby buildings and industrial uses in the City's Public Works yard to the north and would not substantially degrade the visual quality of the site and its surroundings. This impact would be less than significant.

b) ***No Impact.*** According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping system, there are no officially designated state scenic highways in Butte County or the project site. There is only one eligible scenic highway in the county—State Route (SR) 70 northeast of Oroville, approximately 13 miles northeast of the project site (Caltrans 2018). Therefore, implementation of the proposed project would have no impact on scenic resources within a state scenic highway.

d) ***Less Than Significant Impact.*** The project would install two overhead security lights, one near the control/pump room and one near the well. These lights would be similar to existing security lighting for the existing buildings on the project site and the adjacent City Public Works yard and building. A row of tall oleander along West Biggs Gridley Road would partially block light emanating from the security lights. No daytime or nighttime views in the area would be adversely affected. Therefore, this impact is less than significant.

Difference Between Water Tank Option A and Water Tank Option B

Under Option B, project features would be less visible to motorists on West Biggs Gridley Road because they would be partially screened by existing ornamental vegetation.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.2 AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
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 nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526 and by Government Code Section 51104(f)), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) ***No Impact.*** According to the Butte County Important Farmland 2016 map (DOC 2017), the project site is designated as Urban and Built-Up land. There would be no impact on important farmland.

b) ***No Impact***. According to the Butte County Williamson Act Parcels map (Butte County 2015), the project site is not subject to a Williamson Act contract. Implementation of the proposed project will have no impact on zoning for agricultural use or a Williamson Act contract.

c) ***No Impact.*** The project site contains no forest or timber resources and is not zoned for forestland protection or timber production. The proposed project would have no impact on any lands with such zoning.

d) ***No Impact.*** The project site contains no forest or timber resources.

e) ***No Impact.*** The proposed project would construct a new well and water tank in a 5-acre area that is not utilized or zoned for agriculture or designated as agricultural land. The proposed project would not result in the conversion of farmland to nonagricultural use.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.3 AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

EXISTING SETTING

NORTHERN SACRAMENTO VALLEY AIR BASIN

The proposed project site is in Butte County, which is in the Northern Sacramento Valley Air Basin (NSVAB). The NSVAB is bounded on the north and west by the Coast Ranges and on the east by the southern portion of the Cascade Mountains and the northern portion of the Sierra Nevada. The mountains form a substantial physical barrier to locally created pollution as well as that transported northward on prevailing winds from the Sacramento metropolitan area (SVBAPCC 2015).

Butte County's environmental conditions are conducive to conditions which can traps pollutants between two mountain ranges. Prevailing winds in the area are from the south and southwest, transporting pollutants from the large urban areas in the San Francisco Bay Area. Growth and urbanization in the NSVAB have also contributed to an increase in emissions.

AIR POLLUTANTS OF CONCERN

Criteria air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state laws. Primary air pollutants are those that are emitted directly from sources: carbon monoxide (CO); reactive organic gases (ROG); nitrogen oxide (NO_X); sulfur dioxide (SO_2); coarse particulate matter (PM_{10}); fine particulate matter ($PM_{2.5}$); lead; and fugitive dust. Of these, CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and

go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere, principally ozone (O_3) and nitrogen dioxide (NO_2).

TOXIC AIR CONTAMINANTS

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. While criteria air pollutant emissions are analyzed for their regional contribution to air quality concerns, TACs are analyzed for their health risks to humans resulting from localized concentrations. The California Air Resources Board (CARB) has designated nearly 200 compounds as TACs. Most recently, CARB identified diesel particulate matter (diesel PM) as a toxic air contaminant. Diesel PM differs from other TACs in that it is not a single substance but rather a complex mixture of particles and gases produced when an engine burns diesel fuel. Diesel PM is a concern because it can result in increased cases of lung cancer in a population exposed to high localized concentrations of diesel PM.

REGULATORY FRAMEWORK

Ambient air quality standards have been promulgated at the local, state, and federal levels. The federal Clean Air Act of 1971 and the Clean Air Act Amendments (1977) established the national ambient air quality standards (NAAQS), which are regulated by the US Environmental Protection Agency (EPA). The State of California has also adopted its own California ambient air quality standards (CAAQS), which are regulated by CARB. Implementation of the project would occur in the Butte County portion of the NSVAB, which is under the air quality regulatory jurisdiction of the Butte County Air Quality Management District (BCAQMD) and is subject to the rules and regulations adopted by the air district to achieve the national and state ambient air quality standards. Federal, state, regional, and local laws, regulations, plans, and guidelines that are relevant to the proposed project are summarized below.

FEDERAL AND STATE

Ambient Air Quality Standards

The Clean Air Act of 1971 established (NAAQS, with states retaining the option to adopt more stringent standards or to include other pollution species. Both the State of California and the federal government have established health-based ambient air quality standards for six air pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Air Quality Attainment Plans

In 1994, the air districts in the North Sacramento Valley Planning Area (NSVPA), a subsection of the greater Sacramento Valley Air Basin, prepared an Air Quality Attainment Plan for ozone. This plan is updated every three years. The North Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan is the most recent air quality planning document covering Butte County (SVBAPCC 2015). The Triennial Air Quality Attainment Plan provides local guidance for air basins to achieve attainment of ambient air quality standards. The Butte County portion of the NSVAB is classified as nonattainment for state 1-hour ozone, state and federal 8-hour ozone, state 24-hour and annual PM_{10}, federal 24-hour $PM_{2.5}$, and state annual $PM_{2.5}$ standards (CARB 2015).

LOCAL

Butte County Air Quality Management District

In Butte County, the air quality regulating authority is the BCAQMD, which adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs. Other responsibilities include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality. The BCAQMD develops regulations to improve air quality and protect the health and welfare of Butte County residents and their environment. BCAQMD rules and regulations applicable to the project include, but are not limited to, the following:

- ***Regulation II, Rule 205, Fugitive Dust Emissions***. No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

  – The dust remains visible in the atmosphere beyond the property line of the emission source; or

  – The dust emission exceeds 20 percent opacity for a period or periods aggregating more than 3 minutes in any 1 hour if the dust emission is the result of movement of a motorized vehicle.

  No person shall conduct active operations without implementing the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

  No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. All track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

- ***Regulation II, Rule 252, Stationary Internal Combustion Engines***. To limit emissions of nitrogen oxides (NO_X) and carbon monoxide (CO) from stationary internal combustion engines.

  3 EXEMPTIONS: Except for the administrative requirements of Section 6.4 of this Rule, the provisions of this Rule shall not apply to the following engines:

  3.3 Any diesel-fueled Emergency Standby Engine operated no more than 100 hours per calendar year for non-emergency purposes as determined by a non-resetting hour meter.

- ***Regulation IV, Rule 400, Permit Requirements.*** To require any person constructing, altering, or operating a source that emits or may emit air contaminants to obtain an Authority to Construct or Permit to Operate from the Air Pollution Control Officer (APCO) and to provide an orderly procedure for application, review, and authorization of new sources and of the modification and operation of existing sources of air pollution.

- ***Regulation IV, Rule 401, Permit Exemptions.*** This Rule specifies emissions units that are categorically or conditionally exempted from the requirement to obtain an Authority to Construct or a Permit to Operate from the Air Pollution Control Officer (APCO).

4.1.5 Internal Combustion Engines

4.1.5.1 Any reciprocating internal combustion engine with a brake horsepower rating of less than fifty (50).

4.1.5.3 Any natural gas, propane, or LPG fueled engine rated at 250 brake horsepower or less and operating less than 200 hours per calendar year for non-emergency purposes.

DISCUSSION OF IMPACTS

a) ***Less Than Significant Impact.*** The North Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan is the most recent air quality planning document covering Butte County (SVBAPCC 2015). Air quality attainment plans are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards for ozone and particulate matter. The NSVPA 2015 Triennial Air Quality Attainment Plan includes forecast ROG and NOx emissions (ozone precursors) for the entire NSVPA region through the year 2020. As previously stated, the Butte County portion of the NSVPA is classified as nonattainment for state and federal ozone standards.

Per the BCAQMD (2014), a project would conflict with or obstructs implementation of the applicable attainment plan if it would result in or induce growth in population, employment, land use, or regional vehicle miles traveled (VMT) that is inconsistent with the growth (and therefore the emissions projection) assumptions in the applicable attainment plan. The proposed project would involve improvements to the City's water storage and system pressure. The project would not create new residences or jobs, nor would it induce any growth in population, employment, land use, or regional VMT. Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plan and this impact would be less than significant.

b) ***Less Than Significant Impact.*** Implementation of the project would result in some criteria air pollutant and precursor emissions during short-term construction activities and long-term operation.

Short-Term Construction-Generated Pollutant Emissions

Construction activities such as clearing, excavation and grading operations, construction vehicle traffic, and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions (dust) that would temporarily affect local air quality. Activities such as painting, sealing, and paving would release ROGs that could cause a temporary increase in local ozone levels. In accordance with BCAQMD Regulation II, Rule 205, Fugitive Dust Emissions, best practice measures to control fugitive dust during construction are required. Appendix C-1 of the BCAQMD (2014) CEQA Air Quality Handbook lists best practice measures that would satisfy the requirements of Rule 205. The City will ensure the following measures are noted on grading plans and in construction specifications, and implemented during project construction to reduce fugitive dust emissions.

- Reduce the amount of the disturbed area where possible.

- Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. An adequate water supply source must be identified. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible.

- All dirt stockpile areas should be sprayed daily as needed, covered, or a BCAQMD-approved alternative method will be used.

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

- Exposed ground areas that will be reworked at dates greater than one month after initial grading should be sown with a fast-germinating noninvasive grass seed and watered until vegetation is established.

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

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

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

- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least 2 feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with local regulations.

- Dust, dirt, or other material track-out shall not extend 25 feet or more in cumulative length from the point of origin from an active operation. All track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

- The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off-site. Their duties shall encompass holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the City of Biggs and the BCAQMD prior to commencement of clearing, demolition, or earthmoving activities.

Construction emissions associated with extension of the water main were estimated using the Road Construction Emissions Model, version 8.1.0, developed by the Sacramento Municipal Air Quality Management District and used by many lead agencies and air districts throughout the state to estimate construction emissions for linear projects. Construction emissions for site preparation, grading, well drilling, and constructing the water tank and control/pump building were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. The construction emissions models assume a total construction length of 6 months commencing in April 2019. The models account for

the quantifiable components of the dust mitigation measures that would be required in construction contracts. See **Appendix A** for the model outputs.

The construction emissions for either tank location option would be similar. Location Option A would have slightly higher NO_x and PM emissions due to a longer extension of the water main and the requirement to remove concrete from an old building foundation. Only the worst-case (highest emissions) construction scenario was analyzed (location Option A). Predicted maximum daily construction-generated emissions for the proposed project are summarized in **Table 4.3-1**.

TABLE 4.3-1
CONSTRUCTION-RELATED CRITERIA POLLUTANT AND PRECURSOR EMISSIONS

Construction Activities	ROG	NO_x	Total PM_{10}	Total $PM_{2.5}$
Water Main	0.7	7.7	0.9	0.4
Water Tank, Pump Building, and Well	39.4	11.2	1.8	1.0
Maximum Daily Emissions (pounds per day)	*39.4*	*11.2*	*1.8*	*1.0*
Annual Maximum Emissions (tons per year)	*0.23*	*0.33*	*0.03*	*0.02*
BCAQMD Significant Impact Threshold	137 pounds per day not to exceed 4.5 tons per year	137 pounds per day not to exceed 4.5 tons per year	PM_{10} + $PM_{2.5}$ < 80	PM_{10} + $PM_{2.5}$ < 80
Exceed BCAQMD Threshold?	**No**	**No**	**No**	**No**

*Source: CalEEMod version 2016.3.2; Road Construction Emissions Model version 8.1.0; see **Appendix A** for emission model outputs.*
Notes: Project construction activities are assumed to occur over a 6-month period. Emissions estimates account for the quantifiable components of fugitive dust control per BCAQMD Rule 205.

As shown in **Table 4.3-1**, during construction, short-term daily emissions associated with the development of the proposed project would not exceed the BCAQMD significance thresholds, and the impact would be less than significant

Long-Term Operational Pollutant Emissions

Long-term operation of the project would produce a small amount of exhaust emissions from mobile and stationary sources. Up to two maintenance trips per week from the City Public Works Department (approximately 800 feet away from the project site) could be required, and up to 2 hours per month could be required for testing and maintenance of the diesel-powered emergency backup generator. Neither of these activities would be a significant source of criteria pollutant or precursor emissions. The only other significant emissions from long-term operation of the project would be the off-site emissions of greenhouse gases (primarily carbon dioxide [CO_2]) resulting from increased water system electricity use. Impacts from greenhouse gas emissions are discussed in subsection 4.7, Greenhouse Gases. Impact resulting from operational emissions of criteria pollutants or precursors would be less than significant.

Therefore, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. This impact would be less than significant.

c) ***Less Than Significant Impact.*** See Impact b) above. The proposed project's construction emissions would not exceed BCAQMD thresholds, and the project would generate minimal operational emissions. Therefore, the proposed project, in conjunction with other approved and pending development projects in the region, would not result in a cumulatively considerable net increase of criteria pollutants.

d) ***Less Than Significant Impact.***

Short-Term Construction Toxic Air Contaminants

Project construction would generate diesel particulate matter emissions from the use of off-road diesel equipment required for site grading, excavation, and other construction activities. Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The amount to which the receptors could be exposed, which is a function of concentration and duration of exposure, is the primary factor used to determine health risk (i.e., potential exposure to TAC emissions levels that exceed applicable standards). Only one sensitive receptor is located near the project site—a single-family residence across West Biggs Gridley Road at the northeast corner of the project site. The only construction activity expected to occur near the sensitive receptor would be excavation of a trench and installation of an 8-inch water main along the road. This work is anticipated to last less than 2 weeks and would only require the use of up to three pieces of diesel-powered construction equipment. The remaining construction activity would occur a minimum of 280 feet away from the residence and would involve the intermittent use of diesel-powered construction equipment over a 6-month period.

Construction-generated diesel PM emissions may contribute to negative health impacts when construction is extended over lengthy periods of time. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. The heaviest use of diesel-powered equipment during the project would occur during the site preparation and grading/excavation phases in the first month of construction. The use of diesel-powered equipment during construction would be temporary and episodic. Due to the short duration and small size of the project, and due to the distance between the nearest residence and the primary construction activity, diesel PM generated by construction activities would not be expected to create an impact on community health risks.

Long-Term Operation Toxic Air Contaminants

The only potential source of TACs resulting from long-term operation of the project would be diesel PM from use of the 150-kW backup generator. Except for power outages, the backup generator for the project would only be operated for routine maintenance and testing, approximately 2 hours per month (24 hours per year). Diesel-powered stationary engines of more than 50 horsepower are subject to the permit requirements of BCAQMD Rule 400, regardless of the number of hours per year operated. The City will be required to obtain an Authority to Construct and Permit to Operate for the diesel generator and will be subject to all permitting requirements imposed by the BCAQMD to control diesel PM emissions. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations, and this impact would be less than significant.

e) ***Less Than Significant Impact.***

Construction-Related Odors

The BCAQMD does not have a recommended odor threshold for construction activities because although heavy-duty construction equipment would emit odors, those odors would primarily be from diesel exhaust, which dissipates quickly. Construction activities would be short term and intermittent. For these reasons, construction-related odors associated with the project would not be anticipated to create objectionable odors affecting a substantial number of people.

Operational Odors

The project would not include any significant odor sources. Therefore, the project is not anticipated to create objectionable odors affecting a substantial number of people. This impact would be less than significant.

Difference Between Water Tank Option A and Water Tank Option B

There would be little or no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.4 BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

OVERVIEW

This subsection describes the natural resources present within and immediately surrounding the project site, which includes a discussion of the special-status species potentially occurring in the area, an analysis of impacts on biological resources that could occur due to implementation of the proposed project, and appropriate mitigation measures to minimize or avoid those impacts. The analysis of biological resources presented in this section is based on a review of the current project description and available literature, as well as a site visit and survey conducted by a Michael Baker International (Michael Baker) biologist on December 21, 2017. Results are documented in *Biggs Water Tank Project Biological Assessment* (Michael Baker International 2018), included in **Appendix B**.

REGULATORY FRAMEWORK

Laws and regulations that apply to species and habitat are summarized below. Also identified are environmental review and consultation requirements, as well as permits and approvals that may be required from local, state, and federal agencies, depending on whether protected species or habitats are present and on the location and type of development.

FEDERAL

Endangered Species Act

The Endangered Species Act of 1973 (ESA), as amended, establishes protective measures for federally listed species and those proposed for listing as threatened and endangered, including their critical habitats, from unlawful take (16 United States Code [USC] Sections 1531–1544). The ESA defines "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, Part 222, of the Code of Federal Regulations (50 Code of Federal Regulations [CFR] 222) further defines "harm" to include "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including feeding, spawning, rearing, migrating, feeding, or sheltering." The US Fish and Wildlife Service (USFWS) enforces the ESA.

Critical habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA-listed species and which may require special management considerations or protection. Critical habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy USFWS-designated critical habitat, they must consult with the USFWS under Section 7 of the ESA. The designation of critical habitat does not affect private landowners, unless a project they are proposing has a federal nexus and uses federal funds or requires federal authorization or permits (e.g., federal funding or a permit from the US Army Corps of Engineers [USACE]). If the USFWS determines that critical habitat will be lost or adversely modified from a proposed action, the USFWS will develop reasonable and prudent alternatives to ensure the purpose of the proposed action can be achieved without loss of critical habitat. If the action is not likely to adversely modify or destroy critical habitat, the USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Part 21). The majority of birds found in the project area are protected under the MBTA.

Clean Water Act

Since 1972, the USACE and the EPA jointly regulate discharges of dredged or fill material into "waters of the United States" (WoUS), including wetland and non-wetland aquatic features, pursuant to Section 404 of the federal Clean Water Act (CWA). Section 404 is founded on the findings of a significant nexus (or connection) between the aquatic feature in question and interstate commerce via Relatively Permanent Waters (RPW), and ultimately Traditional Navigable Waters (TNW). The term WoUS is defined under 33 CFR Section 328.3(a). The USACE typically regulates as WoUS any aquatic feature displaying and ordinary high water mark (OHWM), or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). The OHWM is defined as "that 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 soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area." Wetlands, a subset of jurisdictional waters, jointly defined by the USACE and the EPA, are defined as "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions."

Applicants for a federal license or permit for activities which may discharge to WoUS must seek Water Quality Certification from the state or Indian tribe with jurisdiction. Such certification is based on a finding that the discharge will meet water quality standards and other applicable requirements. In California, there are nine Regional Water Quality Control Board (RWQCB) regions that issue or deny certification for discharges within their geographical jurisdiction. Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which are defined as numeric and narrative objectives in each RWQCB's Basin Plan.

Where applicable, the State Water Resources Control Board has the responsibility for projects affecting waters within multiple Regional Water Quality Control Boards. The RWQCB's jurisdiction extends to all waters of the State and to all WoUS, including wetlands.

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Wildlife (CDFW) has the responsibility for maintaining a list of endangered and threatened species [California Fish and Game Code (CFGC) Section 2070]. The CDFW also maintains a list of "candidate species," which are species formally noticed as being under review for potential addition to the list of endangered or threatened species, and a list of "species of special concern," which serves to monitor species in decline, and others on species "watch lists." State-listed species are fully protected under the mandates of the CESA. If it is determined that state-listed species will be adversely affected by the project, an Incidental Take Permit will be required pursuant to CFGC Section 2081. In order to obtain such a permit, all impacts on the species in question must be minimized, fully mitigated, and fully funded for implementation and any required monitoring.

Rare, Threatened, and Endangered Plants

The California Native Plant Society (CNPS) is a nongovernmental agency that classifies native plant species according to current population distribution and threat level in regard to extinction. The CNPS uses the data to create and maintain a list of native California plants that have low

numbers or limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2017). Potential impacts on populations of CNPS-listed plants receive consideration under CEQA review.

The following identifies the definitions following the California Rare Plant Rank (CRPR) system:

1A: Plants presumed extirpated in California and either rare or extinct elsewhere

1B: Plants that are rare, threatened, or endangered in California and elsewhere

2A: Plants presumed extirpated in California, but common elsewhere

2B: Plants that are rare, threatened, or endangered in California, but are more common elsewhere

All plant species with CRPR 1 and 2 meet the requirements of the Native Plant Protection Act, Section 1901, Chapter 10, or CFGC Sections 2062 and 2067, and are eligible for state listing. Plants appearing with CRPR 1 or 2 are considered to meet the criteria of CEQA Section 15380, and effects on these species are considered "significant." Classifications for plants with CRPR 3 (plants about which more information is needed) and/or CRPR 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under state or federal law. Therefore, no detailed descriptions are provided nor impact analyses performed on species with these classifications.

California Fish and Game Code

Sections 3503, 3503.5, 3511, and 3513

The CDFW administers the California Fish and Game Code. Particular sections of the code are applicable to natural resource management. For example, Section 3503 makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (birds of prey, such as hawks, eagles, and owls) are protected under Section 3503.5, which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with the CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. CFGC Section 3511 lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are state fully protected include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Section 1600 et seq.

CFGC Section 1600 et seq. applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. Section 1602 of the Fish and Game Code establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided. Pursuant to CFGC Section 1602, a notification must be submitted to the CDFW for any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream or use material from a streambed. This includes activities taking place within rivers or streams that flow perennially or episodically and that are defined by the area in which surface water currently

flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical and biological indicators.

LOCAL

City of Biggs General Plan

Policy CR-3.1 (Biological Resources) in the City's General Plan requires that applicants for projects that have the potential to negatively affect special-status species conduct a biological resources assessment and identify design solutions that avoid such impacts. If adverse impacts cannot be avoided, they should be mitigated as prescribed by the appropriate state or federal agency.

As described below, the project site was evaluated for special-status species, and mitigation measures have been identified to reduce impacts to less than significant.

METHODOLOGY

LITERATURE REVIEW AND DATABASE SEARCH

Information on species that have the potential to occur on the project site and in the vicinity was obtained from the following:

- USFWS Information for Planning and Conservation (IPaC) online system (2017a)
- USFWS Critical Habitat Portal (2017b)
- CDFW California Natural Diversity Database (CNDDB) RareFind 5 (2017)
- CNPS Inventory of Rare and Endangered Plants of California (2017)

The USFWS IPaC tool was used to identify federally listed species under USFWS jurisdiction that may be affected by the proposed project. In addition, a query of the USFWS Critical Habitat Portal was conducted to identify any designated critical habitat on or in the vicinity of the project site. The CNDDB was used to generate a list of processed and unprocessed occurrences of special-status plant and wildlife species and vegetation communities identified within the Biggs, West of Biggs, Gridley, and Pennington, California, US Geological Survey (USGS) 7.5-minute quadrangle maps (quads). The CNPS database was also queried to identify special-status plant species with the potential to occur in the aforementioned quads. Species lists, along with a map of occurrences within a 5-mile radius of the project site, are provided in Table B-1 and Figure B-1, respectively, in **Appendix B**.

Michael Baker also researched the environmental setting of the survey area, such as regional and local geography, land use, climate, and watershed. Resources reviewed include the recent and historical aerial photography using Google Earth Pro 2017; the US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (2018); the National Hydric Soils List (NRCS 2015); the USFWS National Wetland Inventory (NWI) (USFWS 2017c); and the City of Biggs Wastewater Treatment Plant Enhancement Project Biological Assessment (PMC 2015).

FIELD SURVEY

Michael Baker conducted an evaluation on December 21, 2017, to characterize the environmental setting on and adjacent to the project site. The evaluation involved a query of available data and literature from local, state, federal, and nongovernmental agencies, and a site survey to collect site-specific data regarding habitat suitability for special-status species and to identify preliminarily any potentially jurisdictional aquatic or hydrological resources.

EXISTING CONDITIONS

The following is a summarization of the results of the database searches and biological resources survey. Discussions regarding the general environmental setting, vegetation communities and other land uses present, and plant and animal species observed are presented below.

ENVIRONMENTAL SETTING

The survey area is located in the Great Central Valley region, Sacramento Valley subregion, of the California Floristic Province, in the northeastern portion of the Central Valley, approximately 1.5 miles west of State Route 99 and approximately a third of a mile south of B Street, west of West Biggs Gridley Road and primarily south of the Main Drainage Canal, in Biggs, Butte County, California. The survey area consists of flat, primarily disturbed, developed, and agricultural lands dominated by nonnative annual and other opportunistic vegetation in areas not developed or is active or fallow agricultural land. The project site has undergone significant changes resulting from the development of a landing strip and associated facilities (pre-1970; inclusive of the project width, south to Farris Road), but long since abandoned with remnant buildings, foundations, and fences/gates. Flood channels and irrigation ditches surround the perimeters of the existing facilities and other lots in the survey area. Developed areas surrounding the project site include West Biggs Gridley Road and an active orchard to the east and the City Public Works facility to the north. The Main Drainage Canal north of the project site conveys flows east to west through the survey area.

Climate

The survey area, located in the northeast Central Valley, has a climate characterized as Mediterranean, with cool, rainy winters and hot, dry summers. The Biggs area is generally warm and temperate, with highs averaging approximately 78 degrees Fahrenheit (°F) in July and lows averaging approximately 45°F in January. Average annual precipitation for the Biggs area is approximately 24 inches (Climate Data 2018).

Watershed

The project site is located in the Sacramento River Watershed (Hydrologic Unit Code 18020105), Colusa Basin Hydrologic Unit (HU 20.00), and Butte Basin Hydrologic Area (HA 20.40) of the Basin Plan for the Central Valley Region. The Sacramento River Watershed, the largest river and watershed system in California, covers a land area of 27,000 square miles from the eastern slopes of the Coast Range, Mount Shasta, the western slopes of the southernmost region of the Cascades, and the northern portion of the Sierra Nevada, draining nearly a third of the state's surface water runoff.

Source waters rise in the volcanic plateaus and ranges of Northern California as the Upper Sacramento, McCloud, and Pit rivers. Butte Creek merges with the Sacramento River near Colusa and the Sutter Buttes, a group of isolated volcanic hills in the middle of the Sacramento Valley.

The Sacramento River is joined by its largest tributary, the Feather River, at Verona. Hamilton Slough is generated from the Feather River and conveys flows generally southwest across the valley through a system of canals supporting various agricultural lands before joining Butte Creek and the Sacramento River to the southwest. The Sacramento River eventually flows into the estuary of the Delta near Rio Vista. The mouth of the Sacramento River is at Suisun Bay near Antioch, where it combines with the San Joaquin River. The Sacramento River, now nearly a mile wide at its mouth, flows into San Francisco Bay and finally joins the Pacific Ocean under the Golden Gate Bridge in San Francisco.

Topography and Soils

The general area in which the project site is situated is characterized by flat, active and fallow agricultural lands (including rice fields) and developed land (the city of Biggs) primarily to the north and east. Surface elevations within the survey area range from approximately 98 feet above mean sea level (amsl) in the north to approximately 87 feet amsl in the south.

Mapped soils within the survey area entirely consist of Esquon-Neerdobe, 0 to 1 percent slopes (Map Unit Symbol: 520) (NRCS 2018). According to the National Hydric Soils List (NRCS 2015), the soils mapped in the survey area are considered hydric. Soil textures identified on-site were inconsistent with those mapped by the Web Soil Survey due to the developed nature of the site. Surface soils observed on-site consist of fill material, including gravel and other imported sizes.

Drainage Features

The Main Drainage Canal, which is managed by Reclamation District 833, enters the survey area upstream at approximately 91 feet amsl and leaves the survey area to the west at approximately 87 feet amsl. The canal is an earth-lined feature beginning at the bridge and extending approximately 13 miles to the west. It was constructed in the early 1900s to convey agricultural drainage. There are no natural flows. Sources of flow in the canal include agricultural return flows, urban runoff, treated municipal wastewater, groundwater seepage, and stormwater during the winter. The canal has intermittent flows year-round, with increased volume during irrigation and winter storm seasons. Maintenance is minimal, and the channel is excavated only when needed due to blockage (Biggs n.d.).

Vegetation Communities and Other Land Uses

Three vegetation communities were observed within the survey area: disturbed emergent freshwater marsh, disturbed habitat, and ornamental. Three other land uses were mapped on the project site, including open waters, agricultural, and developed areas. A complete list of plant species identified during the survey is provided in Table B-2 in **Appendix B**. **Table 4.4-1** lists the acreages of the mapped classifications observed within the survey area, which extends 100 feet out from the project site, with each classification discussed in detail below. The project site is predominantly disturbed/developed habitat. The open waters and disturbed emergent freshwater marsh are associated with the Main Drainage Canal.

Disturbed Emergent Freshwater Marsh

As observed during the site survey, the Main Drainage Canal appears to be maintained regularly, thereby keeping perennial vegetation from establishing and any vegetation from maturing. Vegetation that lines the fringes of the open water surface flows is emergent, primarily along the northern side that receives more sunlight, and includes native and nonnative grasses and forbs adapted to living in anaerobic soil conditions. Species noted include tall flatsedge (*Cyperus*

eragrostis), slender willow herb (*Epilobium ciliatum*), alkali heath (*Frankenia salina*), Italian rye grass (*Festuca perennis*), rush (*Juncus* sp.), English plantain (*Plantago lanceolata*), ditch beard grass (*Polypogon interruptus*), and Jersey cudweed (*Pseudognaphalium luteoalbum*). An unknown alga was observed partially inundated in most instances.

TABLE 4.4-1
VEGETATION COMMUNITIES/LAND USES WITHIN THE BIOLOGICAL RESOURCES SURVEY AREA

Vegetation Community/Land Use	Total within Survey Area (Acres)	
	Option A	Option B
Disturbed Emergent Freshwater Marsh	0.044	0.093
Open Waters	0.009	0.050
Disturbed Habitat	3.293	4.480
Ornamental	0.364	0.586
Agricultural (outside project boundary)	1.681	2.053
Developed	0.938	1.651
TOTAL*	**6.33**	**8.913**

** Totals may not equal sum due to rounding. Includes acreage within 100-foot-buffer outside the construction limits.*

Open Waters

Areas within the Main Drainage Canal that consist of surface flows and are devoid of vegetation are classified as open waters.

Disturbed Habitat

Disturbed habitat includes areas that have been subject to significant ground disturbance and are reestablished by opportunistic, primarily nonnative species that often limit the reestablishment of native vegetation. Dominant vegetation within this nonnative community on-site consists primarily of stinkwort (*Dittrichia graveolens*) and nonnative grasses such as wild oat (*Avena fatua*), common ripgut grass (*Bromus diandrus*), red brome (*B. rubens*), soft chess (*B. hordeaceus*), foxtail barley (*Hordeum murinum*), and Dallis grass (*Paspalum dilatatum*), including other invasive forbs such as yellow star thistle (*Centaurea solstitialis*), bull thistle (*Cirsium vulgare*), filaree (*Erodium* spp.), wild radish (*Raphanus sativus*), and curly dock (*Rumex crispus*). An immature, struggling individual valley oak (*Quercus lobata*) is present adjacent to an existing structure on-site, and Himalayan blackberry (*Rubus armeniacus*) was observed along the north side of the project site adjacent to and under ornamental vegetation and to the Main Drainage Canal.

Ornamental

Ornamental vegetation is present, primarily along the perimeters (and inside existing fences) of the Option B site, entirely consisting of partially broken rows of oleander (*Nerium oleander*). In addition, ornamental rose (*Rosa* sp.) bushes are present in the northeast portion of the Option B site. Ornamental vegetation mapped within the survey area includes that associated with an existing residence northeast of the Option B site and to the north associated with the Public Works facility.

Agricultural

Agricultural land, within the survey area but outside of the project site, is present as fallow fields to the south, west, northwest, and northeast, with an active orchard east of West Biggs Gridley Road.

Developed

Developed land within the project site consists of remnant, abandoned buildings and concrete foundations from previous land uses and portions of West Biggs Gridley Road. Other developed areas in the survey area include a paved access road and the Public Works facility to the north, West Biggs Gridley Road to the east, and the residence to the east associated with the active orchard.

General Wildlife Observations

Habitat within the survey area is marginally suitable for supporting various wildlife species due to the disturbed nature of the project site and surrounding land uses, and the subsequent reestablishment of nonnative vegetation on-site. Species common to disturbed vegetation communities described above that were observed during the survey include, but are not limited to, rock dove (*Columba livia*), American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), and white-crowned sparrow (*Zonotrichia leucophrys*). Species that are more restrained to native marshland habitat include those observed flying overhead such as great blue heron (*Ardea herodias*) and cackling goose (*Branta hutchinsii*), with an individual northern harrier (*Circus cyaneus*), a California Species of Special Concern (SSC), foraging in the survey area and adjacent elsewhere. A complete list of wildlife species observed during the surveys is included in Table B-2 in **Appendix B**.

DISCUSSION OF IMPACTS

a) ***Less Than Significant Impact with Mitigation Incorporated.*** Candidate or special-status species are commonly characterized as species that are at potential risk to their persistence in a given area or across their range. These species have been identified and assigned a status ranking by governmental agencies such as the CDFW and the USFWS, or nongovernmental organizations such as the CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this biological review, special-status species are defined by the following codes:

1) Listed, proposed, or candidates for listing under the ESA (50 CFR Section 17.11 – listed; 61 Federal Register [FR] 7591, February 28, 1996, candidates)

2) Listed or proposed for listing under the CESA (CFGC Section 2050 et seq.; 14 CCR Section 670.1 et seq.)

3) Designated as Species of Special Concern (SSC) by the CDFW

4) Designated as Fully Protected (FP) by the CDFW (CFGC Sections 3511, 4700, 5050, and 5515)

5) Species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380) including CRPR 1B and 2 species

The query of the USFWS, CNPS, and CDFW databases, combined with the site visit and survey, identified limited habitat marginally suitable to support special-status species with the potential to occur on the project site.

The results of the four-quadrangle database record searches revealed documented occurrences for a total of 20 special-status plant species and a total of 21 special-status wildlife species. Many of the special-status species with documented occurrences were evaluated by Michael Baker as having a "Low" or "Not Expected" potential for occurrence due to a lack of suitable habitat and/or being outside known affinities (elevation range, distribution, etc.) and are therefore not discussed further. Species determined to have a "Moderate" or "High" potential for occurring, and those observed on-site during the survey, warrant discussion.

No special-status plants species were observed during the survey. One special-status wildlife species, northern harrier, was identified foraging on-site during the survey. Based on the literature review and database searches and an on-site habitat suitability assessment, Michael Baker determined that the survey area also contains suitable habitat for one other special-status wildlife species and one special-status plant species.

Special-Status Wildlife

One special-status wildlife species, northern harrier, was observed foraging on-site during the survey. No other special-status wildlife species were observed during the survey. One other special-status wildlife species, giant garter snake (GGS; *Thamnophis gigas*), a state- and federally listed threatened species, was determined to have a moderate potential to occur within the survey area. All other special-status wildlife species known to occur in the vicinity of the survey area either have a low potential or are not expected to occur within the survey area.

Northern Harrier

Northern harrier occurs in coastal salt and freshwater marshes and grasslands, from desert sinks to mountain cienagas. It nests on the ground in shrubby vegetation; nests are typically built on a large mound of sticks in wet areas, usually at marsh edges. During the survey, a mature individual was observed foraging within the survey area. However, suitable nesting habitat (marsh edges) is not present, and the nearest CNDDB occurrence is over 5 miles to the north. Due to the high mobility of this species, and the lack of nesting habitat in the survey area, no impacts on northern harrier are expected as a result of the proposed project.

Giant Garter Snake

GGS is the most aquatic of the garter snakes in California. It prefers freshwater marshes, swamps, riparian scrub, wetlands, and low gradient streams, but with the conversion of much of the Central Valley to agricultural lands, this species has adapted to drainage canals, irrigation ditches, and rice fields. The Main Drainage Canal (a slow-moving drainage canal) at the north end of the project site and within the survey area is periodically maintained to ensure channel capacity, with the disturbed uplands on-site containing a few small mammal burrows suitable for dispersal, foraging, and winter refuge.

Although this species was not observed during the survey, an adult individual was documented in 2014 in Hamilton Slough near the 6th Street bridge, approximately one-third mile east of the study area, with four other occurrences within 5 miles. Habitat was

reported to have had moderate quality, consisting of slow-moving water, with small fish visible, and emergent and bankside vegetation. Bankside (riparian) and marsh vegetation such as cattails and bulrushes are necessary for cover.

Therefore, during project construction, there is a moderate potential for temporary impacts on GGS if present in the Main Drainage Canal during its active period, or in the uplands/burrows while wintering.

Up to approximately 0.003 acres of aquatic habitat and up to approximately 0.26 acres of upland habitat could be affected during construction. Activities that have the potential for aquatic habitat disturbance would consist of equipment movement to install the water line along the bridge and use of construction best management practices to protect water quality in the Main Drainage Canal when those activities occur. Activities that have the potential for upland habitat disturbance include vehicle and equipment movement into and out of the site if the northern access gate (just south of the bridge) is used and potential construction area staging. No aquatic or upland habitat would be removed to accommodate the proposed action. The impact would be identical for both options because the construction disturbance area would be the same. Because no permanent modification of aquatic or upland habitat within 200 feet of aquatic habitat would occur as a result of implementing the proposed project, there would be no permanent impacts on GGS aquatic or upland habitat (Michael Baker International 2018).

Mitigation measures **MM BIO-1** through **MM BIO-8** (generated from Appendix C of the Programmatic Consultation with the US Army Corps of Engineers) would require take authorization, personnel training, avoidance, preconstruction surveys, and the applicable mitigation. If GGS are found during preconstruction surveys, they would be avoided and/or protected in accordance with applicable laws and regulations. This mitigation would reduce impacts to a less than significant level.

Mitigation Measures

MM BIO-1 Twenty-four (24) hours prior to construction activities, the project area shall be surveyed for GGS by a qualified biologist. Survey of the project area shall be repeated if a lapse in construction activity of 2 weeks or greater has occurred. A qualified biological monitor shall be present during all project activities associated in or near GGS aquatic habitat (Main Drainage Canal). If GGS is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Any sightings and any incidental take shall be reported to the USFWS and the CDFW.

MM BIO-2 Prior to the commencement of construction activities, construction personnel, including contractors, shall receive training through a USFWS-approved worker environmental awareness program (WEAP). This training shall instruct project personnel to recognize GGS and its habitat.

MM BIO-3 The City shall avoid construction activities within 200 feet from the banks of GGS aquatic habitat, if and where feasible. This may be accomplished by limiting movement of heavy equipment to existing roadways and using the southern access driveway to the greatest extent feasible to minimize upland habitat disturbance. If avoidance of GGS individuals is not feasible, take

authorization from USFWS through informal consultation pursuant to ESA Section 7 and California Fish and Game Code Section 2081 shall be required.

MM BIO-4 Construction activity within habitat shall be conducted between May 1 and October 1. This is the active period for GGS, and direct mortality is lessened because snakes are expected to actively move and avoid danger. Between October 2 and April 30, the City shall contact the USFWS Sacramento Fish and Wildlife Office and the CDFW to determine if additional measures are necessary to minimize and avoid take.

MM BIO-5 Clearing shall be confined to the minimal area necessary to facilitate construction activities. GGS aquatic habitat shall be flagged and designated within or adjacent to the project area as Environmentally Sensitive Areas (ESA). This area shall be avoided by all construction personnel to the greatest extent feasible. Project-related equipment and materials shall remain outside of these ESAs.

MM BIO-6 In the unlikely event that dewatering in the channel is necessary during construction, any dewatered habitat shall remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.

MM BIO-7 After completion of construction activities, any construction debris shall be removed and, wherever feasible, disturbed areas (if any) restored to pre-project conditions. Restoration work may include such activities as replanting species removed from banks or replanting emergent vegetation in the active channel.

MM BIO-8 To compensate for the temporary disturbance of upland habitat during construction (e.g., equipment movement, grading, and material staging areas, trenching for utility connections, etc.), the City shall provide compensatory mitigation, which will be based on the actual acreage and on the duration of disturbance. Temporary impacts shall be mitigated by restoring the disturbed area, provided disturbance occurs within one season.

Mitigation Responsibility: *City of Biggs*

Mitigation Action/Timing: *Prior to and during construction*

Compliance Monitoring: *City of Biggs*

Verification Action/Timing: *Prior to and during construction*

Nesting Birds

Various migratory and resident raptors and other birds have the potential to inhabit the project site and adjacent properties. Some species are afforded specific protection, such as osprey (*Pandion haliaetus*), which is a CDFW Fully Protected Species. However, raptor and other bird species such as merlin (*Falco columbarius*), Cooper's hawk (*Accipiter cooperii*), and sharp-shinned hawk (*Accipiter striatus*), species on the CDFW Watch List, are not protected under the ESA or the CESA. Nonetheless, the nests of all raptor species

are protected under the MBTA and CFGC Section 3503.5. The nests of nearly all avian species are protected under the MBTA, which makes it illegal to destroy active bird nests, including eggs or chicks.

The project site and survey area contain habitat suitable for foraging for a variety of raptors and other birds. In addition, the disturbed areas, buildings, and ornamental vegetation provide marginal habitat suitable to support nesting raptors and other birds.

Construction activities involving tree removal, grading, and vegetation clearing may cause direct mortality or damage to nests. In addition, construction activities near active nests may result in nest abandonment, which would be a potentially significant impact. Mitigation measures **MM BIO-9** through **MM BIO-11** would require preconstruction surveys for nesting birds, buffers for active nests, and seasonal restrictions on the clearing of vegetation with identified nests. If nesting birds are found during preconstruction surveys, they would be avoided and/or protected in accordance with applicable laws and regulations. This mitigation would reduce impacts to a less than significant level.

Mitigation Measures

MM BIO-9 If clearing and/or construction activities would occur during the bird breeding season (typically January through July for raptors and February 15 through August 15 for other birds), preconstruction surveys to identify active nests shall be conducted within 3 days of construction initiation, particularly vegetation clearing and ground-disturbing activities. Surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 500-foot buffer (if feasible). If no active nests are found, no further mitigation is required. Surveys shall be repeated if relevant construction activities are delayed or postponed.

MM BIO-10 If an active nest is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is deemed inactive by a qualified biologist. Restrictions shall include establishment of exclusion zones (no ingress of personnel or equipment) at a minimum radius of 300 feet around an active raptor nest and 100 feet around other active bird nest(s). Activities permitted within exclusion zones and the size may be adjusted through consultation with the CDFW.

MM BIO-11 Vegetation containing active nests that must be removed as part of the project shall be removed during the non-breeding season (August 16 through December 31), but only provided that the nest(s) are confirmed no longer active.

Mitigation Responsibility: *City of Biggs*

Mitigation Action/Timing: *Prior to and during construction (MM BIO-9 through MM BIO-11)*

Compliance Monitoring: *City of Biggs*

Verification Action/Timing: *Prior to and during construction*

Burrowing Owl

The nearest burrowing owl (*Athene cunicularia*) CNDDB occurrence was reported from 2006 over 6 miles northeast of the survey area. In addition, the project site contains high grasses and forbs (burrowing owls prefer short vegetation) and tall buildings, fences, and ornamental vegetation that typically preclude burrowing owl from the visual protection necessary to avoid predators. Therefore, burrowing owl is not expected to occur on the project site or in the survey area.

Special-Status Bats

The database queries identified one special-status bat species in the project vicinity—silver-haired bat (*Lasionycteris noctivagans*)—which is not recognized by the USFWS or CDFW, but has a state and global ranking. In general, the CDFW is most concerned about the loss of maternity roosting sites. Suitable roosting sites for this species include hollow trees, beneath exfoliating bark, in abandoned woodpecker holes, and rarely under rocks, none of which are present within the survey area. Therefore, silver-haired bat is not expected to occur on the project site or in the survey area.

The entire survey area is disturbed and/or developed and lacks native vegetation communities, particularly vernal pools, marshlands, and wooded riparian systems. Other special-status wildlife species known to occur in the vicinity of the survey area either have a low potential or are not expected to occur on-site.

Special-Status Plants

No special-status plant species were observed during the survey. One special-status plant species, Sanford's arrowhead (*Sagittaria sanfordii*), a CRPR 1B.2 species, was determined to have a moderate potential to occur in the survey area. The entire survey area is disturbed and/or developed and lacks native vegetation communities and/or alkaline soils on-site. Other special-status plants species known to occur in the vicinity of the survey area either have a low potential or are not expected to occur on-site.

Sanford's Arrowhead

Sanford's arrowhead is a perennial rhizomatous herb (emergent) that typically blooms May through October (sometimes in November). It is often found in standing or slow-moving freshwater ponds, marshes, swamps, and ditches, and is known from elevations between 0 and 4,170 feet amsl. The Main Drainage Canal (a slow-moving ditch) at the north end of the project site and in the survey area is subject to periodic maintenance to maintain flow capacity. Therefore, suitable habitat to support Sanford's arrowhead is limited. Although this perennial species was not observed during the survey, it has been documented within 0.5 mile of the survey area, with several other occurrences within 5 miles. Therefore, there is a moderate potential for impacts on Sanford's arrowhead if established within the canal at the time of construction. Mitigation measure MM 4.12 requires a preconstruction survey for Sanford's arrowhead. If plants are found, they would be relocated to a protected area and monitored to ensure relocation success. The impact would be less than significant with mitigation incorporated.

Mitigation Measure

MM BIO-12 Prior to work involving the water line extension across the Main Drainage Canal next to the bridge, a focused survey for Sanford's arrowhead shall be conducted by a qualified botanist. If any Sanford's arrowhead plants are identified within the area where best management practices would be implemented to prevent materials or sediment from falling into the canal (mitigation measure MM BIO-13), a plan shall be developed for relocating the plants to a suitable protected area. The relocation shall occur prior to initiation of any project activities that may impact Sanford's arrowhead. Monitoring by a qualified botanist shall be required to ensure the relocation is successful. If no plants are found during the survey, no additional mitigation is required.

Mitigation Responsibility: *City of Biggs*

Mitigation Action/Timing: *Prior to construction*

Compliance Monitoring: *City of Biggs*

Verification Action/Timing: *Prior to construction*

b) *Less Than Significant Impact with Mitigation Incorporated.* Special-status habitats include (a) areas of special concern to resource agencies; (b) areas protected under CEQA; (c) areas designated as sensitive natural communities by the CDFW; (d) areas outlined in CFGC Section 1600 et seq.; (e) areas regulated under Clean Water Act Section 404; and (f) areas protected under local regulations and policies.

The project site contains portions of the Main Drainage Canal that supports disturbed emergent freshwater marsh, a special-status vegetation community. The canal is a constructed feature for conveying agricultural drainage and runoff and is periodically maintained. Although this feature contains streambed and banks subject to CDFW jurisdiction pursuant to CFGC Section 1600 et seq., temporary impacts on this vegetation community would be limited to minor foot traffic and potential falling debris during the proposed installation of the 8-inch water main spanning the canal adjacent to the bridge. The pipeline would require holes to be drilled through the existing concrete abutment on both sides of the canal, resulting in impacts totaling 2 square feet to already developed areas. Such impacts on CDFW streambed/banks are not considered a substantial alteration. Therefore, a Notification of Lake or Streambed Alteration to the CDFW is not anticipated to be required. Further, mitigation measures **MM BIO-13** and **MM BIO-14** would require best management practices (BMP) and monitoring during construction necessary to avoid and minimize impacts on the canal during construction.

Mitigation Measures

MM BIO-13 Prior to project activities occurring within and around the Main Drainage Canal, installation of appropriate best management practices (BMP) shall be implemented. An impermeable sheet of plastic (tarp or visqueen) shall span the banks and be secured (without gaps) to the concrete abutment below the pipeline installation points to catch any fallen debris during construction. Further, staging of equipment and materials shall be contained with proper BMPs outside of the canal, with the banks of the

canal protected from sediment entering the canal using wattles or other implements. Following the completion of construction at the canal, the plastic sheet shall be removed carefully to prevent debris from falling into the canal.

MM BIO-14 A qualified biological monitor shall be present during all project activities within and around the Main Drainage Canal. The monitor shall be authorized to stop work and direct crews on corrective measures prior to continuing construction.

Mitigation Responsibility: *City of Biggs*

Mitigation Action/Timing: *Prior to and during construction (MM BIO-13 and MM BIO-14)*

Compliance Monitoring: *City of Biggs*

Verification Action/Timing: *Prior to and during construction*

c) *Less Than Significant Impact with Mitigation Incorporated.* The project site contains portions of the Main Drainage Canal that supports disturbed emergent freshwater marsh. The freshwater marsh vegetation on-site is presumed wetland waters of the United States subject to CWA Section 404. Construction activities would result in temporary impacts, which would be limited to minor foot traffic and potential for falling debris during the proposed installation of the 8-inch water main across the canal adjacent to the bridge. The water line would span the canal, with each end of the line installed in the existing concrete abutment under the bridge. There would be no permanent dredge and/or fill impacts on WoUS because the project would not require channel modification. With the implementation of mitigation measures **MM BIO-13** and **MM BIO-14**, which require use of BMPs during construction to minimize impacts on wetlands and monitoring by a qualified biologist to ensure the effectiveness of BMPs, impacts would be less than significant.

d) *Less Than Significant Impact.* A review of the CDFW (2018) Biogeographic Information and Observation System (BIOS) was performed to determine if the project site is located in an Essential Connectivity Area. Based on this review, the project site is not within an Essential Connectivity Area. The nearest Essential Connectivity Areas are over 10 miles to the southwest and over 11 miles to the northeast. While the project site does contain some disturbed/undeveloped areas, it is not adjacent to open space or contiguous woodland or forest areas. Further, residences, agricultural lands, and roads surround the project site, and it does not provide nursery sites for wildlife or large forested areas that would be conducive to functioning as a corridor for migratory wildlife. The Main Drainage Canal may provide a corridor suitable for migration for a variety of wildlife species. However, no permanent alteration of this feature would occur. Temporary impacts on wildlife movement, if any, would occur only during installation of the water line across the canal next to the bridge when BMPs such as plastic sheeting and wattles per mitigation measure **MM BIO-13** would be used to protect the drainage from debris and sediment. Therefore, impacts would be less than significant.

e) *No Impact.* No local biological resources policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, are applicable to the proposed project. There would be no impact.

f) *No Impact*. The Butte Regional Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) is being coordinated by the Butte County Association of Governments (BCAG) on behalf of the Cities of Biggs, Chico, Gridley, and Oroville, and Butte County. The HCP/NCCP is a comprehensive and broad-based approach to biological resource preservation. The HCP/NCCP is a voluntary plan that will provide comprehensive species, wetlands, and ecosystem conservation and contribute to the recovery of endangered species within the plan area while also establishing a more streamlined process for environmental permitting. As of the date of this Initial Study, the HCP/NCCP has not been adopted. There would be no impact.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in GGS impacts between Option A and Option B because the area of potential construction disturbance that could affect aquatic and upland habitat is the same within the 200-foot avoidance area, which is defined on the west by the area of non-disturbance for the hangars and on the east by the roadway. Impacts on nesting birds and raptors, Sanford's arrowhead, and freshwater emergent marsh would be the same under both options.

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	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.5 CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

SETTING

CONCEPTS AND TERMINOLOGY FOR IDENTIFICATION OF CULTURAL RESOURCES

Cultural resources include historical resources and archaeological resources (as defined in Public Resources Code Section 15064.5). Cultural resources are any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Generally, a resource is considered by the lead agency to be historically significant if the resource meets the criteria for listing in the California Register of Historical Resources (California Register) (California Code of Regulations Title 14(3) Section 15064.5(a)(3)).

CULTURAL RESOURCES IDENTIFICATION EFFORTS

Michael Baker International (2018) prepared a cultural resources technical study for the proposed project. The study consisted of the following: a records search at the Northeast Information Center (NEIC) of the California Historical Resources Information System, California State University, Chico; map review; review of the Native American Heritage Commission Sacred Lands File, consultation with Native Americans and local historical societies; and an intensive pedestrian survey, which was performed on January 18, 2018. The study delineated the area of potential effect (APE) for purposes of Section 106 of the National Historic Preservation Act component of the CEQA-Plus program. The technical study is included in **Appendix C**.

The records search identified three cultural resources within the APE: hangars associated with the former airstrip (map resource [MR] 1); the Fleming Ditch (now called Main Drainage Canal, MR 2); and the Hamilton Slough bridge (12C0058; MR 3).

PALEONTOLOGICAL RESOURCES

The project site is underlain by Quaternary basin (alluvium) deposits (CGS 1992), which are generally too young to contain fossils. A search of the UC Museum of Paleontology database did not reveal any records of fossils found in this geologic unit in Butte County (UCMP 2018).

DISCUSSION

a) ***No Impact.*** No historical resources would be affected by the proposed project. The proposed project would not result in removal or modification of the hangars, and construction-related activities around the buildings such as vehicle and equipment movement and materials storage would be restricted as required in mitigation measure **MM CUL-1**. There would be no modification of the Main Drainage Canal or the Hamilton Slough Bridge (see Section 3.0, Project Description). There would be no impact.

Mitigation Measure

MM CUL-1 The existing buildings on the site shall not be removed or modified to accommodate the project, and vehicle and heavy equipment movement and materials storage in the vicinity of the buildings shall be avoided to the extent feasible. Construction specifications shall include this restriction.

Mitigation Responsibility: *City of Biggs*

Mitigation Action/Timing: *During construction*

Compliance Monitoring: *City of Biggs*

Verification Action/Timing: *During construction*

b–d) ***Less Than Significant Impact with Mitigation Incorporated.*** No archaeological or paleontological resources or human remains are known to exist on the project site (Michael Baker International 2018). However, the project includes ground-disturbing activities that could result in the unanticipated or accidental discovery of archaeological deposits, paleontological resources, or human remains. Implementation of mitigation measure **MM CUL-2** would ensure that provisions are in place to protect paleontological and prehistoric or historical archaeological deposits encountered during construction. The mitigation measure requires impacts on such resources to be avoided or further investigation to be conducted to offset the loss of scientifically consequential information that would occur if avoidance is not possible.

Implementation of mitigation measure **MM CUL-2** would ensure that human remains encountered during project activities would be treated in a manner consistent with state law. This would occur through coordination with descendant communities to ensure that the traditional and cultural values of said communities are incorporated in the decision-making process concerning the disposition of human remains that cannot be avoided.

Implementation of mitigation measures **MM CUL-2** and **MM CUL-3** would ensure that provisions are in place to reduce impacts on currently undiscovered archaeological and paleontological resources and human remains to a less than significant level.

Mitigation Measures

MM CUL-2 Treatment of previously unidentified archaeological and paleontological deposits. Construction personnel involved in excavation and grading activities shall be informed of the possibility of discovering archaeological or paleontological resources at any location and the protocol to be followed if resources are found. The City shall ensure the grading plan notes include specific reference to the potential discovery of such resources. If prehistoric or historical archaeological deposits are discovered during construction, the City's construction contractor shall stop all work within 25 feet of the discovery and an archaeologist shall assess the situation, consult with agencies as appropriate, and make recommendations regarding the treatment of the discovery. The City's contractor shall avoid impacts on archaeological deposits to the extent feasible, but if such impacts cannot be avoided, the deposits shall be evaluated for their California Register eligibility. If the deposit is not eligible for the California Register, no further protection of the finds is necessary. If the deposits are California Register eligible, they shall be protected from project-related impacts, or such impacts shall be mitigated. Mitigation may consist of but is not necessarily limited to systematic recovery and analysis of archaeological deposits, recording the resource, preparation of a report of findings, and accessioning recovered archaeological materials at an appropriate curation facility. Public educational outreach may also be appropriate.

If potentially unique paleontological resources (fossils) are discovered during project construction, work shall be halted immediately within 25 feet of the discovery, the City shall be notified, and a professional paleontologist shall be retained to determine the significance of the discovery. The paleontologist shall establish procedures for paleontological resource surveillance throughout project construction and for temporarily halting or redirecting work to permit sampling, identification, and evaluation of fossils. These procedures shall be implemented throughout project construction. Excavated finds shall be offered to a State-designated repository such as the Museum of Paleontology at the University of California, Berkeley, or the California Academy of Sciences, or to California State University, Chico.

MM CUL-3 Treatment of previously unidentified human remains. The City and/or its construction contractor shall treat any human remains encountered during ground-disturbing activities in accordance with California Health and Safety Code Section 7050.5. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the Butte County coroner has determined the manner and cause of any death, and recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation or to his or her authorized representative. At the same time, an archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel/construction workers shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American most likely descendant

to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Mitigation Responsibility: *City of Biggs*

Mitigation Action/Timing: *Prior to and during construction (MM CUL-2 and MM CUL-3)*

Compliance Monitoring: *City of Biggs*

Verification Action/Timing: *Prior to and during construction*

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.6 GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Section 1803.5.3 of the 2016 California Building Code, creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a)

i) ***No Impact.*** The only known active fault in Butte County is the Cleveland Hill fault, the site of the August 1975 Oroville earthquake. A review of known earthquake faults, as delineated on the most recent Alquist-Priolo earthquake fault zone map (CGS 2015), identified no known earthquake faults traversing the project site. There would be no impact.

ii) ***Less Than Significant Impact.*** The project site, as with virtually all of California, is subject to ground shaking and potential secondary hazards as a result of earthquakes. All facilities constructed as part of the proposed project would be designed in compliance with the

requirements of the California Building Code (CBC) for seismic safety. Compliance with the engineering requirements of the CBC would ensure that the risk of structural failure during a seismic event is minimized to the greatest degree feasible. The impact would be less than significant.

iii) ***No Impact.*** Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in seismic-related ground failure, in which soils liquefy and lose the ability to support structures and/or buried structures (e.g., pipelines) can float to the surface. Three factors are required for liquefaction to occur: (1) loose, granular sediment; (2) saturation of the sediment by groundwater; and (3) strong shaking. Project site surface soils are Esquon-Neerdobe (NRCS 2018); this soil is characterized as silty clay, moderately cemented clay loam and strongly cemented duripan. Therefore, loose, granular, alluvial soils that may be subject to liquefaction do not exist in the project area. There would be no impact.

iv) ***No Impact.*** The project site and land surrounding the site is flat. There is no landslide hazard, and there would be no impact.

b) ***Less Than Significant Impact.*** Construction activities such as grading and trenching would disturb soils and potentially expose them to wind and water erosion. According to the NRCS (2018), Esquon-Neerdobe soils have a low susceptibility to erosion. The project will require preparation of a stormwater pollution prevention plan (SWPPP) to comply with the State Water Resources Control Board Construction General Permit. The SWPPP will identify best management practices (BMPs) to be implemented on the project site to minimize soil erosion and protect the canal over which the new water main would be installed under the bridge crossing. Compliance with the Construction General Permit would minimize soil erosion and would reduce this impact to less than significant.

c) ***No Impact.*** The potential for landslides on the project site was addressed under Impact a)(iv) and was determined to have no impact. The potential for lateral spreading, liquefaction, subsidence, and other types of ground failure or collapse was addressed under Impact a)(iii) above and was determined to have no impact.

d) ***Less Than Significant Impact.*** Expansive soils are soils that swell when subjected to moisture and shrink when dry. Expansive soils typically contain clay minerals that attract and absorb water, greatly increasing the volume of the soil. This increase in volume can cause damage to foundations, structures, and roadways. The project site soil has a high shrink-swell potential. However, the proposed project would be designed in compliance with the requirements of the CBC, which addresses certain grading activities and includes common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil-related impacts. Compliance with CBC regulations would ensure the adequate design and construction of proposed facilities to resist soil movement. Therefore, this is a less than significant impact.

e) ***No Impact.*** The project involves improvements to the City's water system and would have no impact on the use of septic tanks in the project area. There is no impact.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

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

EXISTING SETTING

Certain gases in the earth's atmosphere, classified as greenhouse gas emissions, play a critical role in determining the earth's surface temperature. Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. California is a significant emitter of CO_2e in the world and produced 459 million gross metric tons of CO_2e in 2012 (CARB 2014). In the state, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CARB 2014).

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or micro climates. From the standpoint of CEQA, greenhouse gas impacts on global climate change are inherently cumulative.

REGULATORY FRAMEWORK

STATE

Although lead agencies must evaluate climate change and greenhouse gas emissions of projects, the State CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or specific thresholds of significance and do not specify GHG reduction mitigation measures. Instead, the guidelines allow lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. In addition, no state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating significant effects in CEQA documents. Thus, lead agencies exercise their discretion in determining how to analyze GHGs.

California Global Warming Solutions Act (Assembly Bill 32)

The primary acts that have driven GHG regulation and analysis in California include the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), which instructs the California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The act directed CARB to set a greenhouse gas emissions limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020.

Senate Bill 32

In August 2016, Governor Brown signed Senate Bill (SB) 32 (Amendments to California Global Warming Solutions Action of 2006), which extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emissions reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by Executive Order B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in Executive Orders S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

Climate Change Scoping Plan

CARB adopted the Scoping Plan to identify how the state would achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business as usual"). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all of the CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations occurred through the end of year 2013.

In December 2008, CARB adopted its first version of its Climate Change Scoping Plan, which contained the main strategies California will implement to achieve the mandate of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020.

On December 14, 2017, CARB adopted the 2017 Climate Change Scoping Plan (2017 Scoping Plan), which lays out the framework for achieving the mandate of SB 32 to reduce statewide GHG emissions to at least 40 percent below 1990 levels by the end of 2030 (CARB 2017).

The 2017 Scoping Plan includes guidance to local governments in Chapter 5, including plan-level GHG emissions reduction goals and methods to reduce communitywide GHG emissions. In its guidance, CARB recommends that "local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals." CARB further states that "it is appropriate for local jurisdictions to derive evidence-based local per capita goals [or some other metric that the local jurisdiction deems appropriate, such as mass emissions or per service population] based on local emissions sectors and population projections that are consistent with the framework used to develop the statewide per capita targets" (CARB 2017).

REGIONAL

Butte County 2016 Regional Transportation Plan/Sustainable Communities Strategy

The 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTS/SCS), prepared by the Butte County Association of Governments (BCAG), specifies the policies, projects, and programs necessary over a 20+ year period to maintain, manage, and improve the region's transportation system. The RTP/SCS is the region's long-range plan to meet the requirements of California's Sustainable Communities and Climate Change Act of 2008 (SB 375), which calls on regions throughout California to develop a Sustainable Communities Strategy to accommodate future population growth and reduce greenhouse gas emissions from cars and light trucks. The RTP/SCS is also intended to be consistent with the California Transportation Plan developed by the California Department of Transportation (Caltrans) (BCAG 2016).

Butte County Air Quality Management District

The BCAQMD (2014) provides direction and recommendations for the analysis of GHG impacts of a project and the approach to mitigation measures in its CEQA Air Quality Handbook. The BCAQMD has not adopted GHG emissions thresholds. The guidance in the handbook was used to prepare the analysis, as described in more detail below.

City of Biggs General Plan

The City's General Plan Conservation, Open Space, and Recreation Element includes Policy CR-7.6, which directs that a greenhouse gas inventory and climate action plan be prepared, and that until a climate action plan is adopted, each project is to be evaluated for its impact on greenhouse gases as part of the environmental review process. The City has not adopted a climate action plan as of the date of publication of this Initial Study. An analysis of the project's GHG emissions was prepared and is presented in this section.

DISCUSSION OF IMPACTS

a) ***Less Than Significant Impact.*** The BCAQMD (2014, Table ES-2) has not established numeric screening criteria for GHG emissions, but it states that if the lead agency jurisdiction has not adopted a climate action plan or general plan goals and policies, the BCAQMD recommends that the lead agency consider a project's total emissions in relation to the AB 32 Scoping Plan goals (and additional state goals as they are promulgated) or the thresholds established by other jurisdictions.

The City of Biggs has not adopted a climate action plan. The General Plan contain goals, policies, and actions for the reduction of GHGs. However, the General Plan does not include thresholds of significance for evaluating GHG emissions, or an inventory of sources of GHG emissions in the city. As such, it is appropriate to evaluate the proposed project's impacts against thresholds established by another jurisdiction. The adjoining air districts are the Tehama County Air Pollution Control District (TCAPCD), Northern Sierra AQMD (which comprises Nevada, Sierra, and Plumas counties), Glenn County APCD, Colusa County APCD, and Feather River AQMD (comprising Sutter and Yuba counties). Of these districts, only the TCAPCD has established or adopted a threshold for determining the significance of GHG impacts. The TCAPCD established a conservative screening criterion of 900 metric tons of CO_2e per year for operational emissions to determine which projects would require further analysis and mitigation with regard to climate change. The TCAPCD screening threshold is based on a market capture rate determined by the California Air Pollution

Control Officers Association (CAPCOA) in its 2008 CEQA and Climate Change document (TCAPCD 2015).

AB 32 requires California, by the year 2020, to reduce its statewide GHG emissions such that emissions are at the level that occurred in 1990. The TCAPCD screening threshold of 900 metric tons of CO_2e per year is based on achieving this target. SB 32 requires California, by the year 2030, to reduce its statewide GHG emissions such that emissions are 40 percent below the level that occurred in 1990. Therefore, to be consistent with the 2020 GHG methodology and the SB 32 GHG reduction target for 2030, the GHG emissions threshold used to evaluate the impacts of this project is 40 percent below the TCAPCD threshold, or 540 metric tons of CO_2e per year for operational emissions.

GHG emissions for the project would primarily be indirect off-site emissions resulting from the generation of electricity used to run the project's pumps. The project would not increase the amount of water used by the City. Therefore, there would be no increase in the system-wide use of well pumps. The pump used to operate the water tank and to maintain the system water pressure is estimated to use 142 megawatt-hours (MWhr) of electricity per year. To be conservative, it is assumed that all of this electrical power is in addition to existing energy used for the City water system. The GHG intensity factors (amount of GHG emissions per MWhr of electricity generated) for the Gridley Biggs Electric Department is not known. The statewide average intensity factors for all California utilities is used in the calculations (CAPCOA 2017). **Table 4.7-1** summarizes the estimated GHG emissions resulting from long-term operation of the project.

TABLE 4.7-1
GHG EMISSIONS FROM LONG-TERM OPERATIONAL ENERGY USE

Input: Estimated Annual Energy Use (MWhr)					142
Gas	**Intensity Factor[1] (lbs/MWhr)**	**Emissions (lbs)**	**Emissions (MT)**	**GWP**	**CO_2e (MT)**
CO_2	1,002	142,284	64.54	1	64.54
CH_4	0.03	4.12	0.0019	25	0.05
N_2O	0.01	0.88	0.0004	298	0.12
				Total	**64.7**
				Exceed Screening Threshold of 540 MT CO_2e per year?	**No**

Notes: [1]Intensity factor is California average for electrical utilities reported in 2009 (CAPCOA 2017); MWhr = megawatt-hour; lbs = pounds; MT = metric tons; GWP = global warming potential; CO_2e = carbon dioxide equivalent

As shown in **Table 4.7-1**, the project would not exceed the screening threshold for operational GHG emissions. Therefore, the project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. This impact would be less than significant.

b) ***Less Than Significant Impact.*** The project involves improvements to the City water system to increase water storage, provide more water available for fire suppression, and improve the system water pressure. The project would not directly increase the population or employment in Biggs or Butte County, nor would the project indirectly induce any growth in the city or county. The project is consistent with the City's General Plan land use designation of Agriculture Industrial and the Public/Quasi-Public zoning. Therefore, the project would be consistent with the growth projections and GHG inventory projections for

the region in the Biggs General Plan, the Butte County 2016 Regional Transportation Plan/Sustainable Communities Strategy, and statewide planning efforts detailed in the CARB Climate Change Scoping Plan. The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be less than significant.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

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	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.8 HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

OVERVIEW

Several federal agencies regulate hazardous substances. These include the US Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the US Department of Transportation (DOT). Applicable federal regulations and guidelines are contained primarily in Titles 10, 29, 40, and 49 of the Code of Federal Regulations (CFR). The primary state laws pertaining to hazardous materials and wastes that may be applicable to the proposed project, depending on the activity, include the Hazardous Waste Control Law, Hazardous Substances Information and Training Act, Air Toxics Hot Spots and Emissions Inventory Law,

Underground Storage of Hazardous Substances Act, and Porter-Cologne Water Quality Control Act. At the state level, the California Environmental Protection Agency (CalEPA) is the "umbrella" agency under which a number of the state's environmental agencies operate. These subordinate agencies include the California Air Resources Board, the Department of Pesticide Regulation, the Department of Toxic Substances Control (DTSC), the California Department of Resources Recycling and Recovery (CalRecycle), the Office of Environmental Health Hazard Assessment, and the State Water Resources Control Board. Within CalEPA, the DTSC has primary regulatory responsibility for hazardous waste management. CalEPA has adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Unified Program is implemented at the local level by a local agency—the Certified Unified Program Agency (CUPA). Butte County Environmental Health is the CUPA for the county. State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, if such materials are accidentally released, to prevent or to mitigate injury to health or the environment.

California's Hazardous Materials Release Response Plans and Inventory Law, also called the Business Plan Act, is intended to minimize the potential for accidents involving hazardous materials and facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on-site, to prepare an emergency response plan, and to train employees to use the materials safely. This information is compiled into a Hazardous Materials Business Plan that must be submitted to Butte County Environmental Health, which is responsible for ensuring that businesses and facilities subject to the Business Plan Act comply with applicable requirements.

CEQA (Public Resources Code Section 21092.6) requires that the lead agency consult a list of hazardous waste and substances sites compiled by certain state agencies pursuant to Government Code Section 65962.5 to determine whether the project and any alternatives are located on a site included on the list. This list is referred to as the Cortese List, which is intended to be used as a planning document by state and local agencies and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites.

The DTSC and the Regional Water Quality Control Board are the two primary agencies for issues pertaining to sites where hazardous materials have resulted in environmental contamination (e.g., soil and groundwater). The Central Valley RWQCB is the regional authority for water quality. Local jurisdictions, such as Butte County, may also be involved in site remediation projects, such as leaking underground storage tanks. These agencies implement a regulatory process to address the release of hazardous materials that could be harmful to public health and the environment.

Construction projects affecting 1 acre or more are required to comply with the National Pollutant Discharge Elimination System (NPDES) general construction permit to manage stormwater runoff. This permit requires a stormwater pollution prevention plan that identifies best management practices for the handling of fuels and oils, including measures to minimize the potential for spills and procedures for spill cleanup if it were to occur. These BMPs are intended to minimize the potential for accidental spills on construction sites by requiring the designation of safe, covered storage areas for such materials, as well as safe handling practices.

DISCUSSION OF IMPACTS

a) ***Less Than Significant Impact.***

Construction

Construction of the proposed project would involve the transport, use, and disposal of common hazardous materials such as fuels, oil, solvents, paints, and landscaping materials. These materials are routinely used in construction activities and would be regulated through compliance with applicable federal, state, and local laws as well as product labeling. These materials would be used only temporarily during construction activities. BMPs to control the potential for hazardous materials spills and equipment leaks would be required to be implemented in accordance with the SWPPP. As such, the handling of these materials on the project site would not create a significant hazard to the public or the environment.

Operation

The types and amounts of hazardous materials that would be used during operation would be limited to lubricants and related products for the booster pump and diesel fuel for the backup generator. Fuel for the generator would be stored in a 1,500-gallon aboveground storage tank (AST) adjacent to the booster pump/control building.

Because diesel fuel would be stored in the AST, the project would be subject to regulation by the State Fire Marshal under the Aboveground Petroleum Storage Act element of the Unified Program and California Health and Safety Code Chapter 6.67, Sections 25270–25710.13. The City will be required to prepare a spill prevention control and countermeasure plan to minimize the potential for diesel fuel releases from the tank. In addition, the City will be required to prepare and submit a Hazardous Materials Business Plan because of the volume of diesel fuel that would be stored on-site. Compliance with these requirements, which would be monitored and enforced by Butte County Environmental Health as the CUPA, would ensure that the presence of the AST on the site would not create a significant hazard to the public or the environment. Impacts would be less than significant.

b) ***Less Than Significant Impact with Mitigation Incorporated.*** The project site is partially developed with hangars and buildings associated with a former airstrip that was present on the site in the 1970s. There are remnants of a building foundation on the southern part of the site. These historic uses may have resulted in spills or disposal of fuel, oil, or pesticides prior to the enactment of hazardous materials and waste management laws and regulations, and there is the potential for soil contamination. Chico Environmental (2018) prepared a Phase I Environmental Site Assessment (ESA) for the site to determine the potential for contamination or other conditions that could pose a human health or environmental risk if not properly managed. For the proposed project, these risks would occur during site preparation and installation of project features such as utility line connections. The Phase I ESA consisted of historical property use research, a regulatory agency records search, property owner interviews, and visual reconnaissance of the site to identify potential recognized environmental conditions (RECs) on the project site.

The Phase I ESA identified the following RECs:

- Potential petroleum hydrocarbons in surface soil along the site's western border due to the presence of discarded oil filters

- Potential polychlorinated biphenyls (PCBs) in surface soil at the base on three pole-mounted transformers immediately south of the Main Drainage Canal

- Potential organochlorine pesticides and arsenic in surface soils due to historical agricultural use and site use as an agricultural operations landing strip

The Phase I ESA recommended that a Phase II ESA be prepared to determine whether the past uses have resulted in soil contamination. A Phase II ESA would consist of soil sampling and laboratory analysis to determine whether there are residual hazardous materials in soil that could pose a risk during site development if not properly managed. Such risks would be limited to construction personnel and would include potential inhalation hazards (contaminants adhering to soil particles) or direct contact with contaminated soils. In addition, although not within the scope of the Phase I ESA, the Phase I ESA noted that structures on the site may contain asbestos or lead-based paint. However, there are no plans to demolish or modify these structures to accommodate the project.

The potential for a release of hazardous materials into the environment due to the project would be effectively managed through completion of a Phase II ESA, which would determine whether soil remediation would be necessary to ensure protection of construction personnel. Remediation could consist of removing affected soil and disposing of it at a facility permitted to accept the waste. With implementation of mitigation measure **MM HAZ-1**, this impact would be less than significant.

Mitigation Measures

MM HAZ-1 In accordance with the recommendations of the Phase I ESA prepared for the project site by Chico Environmental (2018), the City shall have a qualified environmental professional perform an investigation of all RECs identified in the Phase I ESA. The Phase II ESA shall include, at a minimum, soil sampling and laboratory testing to determine the presence of contaminants, a determination of whether contaminant levels exceed any applicable public standards, and recommendations to address contaminants of concern. Should the Phase II ESA identify contamination in areas that would be directly affected by construction activities such as grading, trenching, or other subsurface work, a Risk Management Plan shall be prepared and implemented that (1) identifies the contaminants of concern and the potential risk each contaminant would pose to human health and the environment during construction and post-development and (2) describes measures to be taken to protect workers and the public from exposure to potential site hazards. Measures could include options such as physical site controls during construction, remediation, long-term monitoring, post-development maintenance or access limitations, or some combination thereof. Depending on the nature of contamination, if any, appropriate agencies shall be notified (e.g., City of Biggs Fire Department, Butte County Environmental Health, California Department of Toxic Substances Control). If needed, a Site Health and Safety Plan that meets Occupational Safety and Health Administration (OSHA) requirements shall be prepared and in place prior to commencement of work in any contaminated area.

Mitigation Responsibility:	*City of Biggs*
Mitigation Action/Timing:	*Require Phase II ESA and implement remediation (if needed) prior to site disturbance; document remediation results and provide to Butte County Environmental Health or other agency if directed*
Compliance Monitoring:	*City of Biggs*
Verification Action/Timing:	*Prior to any ground disturbance*

c) ***No Impact.*** The nearest school to the project site is over 1 mile away. The only potential source of emissions would be from periodic testing and necessary operation of the diesel-fueled backup generator in the event of an emergency. Because of the site's distance to the nearest school and emissions controls that the BCAQMD would stipulate in conjunction with the permit to operate under its Rule 400, there would be no impact.

d) ***No Impact.*** Under Government Code Section 65962.5, both DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. The project site is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Chico Environmental 2018). There would be no impact. The potential for historic uses of the site as an airstrip and related operations to be a source of soil contamination is addressed in Impact b), above.

e) ***No Impact.*** The project site is not located within an airport land use plan area, and no airports are within 2 miles of the project site. There would be no impact.

f) ***No Impact.*** The project site is not located in the vicinity of a private airstrip. The proposed project would create no safety hazard impacts related to private airstrips. There would be no impact.

g) ***Less Than Significant Impact.*** The project would include extending an existing water main north of the bridge crossing at the Main Drainage Canal to the site. This extension would involve some work within the roadway and bridge approaches. There may be times during construction when one-way controlled traffic or short traffic halts on West Biggs Gridley Road are required. This would be temporary and would not permanently affect the ability of emergency vehicles to use West Biggs Gridley Road. The site would be readily accessible to emergency vehicles via existing driveways from West Biggs Gridley Road. Impacts would be less than significant.

h) ***No Impact.*** According to mapping prepared by Cal Fire, the project site is not located in a very high fire hazard severity zone (Cal Fire 2008). The site is surrounding by agricultural fields to the west, south, and east, and to the north by City facilities, and is near downtown Biggs. There is no urban-wildland interface, nor would the project construct residences in such a location. There would be no impact.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

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	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.9 HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a, c, e, f) ***Less Than Significant Impact.*** The proposed project would involve the use of heavy equipment and various construction materials at the site. Fuel or oil leaks from heavy

equipment or inadvertent spills of construction products such as cement have the potential to affect water quality if these substances enter a waterway, such as the Main Drainage Canal. Construction activities such as grading and trenching would disturb soils and potentially expose them to wind and water erosion. To minimize the potential for water quality impacts, the City will implement a stormwater pollution prevention plan (SWPPP) in order to comply with the State Water Resources Control Board Construction General Permit. The SWPPP will identify best management practices (BMPs) to be implemented on the project site to minimize the potential for water quality impacts. Implementation of the SWPPP would reduce this impact to less than significant.

b) ***No Impact.*** The purpose of the proposed project is to ensure City water supply reliability by improving water storage and system pressure. It would not result in additional groundwater extraction. There would be new impermeable surfaces at the site with installation of the tank (approximately 14,000 square feet) and building (2,560 square feet), but the additional approximately one-third of an acre increase in impermeable surfaces would have little, if any, measurable effect on groundwater recharge. There would be no impact.

d) ***Less Than Significant Impact.*** The additional approximately one-third acre of structures on the site would not substantially alter the existing drainage patterns on the site or generate substantial amounts of stormwater runoff compared to existing conditions. The proposed project would not result in flooding on- or off-site. Impacts would be less than significant.

g, h) ***No Impact.*** The project is not located within Flood Zone X, as mapped by the Federal Emergency Management Agency (FEMA 2011). No housing would be placed within a 100-year floodplain as a result of the project. There would be no impact.

i) ***No Impact.*** The project site, as well as the entirety of Biggs, is located in the Oroville Dam inundation zone. The inundation zone assumes that the dam is completely eliminated. Under such circumstances, floodwater would reach the project site approximately 2 hours after time of release and would reach a depth of 4 feet approximately 7 hours after time of release. Failure or overtopping of the levees along the Feather River could result in minor to severe flooding on the project site. The segment of the Feather River from which overflows would affect the project site is in Department of Water Resources (DWR) Management Area 7. It would not involve activities that would affect dam operations or levees. There would be no impact.

j) ***No Impact.*** The project site is not located near an ocean or large body of water with potential for seiche or tsunami. Additionally, the topography of the project site is flat and not at risk of mudflows. There would be no impact.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.10 LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) ***No Impact.*** The project site is partially developed with hangars and buildings associated with a former airstrip. The water tank, well, and pump components of the proposed project would occur in that area, which would not divide an established community. The water line extension to the site would occur along West Biggs Gridley Road. There would be no impact.

b) ***No Impact.*** The applicable land use plan is the City of Biggs General Plan (2014). The project site was annexed into the city in 2016 and has a land use designation of Agriculture Industrial and is zoned Public/Quasi-Public. The proposed water storage tank and associated features are consistent with the land use designation and zoning. Relevant environmental policies are noted in the technical sections of this document. No inconsistencies were identified.

c) ***No Impact.*** See subsection 4.4, Biological Resources. There is no adopted HCP/NCCP that is applicable to the proposed project.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.11 MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) ***No Impact.*** No mineral resources have been identified in the project area, and no mining operations exist on the proposed project site. Therefore, the project will have no impact on the loss of availability of a known mineral resource.

b) ***No Impact.*** Neither Butte County nor the City of Biggs has delineated any location within the project area as a mineral resource recovery site in any land use plans. The project would have no impact on the loss of availability of a locally important mineral resource recovery site.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.12 NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

OVERVIEW

Noise is a subjective reaction to different types of sounds. Noise is typically defined as airborne sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

The decibel scale is used to measure sound and it uses the hearing threshold (20 micropascals) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. Within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by A-weighted sound levels.

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dB is generally perceived as a doubling in loudness. For example, a 70 dB sound is half as loud as an 80 dB sound and twice as loud as a 60 dB sound.

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source near the ground. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dB, while a solid wall or berm reduces noise levels by 5 to 10 dB (FHWA 2006).

HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. Regarding increases in A-weighted noise levels (dBA):

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10 dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

FUNDAMENTALS OF ENVIRONMENTAL GROUNDBORNE VIBRATION

Sources of groundborne vibrations include natural phenomena or human-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. For the purposes of this analysis, a PPV descriptor with units of inches per second is used to evaluate construction-generated vibration for building damage and human complaints. Generally, a PPV of less than 0.08 inches per second does not produce perceptible vibration. At 0.1 PPV inches per second, continuous vibrations may begin to annoy people but there would be no risk of architectural damage to normal buildings. A 0.2 PPV is commonly used as a threshold for annoyance for people in buildings and is a level at which there is a risk of architectural damage to normal dwellings (Caltrans 2013).

SETTING

The project site is in a rural/agricultural area near the southwest side of Biggs. Existing sources of noise in the area include traffic on West Biggs Gridley Road, occasional equipment use in the City's Public Works yard north of the project site, agriculture-related industries to the northeast including the SunWest Milling Company rice mill, occasional farming equipment in the fields surrounding the project site, and the Union Pacific Railroad tracks approximately 1,500 feet east of the project site.

NOISE-SENSITIVE RECEPTORS

Noise-sensitive land uses are those that may be subject to stress and/or interference from excessive noise. Noise-sensitive land uses include public schools, hospitals, and institutional uses such as churches, museums, and private schools. Typically, residential uses are also considered noise-sensitive receptors. Industrial and commercial land uses are generally not considered sensitive to noise. The closest noise-sensitive receptor to the project site is a single-family home across West Biggs Gridley Road from the northeast corner of the project site at the bridge. There are no other sensitive receptors within 1,000 feet of the project site.

CITY OF BIGGS GENERAL PLAN

The following policies and actions from the City's General Plan (2014) are relevant to the analysis of potential noise impacts:

> Policy N-1.6 (Construction Activity) – Utilize standards in the Municipal Code to address issues related to the timing and duration of construction activity.
>
> Action N-1.6.2 (Temporary Construction Noise) – Consider the effects of temporary construction-related noise activities during the project review process, and incorporate noise mitigation techniques including movement of equipment staging areas, screening of portable noise sources, limits on amplified sound devices, and use of noise baffling and reducing technologies.
>
> Policy N-2.1 (Well-Designed Noise Mitigation) – Utilize effective noise attenuation measures that complement the Community Enhancement Element's goals.
>
> Action N-2.1.1 (Noise Control Measures) – Limit noise exposure through the use of insulation, building design and orientation, staggered operating hours, and other techniques. Utilize physical barriers such as landscaped sound walls only when other solutions are unable to achieve the desired level of mitigation.

DISCUSSION OF IMPACTS

a, c, d) ***Less Than Significant Impact***. Temporary increases in noise levels would occur during construction activities. Most of the heavy equipment use would be in the southern part of the site, which is several hundred feet from the closest residence to the northeast. Section 7.40.160 of the Biggs Municipal Code establishes that construction activities shall not occur between the hours of 7:00 PM and 6:00 AM on weekdays or at any time on Sundays or holidays in such a manner that creates noise clearly audible across a residential zone or a commercial zoned real property. The City's construction contracts will include this requirement, which will be monitored and enforced by City staff to ensure compliance with General Plan Policy N-1.5 and Action N-1.6.2.

The proposed project would include a booster pump, which would be a source of intermittent noise when the pump is operating. Consistent with General Plan Policy N-2.1 and Action N-2.1.1, the pump would be inside a building, which would provide noise insulation and would attenuate any noise generated by the pump.

The project would also include an emergency backup generator which would only operate for short periods (1 to 2 hours per month) for testing and maintenance, and during power-outages. Section 7.40.200 of the Biggs Municipal Code establishes that the emission

of sound in the performance of emergency work is not subject to the provisions of chapter 7.40 Noise Regulation. Maintaining city water supply and system pressure during a power outage would be considered emergency work. Impacts would be less than significant.

b) ***Less Than Significant Impact.*** The proposed project would involve the use of heavy equipment for site preparation and construction of the tank, and a drill rig for the groundwater well, which could be a temporary and intermittent source of groundborne vibration. **Table 4.12-1** lists examples of typical construction equipment that could be used on the project and for which published vibration data are available.

TABLE 4.12-1
REPRESENTATIVE CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Equipment	Peak Particle Velocity at 25 Feet (in/sec PPV)
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Small tractors	0.003

Source: Caltrans 2013, Table 18

The threshold at which there is a risk of architectural damage to normal dwellings is 0.2 inches per second PPV (Caltrans 2013). Based on the vibration levels presented in **Table 4.12-1**, ground vibration generated by the type of construction equipment needed to implement the project, such as tractors and trucks, would be less than 0.09 inches per second PPV at 25 feet and would not pose a significant risk to nearby structures or their occupants.

Operation of the project would not include any sources of groundborne vibration. Impacts would be less than significant.

e) ***No Impact.*** The proposed project site is not located within an airport land use plan area or within 2 miles of a public airport. There would be no impact.

f) ***No Impact.*** The proposed project site is not in the vicinity of a private airstrip. There would be no impact.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.13 POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) ***No Impact.*** The proposed project would improve the reliability of the City water system for current users and anticipated future growth in the city. While a new well would be installed to replace the existing C Street Well, no additional groundwater development is proposed as part of the project. The 8-inch water line extension would connect the tank system to the existing water system only. These improvements would not provide additional capacity that would be growth inducing. Therefore, the project will have no impact on population growth.

b, c) ***No Impact.*** The project site contains buildings associated with a former airstrip, but no residences. There would be no displacement of people or housing.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.14 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:				
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a, b) ***No Impact.*** Fire protection services are currently provided to the City of Biggs and the project site through a contractual arraignment with the Butte County Fire Department. Police protection services are currently provided to the City of Biggs through a contractual arraignment with the City of Gridley Police Department. Construction and operation of the water storage tank, control/pump room, and well would not increase the demand for new or expanded fire or police facilities, the construction of which could result physical impacts. It would not involve the development of additional water supply beyond that necessary for future growth and therefore would not increase the demand for these services. There would be no impact.

c, d) ***No Impact.*** The proposed project consists of enhancements to the City's water storage and delivery system to improve water quality and reliability for existing and already planned growth. It would not involve the development of additional water supply beyond that necessary for future growth and therefore would not increase the demand for school or park facilities. There would be no impact.

e) ***No Impact.*** The new water storage tank and well would be operated and maintained by City of Biggs Public Works. The proposed project would be developed on a site that has been disturbed by past activities and is adjacent to the City's Public Works facilities. There would be no demand for other government services that would result in the need for facilities to be expanded or constructed. There would be no impact.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.15 RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a, b) ***No Impact.*** The proposed project would not result in the construction of any new residential units. The use of existing parks and other recreational facilities would not be increased, and no new or expanded facilities would be required. Therefore, implementation of the proposed project would result in no impact on recreation facilities.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

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	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.16 TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation systems, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management programs, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a, b) ***No Impact.*** Operation of the project would require periodic maintenance. The site is directly south of the City's Public Works yard. The proposed project would have no impact on established level of service standards for all site access roads because the project would not result in a permanent increase in existing traffic in the project vicinity. No population growth would occur as a result of the project that would generate new trips. There would be no impact.

c) ***No Impact.*** The project would not affect air traffic volumes. The project is not located within an airport land use influence area. Therefore, the proposed project would not affect flight patterns or interfere with airport operations, and there would be no impact.

d) ***No Impact.*** All features of the project would be constructed in a fenced and gated area readily accessible from existing driveways on West Biggs Gridley Road. No modifications to the bridge over the Main Drainage Canal or to West Biggs Gridley Road are necessary

to implement the project. No design features associated with the proposed project would increase hazards. There would be no impact.

e) ***Less Than Significant Impact***. The project would include extending an existing water main north of the bridge crossing at the Main Drainage Canal to the site, which would involve some work within the roadway and bridge approaches. There may be times during construction when one-way controlled traffic or short traffic halts on West Biggs Gridley Road are required. This would be temporary and would not permanently affect the ability of emergency vehicles to use West Biggs Gridley Road. The site would be readily accessible to emergency vehicles via existing driveways from West Biggs Gridley Road. Impacts would be less than significant.

f) ***No Impact.*** The project would not generate the demand for any form of transportation, alternative or otherwise. The project area does not include bicycle or pedestrian pathways, including sidewalks, or bus routes. The proposed project would not conflict with adopted plans for alternative transportation and would not have an impact on alternative transportation.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.17 TRIBAL 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:				
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)?	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

OVERVIEW

Tribal cultural resources are defined in CEQA as a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe, which may include non-unique archaeological resources previously subject to limited review under CEQA. AB 52 requires the lead agency (in this case, the City of Biggs) to begin consultation with any California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report if (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation (Public Resources Code Section 21080.3.1[b]).

The project area is located within the ethnographic territory of the Konkow, members of the widespread Maiduan family of the California Penutian language. The Konkow occupied the upper drainages of the Sacramento River and the Feather River watershed near Oroville, including the project area. The Konkow language also includes Southern Maidu, or Nisenan, to the south. No known Native American cultural resources (as defined in Public Resources Code Section 21074) have been reported to date on the project site (Michael Baker International 2018).

DISCUSSION OF IMPACTS

a, b) ***Less Than Significant Impact with Mitigation Incorporated.*** There are no historical resources on the project site and no known resources of significance that have been reported by a California Native American tribe. No archaeological resources or human remains are known to exist on the project site. However, the project includes ground-disturbing activities that could result in the unanticipated or accidental discovery of archaeological deposits or human remains. Implementation of mitigation measure **MM CUL-2** would ensure that provisions are in place to protect paleontological and prehistoric or historical archaeological deposits encountered during construction. The mitigation measure requires impacts on such resources to be avoided or further investigation to be conducted to offset the loss of scientifically consequential information that would occur if avoidance is not possible. Implementation of mitigation measure **MM CUL-3** would ensure that human remains encountered during project activities would be treated in a manner consistent with state law. This would occur through coordination with descendant communities to ensure that the traditional and cultural values of said communities are incorporated in the decision-making process concerning the disposition of human remains that cannot be avoided. These mitigation measures would reduce impacts to less than significant.

Mitigation Measures

Implement mitigation measures **MM CUL-2** and **MM CUL-3**.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.18 UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) ***No Impact.*** The proposed project is a water storage and reliability project, which would not generate wastewater or require wastewater facilities. There would be no impact.

b) ***Less Than Significant Impact with Mitigation Incorporated.*** The proposed project would involve the construction and operation of a new water storage tank, pump/control building, water line, and a new well. The potential environmental impacts of constructing and operating the facility are evaluated in the technical sections of this document. Mitigation measures have been identified, where necessary, to reduce potential impacts to less than significant levels.

c) ***No Impact.*** The proposed project would not require or result in the need for storm drainage facilities. There would be no impact.

d) ***No Impact.*** The purpose of the proposed project is to improve water supply reliability for existing and planned future uses. No additional groundwater extraction or development

of water supplies beyond that which already occurs is proposed. There would be no impact.

e) ***No Impact.*** The proposed project would not generate wastewater. There would be no impact.

f, g) ***No Impact.*** Solid waste from the city facilities is currently disposed of at the Neal Road Recycling and Waste Facility. According to the Butte County General Plan (2010), it is anticipated that the waste facility will continue to receive solid waste until at least the year 2034. Other than a minor amount of solid waste generated during construction, the proposed project does not involve operation of occupied uses or activities that would result in a long-term increase in solid waste requiring disposal at the waste facility. There would be no impact.

Difference Between Water Tank Option A and Water Tank Option B

There would be no difference in impacts between Option A and Option B.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.19 MANDATORY FINDINGS OF SIGNIFICANCE				
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, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION OF IMPACTS

a) ***Less Than Significant Impact with Mitigated Incorporated***. The proposed project has the potential to affect one special-status wildlife species (giant garter snake) and one special-status plant species (Sanford's arrowhead). Mitigation measures **MM BIO-1** through **MM BIO-8** require a preconstruction survey for giant garter snake, avoidance, where feasible of its habitat, monitoring during construction, restoration of any disturbed habitat (if any) along the Main Drainage Canal, and compensatory mitigation at 3:1 for permanent impacts. Mitigation measure **BIO-12** requires a preconstruction survey to determine whether Sanford's arrowhead is present and to relocate the plant if found. There are no historic or known archaeological resources on the site that would be affected by project construction. However, there is the potential for previously unrecorded or unknown cultural resources, including human remains, to be discovered during site preparation. Mitigation measures **MM CUL-2** and **MM CUL-3** address the potential for inadvertent discovery and require work stoppage in the event resources are found and their proper disposition.

b) ***Less Than Significant Impact with Mitigation Incorporated.*** The proposed project, in conjunction with other approved or pending projects in the region, would not result in effects that would be cumulatively considerable. The proposed project's construction-generated criteria air pollutant and ozone precursor emissions would be below adopted thresholds and therefore would not result in a cumulative contribution to regional emissions. Such emissions would also be temporary. Site-specific impacts on giant garter snake habitat would be mitigated in accordance with applicable laws and regulations (mitigation measure **MM BIO-8**) to ensure no net loss of habitat supporting the species;

therefore, the project's contribution would not be cumulatively considerable. As a water storage and supply reliability project, the proposed project would not result in an increase in traffic and associated air and GHG emissions that would combine with other existing or future conditions in the vicinity.

c) ***Less Than Significant Impact with Mitigation Incorporated.*** The proposed project would generate air and GHG emissions during construction and minimal emissions during operation. Because the levels would not exceed adopted thresholds, the proposed project would not worsen air quality or climate change–related impacts. The backup generator would require an authority to construct and permit to operation from the BCAQMD, which will require the generator to be equipped, as necessary, with features to ensure diesel particulate emissions are controlled as required. A spill prevention control and countermeasure plan will be required for the aboveground diesel fuel storage tank for the backup generator. The potential for hazardous materials contamination, if any, to be encountered would be mitigated by requiring soil testing and remediation, as necessary, before any ground disturbance (mitigation measure **MM HAZ-1**). Therefore, the proposed project would not result in environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

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5.0
COMPLIANCE WITH FEDERAL REGULATIONS

5.1 INTRODUCTION

Because of the federal nexus with the EPA, projects seeking funding through the SRF program are subject to federal laws and regulations (federal "cross-cutters"). This section summarizes these federal environmental laws and regulations, identifies whether there are aspects of the project that would be subject to the federal laws and/or regulations, and includes an impact evaluation, as necessary.

An alternatives analysis in fulfillment of SRF requirements is included as an appendix to this document. These alternatives are provided to meet the CEQA-Plus requirements and are not required for compliance with CEQA. The alternatives analysis is provided in **Appendix D**.

5.2 COMPLIANCE DETERMINATION EVALUATION

Area of Statutory Compliance and/or Regulatory Compliance	Compliance Determination
Archaeological and Historic Preservation Act	A cultural resources technical study was prepared for the project, which consisted of background and archival research, a records search, a check of the California Native American Heritage Commission (NAHC) Sacred Lands File, consultation with Native Americans and local historical societies, and an intensive pedestrian survey. The study is included in Appendix C in the Initial Study/Mitigated Negative Declaration. The project would have no impact on known historic or archaeological features (Initial Study/Mitigated Negative Declaration, subsection 4.5, Cultural Resources). Mitigation measures MM CUL-2 and MM CUL-3, which address inadvertent discovery, are included in the Initial Study/Mitigated Negative Declaration.
Clean Air Act [General Conformity Rule]	The project site is in the Northern Sacramento Valley Air Basin (NSVAB) and is within the jurisdiction of the Butte County Air Quality Management District (BCAQMD). The NSVAB is nonattainment for federal ozone and $PM_{2.5}$ standards. Construction and operational criteria air pollutant and ozone precursor emissions were estimated for the project using CalEEMod Version 2016.3.2, and the output files are included in Appendix A in the Initial Study/Mitigated Negative Declaration. Emissions would not exceed BCAQMD thresholds (Initial Study/Mitigated Negative Declaration, subsection 4.3, Air Quality, Table 4.3-1). Table E-1 in Appendix E summarizes information and data regarding federal attainment status for the NSVAB, general conformity de minimis levels, and the project's construction and operational emissions. The project's construction and operational emissions would not exceed the applicable de minimis levels and therefore the General Conformity Rule would not apply to the project.
Coastal Barriers Resources Act	The act designates areas that are included in the Coastal Barrier Resources System. The project site is located in the Sacramento Valley in the central part of California, over 100 miles from the Pacific Ocean. There are no undeveloped coastal barrier islands. The requirements of the act would not apply to the project.

Area of Statutory Compliance and/or Regulatory Compliance	Compliance Determination
Coastal Zone Management Act	The project site is located in the Sacramento Valley in the central part of California. There are no Local Coastal Programs that apply to the site, and the site is not within the jurisdiction of San Francisco Bay Conservation and Development Commission. The requirements of the act would not apply to the project.
Endangered Species Act	The Main Drainage Canal is a slow-moving drainage canal at the north end of the project site, with the disturbed uplands to the south on-site containing a few small mammal burrows suitable for dispersal, foraging, and winter refuge. Although this species was not observed during a site survey performed in December 2017, an adult individual giant garter snake was documented in 2014 in Hamilton Slough, approximately one-third mile east of the study area, with four other occurrences within 5 miles. There is a moderate potential for impacts to federally listed giant garter snake (GGS; *Thamnophis gigas*) if present within the Main Drainage Canal during its active period, or in the uplands/burrows while wintering. There would be no modification of aquatic habitat in the canal itself, but installation of the water line adjacent to the bridge over the canal would require drilling holes in the concrete bridge abutments through which the water line would be installed. Work in uplands areas would consist of temporary staging of equipment and materials and grading. A Biological Assessment has been prepared (Appendix B of the Initial Study/Mitigated Negative Declaration), with a determination of "may affect, but not likely to adversely affect" to initiate informal consultation with the US Fish and Wildlife Service (USFWS) pursuant to Section 7 of the Endangered Species Act. The Initial Study/Mitigated Negative Declaration includes mitigation measures MM BIO-1 through MM BIO-8 (generated from Appendix C of the Programmatic Consultation with the US Army Corps of Engineers) that would require take authorization, personnel training, avoidance, preconstruction surveys, and the applicable mitigation. If GGS are found during preconstruction surveys, they would be avoided and/or protected in accordance with applicable federal and state laws and regulations (Initial Study/Mitigated Negative Declaration subsection 4.4, Biological Resources). This would ensure compliance with federal ESA requirements.
Environmental Justice [Executive Order 12898]	Based on 2010 US Census Bureau data, Biggs does not have a disproportionately high minority racial population that exceeds 50% of the community; however, it has a meaningfully greater population than Butte County based on Hispanic/Latino ethnicity (40.7% in the city compared to 14.1% in the county). Nearly 17% of families in Biggs were below the poverty level compared to 12% in Butte County, while approximately 20% of individuals in the city were below the poverty level compared to approximately 21% in the county (see Appendix E, Table E-2). Therefore, there is a minority and low-income population in the affected area. Potential adverse effects of the proposed project on the minority and low-income community would be limited to short-term construction-related impacts such as air emissions and noise. The diesel-fueled backup generator for the booster pump would only operate in the event of an emergency and

Area of Statutory Compliance and/or Regulatory Compliance	Compliance Determination
	would not be a continuous or permanent source of hazardous air emissions (Initial Study/Mitigated Negative Declaration, subsection 4.19.c, Mandatory Findings of Significance). Therefore, the proposed project would not result in a disproportionately high and adverse effect on the minority or low-income population. Moreover, the proposed project would improve water supply reliability for the Biggs community as a whole, which is a benefit of the project.
Farmland Protection Policy Act	According to the Butte County Important Farmland Map of 2016 prepared by the California Department of Conservation under the Farmland Mapping and Monitoring Program, the project site is designated as Urban and Built-Up land (Initial Study/Mitigated Negative Declaration subsection 4.2, Agriculture and Forest Resources). A farmland conversion impact rating is not required for the project because it does not contain categories of farmland subject to the act (prime farmland, unique farmland, or farmlands designated as important by state or local governments).
Fish and Wildlife Coordination Act	The Main Drainage Canal that passes through the northern part of the project site is a constructed feature for conveying agricultural drainage and runoff. The proposed project would not result in the impoundment, diversion, deepening, or any other control or modification of the Main Drainage Canal. The requirements of the act would not apply to the project.
Floodplain Management [Executive Order 11988]	The project is not located within a flood zone as mapped by the Federal Emergency Management Agency (FEMA) (FEMA Map No. 06007C0975E). The project does not involve property acquisition, management, construction, or improvements within a 100-year floodplain (Zones A or V) as identified on FEMA Map No. 06007C0975E (see Figure E-1 in Appendix E).
Magnuson-Stevens Fishery Conservation and Management Act	The Main Drainage Canal is not essential fish habitat, and no modification to the canal or habitat along the canal is proposed. The project would not affect fisheries or waters nor substrates necessary for fisheries. The requirements of the act would not apply to the project.
Migratory Bird Treaty Act of 1918	The project site and survey area contain habitat suitable for foraging for a variety of raptors and other birds. In addition, the disturbed areas, buildings, and ornamental vegetation provide marginal habitat suitable to support nesting raptors and other birds. Construction activities involving tree removal, grading, and vegetation clearing may cause direct mortality or damage to nests. In addition, construction activities near active nests may result in nest abandonment, which would be a potentially significant impact. Mitigation measures MM BIO-9 through MM BIO-11 would require preconstruction surveys for nesting birds, buffers for active nests, and seasonal restrictions on the clearing of vegetation with identified nests. If nesting birds are found during preconstruction surveys, they would be avoided and/or protected in accordance with applicable laws and regulations (Initial

Area of Statutory Compliance and/or Regulatory Compliance	Compliance Determination
	Study/Mitigated Negative Declaration subsection 4.4, Biological Resources). This would ensure compliance with MBTA requirements.
National Historic Preservation Act, Section 106	A cultural resources technical study was prepared for the project, which consisted of background and archival research, a records search, a check of the California Native American Historical Commission (NAHC) Sacred Lands File, consultation with Native Americans and local historical societies, and an intensive pedestrian survey. The technical study is included in Appendix C of the Initial Study/Mitigated Negative Declaration. For Section 106, a finding of no historic properties affected is appropriate for the undertaking.
Protection of Wetlands [Executive Order 11990, as amended by Executive Order No. 12608]	The project site contains portions of the Main Drainage Canal that supports disturbed emergent freshwater marsh. The freshwater marsh vegetation on-site is presumed wetland waters of the United States subject to Clean Water Act Section 404. Construction activities would result in temporary impacts, which would be limited to minor foot traffic and potential for falling debris during the proposed installation of the 8-inch water main across the canal adjacent to the bridge. The water line would span the canal, with each end of the line installed in the existing concrete abutment under the bridge. There would be no permanent dredge and/or fill impacts to waters of the United States because the project would not require channel modification. With the implementation of mitigation measures MM BIO-13 and MM BIO-14, which require use of best management practices (BMPs) during construction to minimize impacts on wetlands and monitoring by a qualified biologist to ensure the effectiveness of BMPs, impact would be less than significant with mitigation incorporated (Initial Study/Mitigated Negative Declaration subsection 4.4, Biological Resources). This would ensure compliance with wetlands protection requirements.
Rivers and Harbors Act, Section 10	The Main Drainage Canal that crosses through the north side of the project site is a constructed water body for agricultural drainage and runoff. It conveys no natural flow and is periodically maintained. It is not a navigable water of the United States, and the requirements of the act would not apply to the project.
Safe Drinking Water Act, Sole Source Aquifer Protection	The project is not located within a sole source aquifer watershed area as designated by the US Environmental Protection Agency (EPA). The requirements of the act would not apply to the project. In addition, replacement of the City's third well with a new well would not result in additional groundwater extraction.
Wild and Scenic Rivers Act	The Main Drainage Canal that crosses through the north side of the project site is a constructed water body that conveys no natural flow and is periodically maintained. The project is not located on or near any river that is listed as a Wild and Scenic River. The closest Wild and Scenic River is the Middle Fork of the Feather River, which is approximately 20 miles from the site. The requirements of the act would not apply to the project.