Draft

Initial Study and Negative Declaration

of the

Annexation Plan - Phase I

Biggs, California

Prepared For:

City of Biggs
465 C Street
Biggs, CA 95917

Prepared By:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

55 Hanover Lane
Suite A
Chico, California 95973

November 2021

THIS PAGE INTENTIONALLY LEFT BLANK

SUMMARY

Project Title/Purpose	Annexation Plan Phase I
Lead Agency:	City of Biggs
Project Proponent:	City of Biggs
Project Location:	Immediately east of the City of Biggs eastern city limit, south of W. Rio Bonito Road north of B Street. APNs: 022-100-040, 022-100-041, 022-170-033, 022-170-041, 022-170-044, 022-170-048, 022-170-051, 022-170-052, 022-170-053, 022-170-054, 022-320-003, 022-320-004, and 022-320-005. (Figure 1. Regional Location and Figure 2. Project Location). The site is within Sections 13, Township 18 North, Range 4 East (Mount Diablo Base and Meridian). The approximate center of the site is located at latitude 39.418407º and longitude -121.700297º.
Project Description:	The City of Biggs proposes the annexation and pre-zoning of 79.45 acres adjacent to the City's eastern border. The majority of this acreage is currently developed with agricultural orchards and row crops. There are ten rural residential single-family homes within the proposed annexation area. No construction or other development is proposed by the City or private development with this annexation.
Public Review Period:	To be determined

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ATTACHMENTS

LIST OF ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
AB	Assembly Bill
AF	Acre-feet
AFY	Acre-feet per year
AMSL	Above mean sea level
APN	Accessor Parcel Number
AWWA	American Water Works Association
BCAQMD	Butte County Air Quality Management District
BCAG	Butte County Association of Governments
BCSO	Butte County Sheriff's Office
BEN|EN	Bennett Engineering Services
BMPs	Best Management Practices
BRWMA	Butte Regional Waste Management Authority
BUSD	Biggs Unified School District
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Energy Commission
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH4	Methane
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNEL	Community noise equivalent level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
CPTED	Crime Prevention Through Environmental Design
CRHR	California Register of Historic Places
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
DADS	Designated Area Deputies
dBA	Decibels
DMR	Division of Mine Reclamation
DOC	California Department of Conservation

LIST OF ACRONYMS AND ABBREVIATIONS

DOF	Department of Finance
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIA	U.S. Energy Information Administration
EIR	Environmental Impact Report
ESA	Endangered Species Act
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
General Permit	General Construction Activity Stormwater Permit
gal/day	Gallons per day
gpm	Gallon per minute
GHG	Greenhouse Gas
GSP	Groundwater Sustainability Plan
I&I	Infiltration and Inflow
ISO	Insurance Service Office
IS	Initial Study
IS/ND	Initial Study / Negative Declaration
kWh	Kilowatt hours
LAFCO	Butte Local Agency Formation Commission
Ldn	Day-night average sound level
Leq	Leq
LOS	Level of service
LRA	Local Response Area
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Levels
mgd	Million gallons per day
MRZ	Mineral Resource Zones
NAHC	Native American Heritage Commission
N2O	Nitrous oxide
NO2	Nitrogen dioxide
NOI	Notice of Intent
NOx	Nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSVAB	Northern Sacramento Valley Air Basin
O3	Ozone

LIST OF ACRONYMS AND ABBREVIATIONS

OHP	Office of Historic Preservation
OPR	Office of Planning and Research
PM10 and PM2.5	Particulate Matter
PRC	Public Resource Code
Project/ Proposed Project	Annexation Plan - Phase I Project
psi	Per Square Inch
RD	Reclamation District
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SCSO	Sheriff Community Service Officer
SGMA	Sustainable Groundwater Management Act
SO2	sulfur dioxide
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
UCMP	California Museum of Paleontology
USC	U.S. Code
USEPA	Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle miles traveled
WWTP	Wastewater Treatment Plant

THIS PAGE INTENTIONALLY LEFT BLANK

1.0 BACKGROUND

1.1 Summary

Project Title:	Annexation Plan - Phase I
Lead Agency Name and Address:	City of Biggs 465 C Street Biggs, CA 95917
Lead Agency Contact Person and Phone Number:	Bob Summerville, City Planner (530) 868-5493
Project Owner:	City of Biggs
Project Location:	Immediately east of the City of Biggs eastern city limit, south of W. Rio Bonito Road north of B Street. APNs: 022-100-040, 022-100-041, 022-170-033, 022-170-041, 022-170-044, 022-170-048, 022-170-051, 022-170-052, 022-170-053, 022-170-054, 022-320-003, 022-320-004, and 022-320-005. (Figure 1. Regional Location and Figure 2. Project Location). The site is within Sections 13, Township 18 North, Range 4 East (Mount Diablo Base and Meridian). The approximate center of the site is located at latitude 39.418407º and longitude -121.700297º.
General Plan Designation:	Biggs: LDR (Low Density Residential), MDR (Medium Density Residential), and C (Commercial) Butte County: RR (Rural Residential), VLDR (Very Low Density Residential)
Zoning:	Biggs Proposed Prezoning: R-1 (Single-Family Residential), R-2 (Medium Density Residential), and C-G (General Commercial) Butte County: RR-5 (Rural Residential – 5 ac minimum), VLDR (Very Low Density Residential)

1.2 Introduction

The City of Biggs is the Lead Agency for this Initial Study/Negative Declaration (IS/ND), which has been prepared to identify and assess the anticipated environmental impacts of the proposed Annexation Plan - Phase I Project (Project or Proposed Project) and mitigate potentially significant environmental effects. This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resource Code [PRC], § 21000 et seq.) and State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of Projects over which they have discretionary authority before acting on those Projects. A CEQA IS/ND is generally used to determine the potentially significant environmental affects and mitigate those to be less than significant.

1.3 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 Annexation Plan - Phase I Project.

1.4 Purpose and Document Organization

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed Annexation Plan - Phase I 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. 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.

2.0 Project Description – This section provides a detailed description of the proposed Project, as well as the 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 Environmental Factors Potentially Affected and Determinations – This section is a summary of the environmental topic areas that were found to potentially impact the environment.

4.0 Environmental Checklist and Discussion – This section describes the environmental setting and overview for each of the environmental subject areas, evaluates a range of impacts classified as "no impact," "less than significant impact," "less than significant impact with mitigation incorporated," and "potentially significant impact" in response to the environmental checklist.

5.0 List of Preparers – This section lists the names of documents preparers.

6.0 Bibliography – This section identifies documents, websites, people, and other sources consulted during the preparation of this Initial Study.

7.0 List of Appendices – This section provides a list of document appendices.

1.5 Project Location and Surrounding Land Uses

The Project Area is east of the City of Biggs, south of W. Rio Bonito Road and north of B Street. See Figures 1 and 2. The Project Annexation Plan – Phase I is 79.48 acres in size and is comprised of 13 parcels including the following:

Table 1.5-1. Accessor's Parcel Numbers

022-100-040	022-100-041	022-170-033	022-170-041
022-170-044	022-170-048	022-170-051	022-170-052
022-170-053	022-170-054	022-320-003	022-320-004
022-320-005			

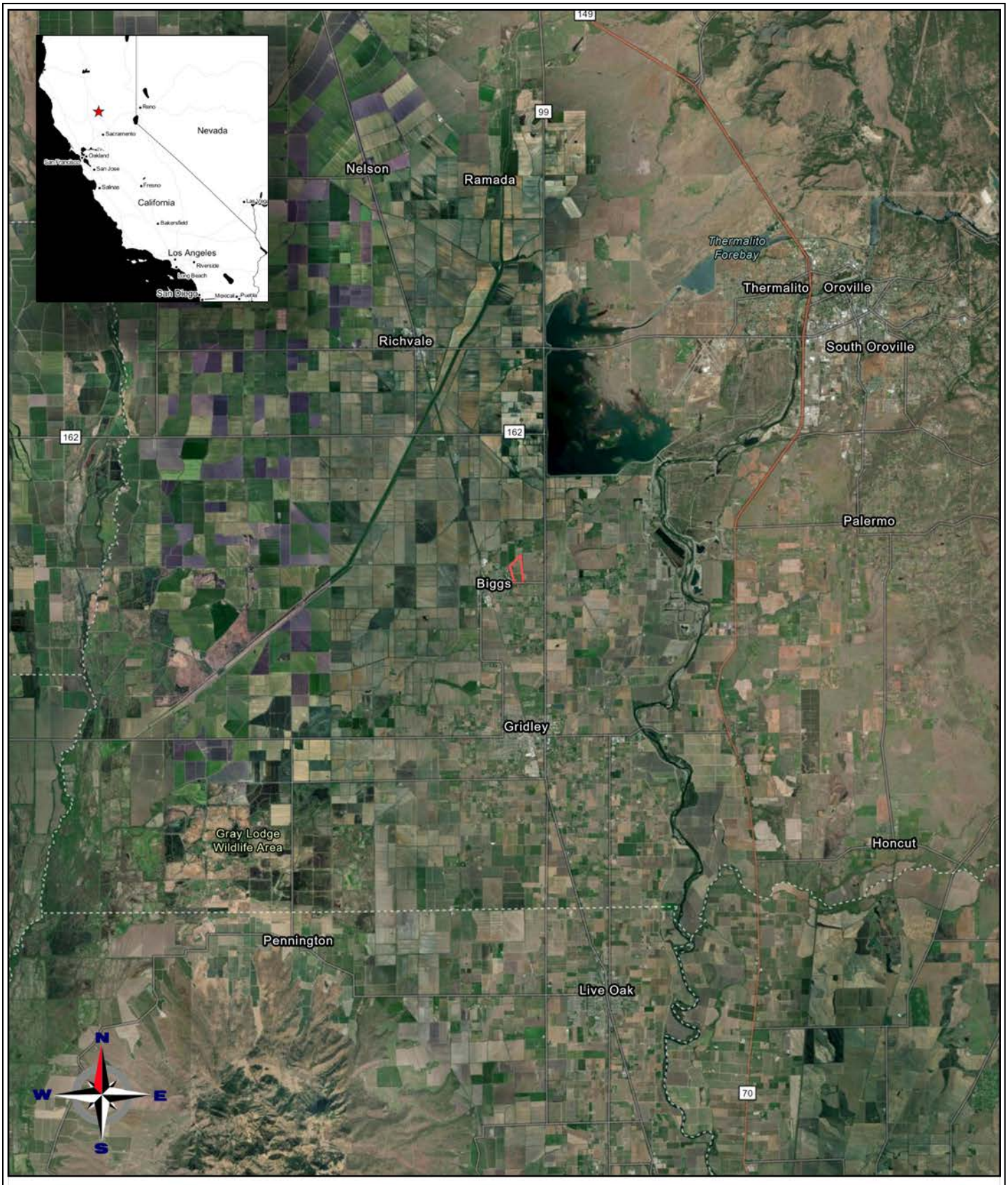
To the west of the site is the Biggs Community Hall, Biggs High School, sports fields, and Biggs Elementary School. To the north, east and south of the site are rural residential and agricultural uses. See Figure 3. Surrounding Uses.

1.6 Environmental Setting

The Proposed Project is located in a mostly rural and agricultural area east of the City of Biggs. The 79.48-acre Project Area is developed with rural residential single-family homes and agricultural uses. The Area is flat with an elevation of approximately 97 feet above mean sea level (AMSL). The majority of the Area is agricultural fields with orchards and row crops. There are also ten single-family homes within the Project Area. Table 1.0-1 illustrates the current uses for each of the 13 parcels. The area is bounded by W. Rio Bonito Road on the north and B Street on the south. There are no ponds, rivers, creeks, or other water features within the Proposed Project Area.

Table 1.6-1. Current Use

Parcel APN	Acres	Current Use
022-100-040	1.12	single-family home
022-100-041	12.68	agriculture
022-170-033	20.97	single-family home, agriculture
022-170-041	30.27	agriculture
022-170-044	0.9	single-family home
022-170-048	0.58	single-family home
022-170-051	6.53	two single-family homes, agriculture
022-170-052	0.32	single-family home
022-170-053	0.42	single-family home
022-170-054	0.41	single-family home
022-320-003	1.91	agriculture
022-320-004	1.12	single-family home
022-320-005	2.25	agriculture

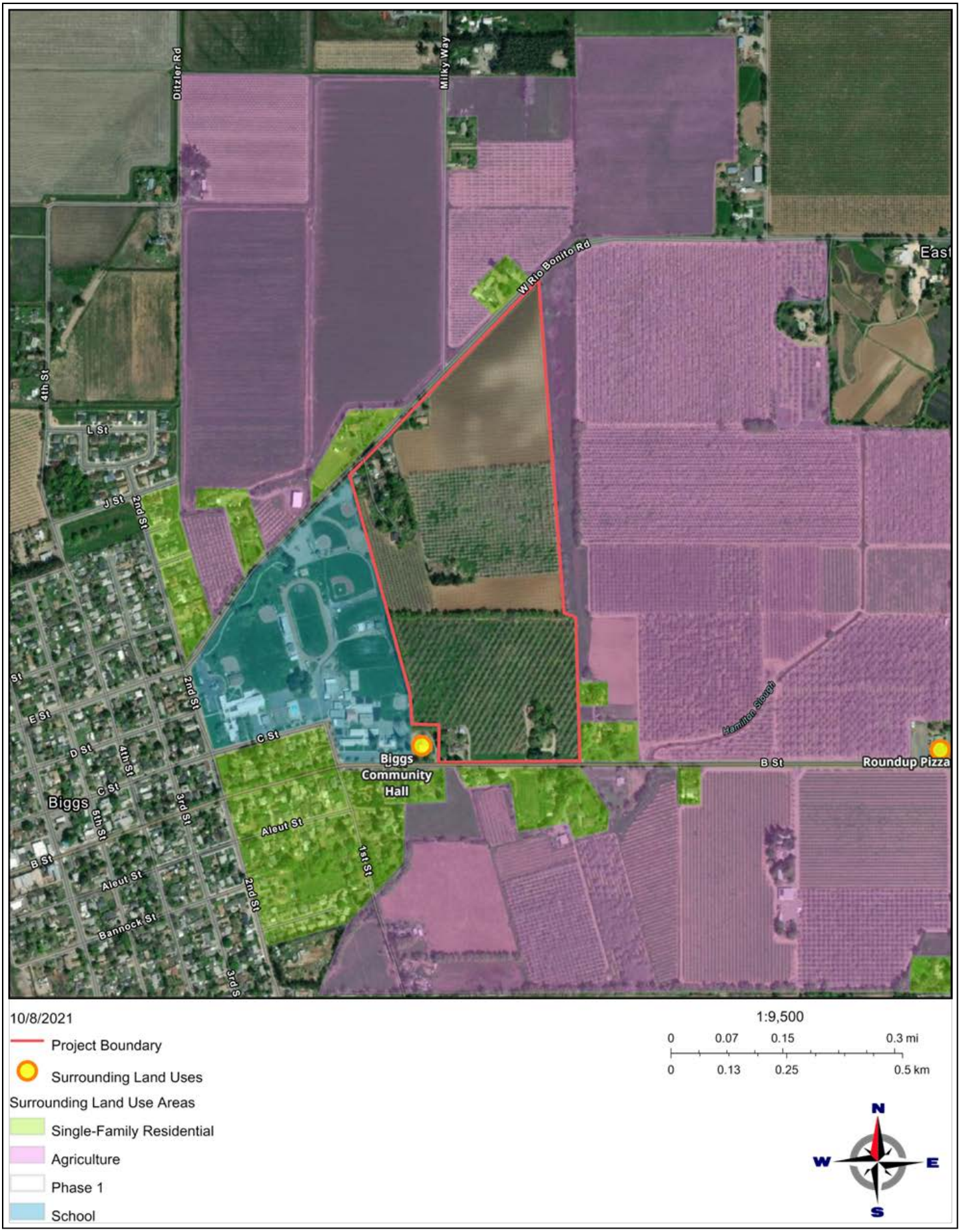


ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Regional Location
City of Biggs - Phase 1 Annexation Area

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2. Project Location
City of Biggs - Phase 1 Annexation Area



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3. Surrounding Land Uses
City of Biggs - Phase 1 Annexation Area

2.0 PROJECT DESCRIPTION

2.1 Project Description

The proposed Biggs Annexation Plan – Phase I (Project, Proposed Project) the Prezoning of 79.45 acres and an Annexation initiated by the City of 13 parcels currently within Butte County jurisdiction. No construction or other development is proposed by the City or private development with this annexation. Current and proposed land use designations for the 13 parcels are listed in Table 2.1-1, below.

Table 2.1-1. Parcel Land Use

Parcel APN	Acres	Butte County		City of Biggs	
		General Plan Designation	Zoning	General Plan Designation	Proposed Prezoning
022-100-040	1.12	VLDR	VLDR	LDR (0.72 ac), MDR (0.4 ac)	R-1 (0.72 ac), R-2 (0.4 ac)
022-100-041	12.68	VLDR	VLDR	LDR (7.08 ac), MDR (2.8 ac), C (2.8 ac)	R-1 (7.08 ac), R-2 (2.8 ac), C-G (2.8 ac)
022-170-033	20.97	VLDR	VLDR	LDR	R-1
022-170-041	30.27	VLDR	VLDR	LDR	R-1
022-170-044	0.9	RR	RR-5	LDR	R-1
022-170-048	0.58	RR	RR-5	LDR	R-1
022-170-051	6.53	RR	RR-5	LDR	R-1
022-170-052	0.32	RR	RR-5	LDR	R-1
022-170-053	0.42	RR	RR-5	LDR	R-1
022-170-054	0.41	RR	RR-5	LDR	R-1
022-320-003	1.91	VLDR	VLDR	LDR	R-1
022-320-004	1.12	VLDR	VLDR	LDR	R-1
022-320-005	2.25	VLDR	VLDR	LDR	R-1

Source: Butte County, 2021; City of Biggs, 2014

Notes: Butte County General Plan Designations: RR = Rural Residential, VLDR = Very Low Density Residential.
Butte County Zoning: RR-5 = Rural Residential – 5 ac minimum, VLDR = Very Low Density Residential.
City of Biggs General Plan Designations: C = Commercial, LDR = Low Density Residential, MDR = Medium Density Residential.
City of Biggs Prezoning: R-1 = Single-Family Residential, R-2 = Medium Density Residential, C-G = General Commercial.

While the Project Area is currently under the jurisdiction of Butte County, the Area has been previously assigned land use designations in the City's General Plan because it is within the City of Biggs General Plan Planning Area. As shown, the current City of Biggs General Plan land use designations for 11 parcels are Low Density Residential (LDR), while one parcel has the LDR and Medium Density Residential (MDR) designations and one parcel has the LDR, MDR and Commercial (C) designations. Butte County's current General Plan land use designation for the parcels is Rural Residential (RR) and Very Low Density Residential (VLDR) . However, once the Project site is annexed by the City, the Butte County land use designations would no longer apply to the parcels.

The City's proposed prezoning of the parcels are Single-Family Residential (R-1),Medium Density residential (R-2) and General Commercial (C-G).

2.1.1 Land Use Development Potential

Table 2.1-2 identifies the existing and proposed land uses and the maximum density that these uses could yield. The maximum density is use for this analysis as this represents the most intense development potential for the subject properties under the City's current General Plan. As shown, in Table 2.1-1, the existing City of Biggs General Plan land use designation for the Project Area is LRD, MDR and C. Prezoning these land uses consistent with the General Plan designations would result in a prezoning of R-1, R-2 and C-G. The General Plan identifies the maximum number of dwelling units per acre and maximum commercial floor area ratios (FAR)[1]. For LDR the density is 0 to 6 dwelling units (du) per acre (ac) and 6 to12 du/ac for MDR. The FAR in the C land use destination is 0.25 to 0.70. Under existing conditions, using these factors and the parcel acreages, the total number of residential units possible for the Project Area would be 441 within the LDR land use and 38 units within the MDR land use. The Project Area would also accommodate 85,3777 square feet of commercial uses based on the General Plan land use designation of C. Please note however, the maximum number of residential units and commercial square footage does not consider the area required for parking, site constraints, landscaping, setbacks, development type, and other factors that would limit the potential square footage. The actual development would most likely not reach the maximum potential.

Table 2.1-2. Land Use Development Potential

APN	Total Acres	Acreage by Land Use			Development Potential		
		LDR	MDR	C	LDR Units (6 du/ac)	MDR Units (12 du/ac)	C (0.70 FAR)
022-100-040	1.12	0.72	0.4		4	5	
022-100-041	12.68	7.08	2.8	2.8	42	34	85,377 sq. ft.
022-170-033	20.97	20.97			126		
022-170-041	30.27	30.27			182		
022-170-044	0.9	0.9			5		
022-170-048	0.58	0.58			3		
022-170-051	6.53	6.53			39		
022-170-052	0.32	0.32			2		
022-170-053	0.42	0.42			3		
022-170-054	0.41	0.41			2		
022-320-003	1.91	1.91			11		
022-320-004	1.12	1.12			7		
022-320-005	2.25	2.25			14		
Total	79.48	73.48	3.2	2.8	441	38	85,377 sq. ft.

Source: City of Biggs, 2014

[1] Floor area ratio is the ratio of a building's total floor area (gross floor area) to the size of the piece of land upon which it is built.

Table 2.1-3 identifies the development potential under Butte County General Plan land use designations. As shown, the current development potential under Butte County jurisdiction for the Project Area would be 82 residential units.

Table 2.1-3. Land Use Development Potential - Butte County

APN	Total Acres	Acreage by Land Use		Development Potential	
		VLDR	RR-5	VLDR (1 du/ac)	RR-5 (1 du / 5 ac)
022-100-040	1.12	1.12		1	
022-100-041	12.68	12.68		13	
022-170-033	20.97	20.97		21	
022-170-041	30.27	30.27		30	
022-170-044	0.9		0.9		1
022-170-048	0.58		0.58		1
022-170-051	6.53		6.53		7
022-170-052	0.32		0.32		1
022-170-053	0.42		0.42		1
022-170-054	0.41		0.41		1
022-320-003	1.91	1.91		2	
022-320-004	1.12	1.12		1	
022-320-005	2.25	2.25		2	
Total	79.48	70.32	9.16	70	12

Source: Butte County, 2012

Table 2.1-4 illustrates the potential population growth comparison between the City and County land use designations for the Project Area. If the Project Area were to develop at the maximum allowable number of units, the Area would have an estimated population of 1,235 persons based on current (2021) average household sizes for the City of Biggs. This is an increase of 1,056 persons over the Butte County estimated population under maximum buildout for the Area.

Table 2.1-4. Population Growth Comparison

Butte County			City of Biggs			Difference
Projected Dwelling Units	Average Household Size[1]	Projected Population	Projected Dwelling Units	Average Household Size[2]	Projected Population	
82	2.19	179	479	2.58	1,235	+1,056

Note: Average Household size based on DOF: E-5 Population and Housing Estimates 1/1/2021. Butte County = 2.19 persons per household, City of Biggs = 2.58 persons per household.

The Biggs General Plan identifies three growth scenarios based on the Long-Term Regional Growth Forecasts report published by the Butte County Association of Governments (BCAG) in January of 2011. Table 2.1-5 reiterates these growth scenarios. According to the California Department of Finance population estimates, the City had a population of 1,727 as of January 1, 2021. As indicated in Table 2.1-5, the General Plan anticipated growth exceeds the current reality for all growth scenarios. The addition of

1,235 persons from the Proposed Project would not result in a growth greater than the growth anticipated in the General Plan.

Table 2.1-5. General Plan Growth Projections

2010	2015	2020	2025	2030	2035
Low Growth Scenario (3.3% Annual Growth Rate)					
1,787	2,086	2,624	3,043	3,521	4,059
Medium Growth Scenario (3.7% Annual Growth Rate)					
1,787	2,139	2,774	3,267	3,830	4,465
High Growth Scenario (4.1% Annual Growth Rate)					
1,787	2,191	2,919	3,485	4,132	4,860

Source: Biggs 2014

2.1.2 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project.

2.1.2.1 *Lead Agency Approval*

The City of Biggs is the lead agency for the Proposed Project. In order to approve the Proposed Project, the Biggs City Council must first adopt the IS/ND, approve the Proposed Project, and file a Notice of Determination (NOD) within five working days. The Council will consider the information contained in the IS/ND in making its decision to approve or deny the Proposed Project. The IS/ND is intended to disclose to the public the Proposed Project's details, analyses of the Proposed Project's potential environmental impacts, and identification of feasible mitigation that will reduce potentially significant impacts to less than significant levels.

The Project may require approvals and/or permits from other public agencies for which this Initial Study may be used, including, without limitation, the following:

Butte Local Agency Formation Commission

The Butte Local Agency Formation Commission (LAFCo) is an intra-local agency that was created by state legislation to ensure that changes in governmental organization occur in a manner that provides efficient and quality services and preserves open space land resources. LAFCO is charged with applying the policies and provisions of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 to its decisions regarding annexations, incorporations, reorganizations, and other changes of government. Butte LAFCo has approval authority over requested annexations within Butte County.

2.1.2.2 *Relationship of Project to Other Plans and Projects*

City of Biggs General Plan

The proposed Project would be located in Biggs. The City of Biggs General Plan was adopted by the City Council on April 8, 2014. The General Plan is the fundamental document governing land use development in the incorporated areas of the City. It includes numerous goals and policies pertaining to land use,

circulation, housing, conservation, open space, parks and recreation, noise, public health and safety, and public facilities. The proposed Project will be consistent with the land use designations in the General Plan. Any future uses developed in the Project Area will be required to abide by all applicable goals and policies included in the adopted General Plan.

2.1.2.3 *Consultation with California Native American Tribe(s)*

Assembly Bill (AB) 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project 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. The City has initiated consultation with the Tribes noted below. Further information on potential Tribal Cultural Resources in the Project Area is provided in Section 4.18 of this IS/ND.

Native American Tribe Consultation List for the City of Biggs:

1. Mechoopda Indian Tribe, Dennis E. Ramirez, Chairperson, 125 Mission Ranch Blvd.

   Chico, CA 95926

2. Tsi Akim Maidu, Don Ryberg, Chairperson, P.O. Box 510, Browns Valley, CA 95918

3. Mooretown Rancheria Of Maidu Indians, Gary Archuleta, Chairperson,

   1 Alverda Drive, Oroville, CA 95966

4. United Auburn Indian Community of the Auburn Rancheria, Gene Whitehouse, Chairperson, 10720 Indian Hill Road, Auburn, CA 95603

5. Eastom Yumeka Maidu Tribe of the Enterprise Rancheria, Glenda Nelson, Chairperson, 2133 Monte Vista Avenue, Oroville, CA 95966

6. Tsi Akim Maidu, Grayson Coney, Cultural Director, P.O. Box 510, Browns Valley, CA 95918

7. Berry Creek Rancheria Of Maidu Indians, James Edwards, Chairperson, 5 Tyme Way,

   Oroville, CA 95966

8. Greenville Rancheria, Kyle Self, Chairperson, P.O. Box 279, Greenville, CA 95947

9. Konkow Valley Band of Maidu, Wallace Clark-Wilson, Chairperson 2086 N. Villa St.,

   Palermo, CA 95968

THIS PAGE INTENTIONALLY LEFT BLANK

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

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" as indicated by the checklist on the following pages.

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

Determination

On the basis of this initial evaluation:

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

I find that although the Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. ☐

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

I find that the Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

I find that although the Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Project, nothing further is required. ☐

Mark Sorensen _____ Date

City Manager

THIS PAGE INTENTIONALLY LEFT BLANK

4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

Biggs is located within the northeastern extent of the Sacramento Valley, in the southwest portion of Butte County. The city is located approximately 5 miles west of the Feather River, with the northern Sierra Nevada foothills to the east. West of the city is the Sacramento River Valley rising to the Coast Ranges. The Sutter Buttes, which are located southeast of Biggs, are visible from most areas of the city.

As Biggs is located in the Sacramento Valley, it is predominantly flat, sloping to the southwest and ranging in elevation from 89 to 106 feet above sea level. Biggs is surrounded by agricultural uses, which constitute a significant component of the local economy. The majority of agricultural operations within the surrounding Biggs are a mixture of orchard crops, predominantly to the east, and rice operations to the west. Biggs is at an agricultural transition area with field and row crops located to the west of the city and grazing and tree crops located to the east. Biggs' agricultural picture includes orchards of almonds, walnuts, and prunes. Special climatic conditions allow orange groves to flourish in the greater Biggs area, the northernmost citrus growing area in the state. Fields of corn, wheat, rice, and beans surround the Biggs area. Agriculture-related industries are prominent in and around the city generally for rice, but also included are processing plants for nuts, citrus, and prunes. In addition to providing direct food production and employment, agricultural land also provides valuable open spaces and important wildlife habitat.

Lighting conditions of the developed portion of the City consist of typical urban light conditions found in urban areas (e.g., roadway lighting, commercial buildings in the downtown, and headlights from motor vehicles). These conditions contrast with the very low ambient nighttime lighting and illumination of agricultural and rural uses surrounding the city (Biggs, 2013).

According to the California State Scenic Highway System list, there are no listed scenic highways adjacent to or within the vicinity of the Project area (Caltrans, 2021).

The Project Area is over 79 acres in size and is occupied by single-family uses and agricultural uses. According to the General Plan Draft Environmental Impact Report (EIR), Biggs is characterized by scenic views that include orchards of almonds, walnuts, prunes, and citrus, and fields of corn, wheat, rice, and beans (Biggs, 2013). Much of the Proposed Project Area is under agricultural use, mainly walnuts. The General Plan has a number of policies and actions designed to protect the agricultural uses surrounding the city as well as protect riparian habitat and open space. These policies and actions are discussed further below. All new development resulting from the Proposed Project would be subject to these policies.

4.1.2 Aesthetics (I) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

Less than significant impact.

A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. As previously described, the City of Biggs is distinguished with its views of the surrounding agricultural land and considers these views to be significant and should be protected. As such, the City includes policies and actions in its General Plan designed to protect and enhance agricultural uses surrounding the city. These include:

Policy LU-1.5 (Agriculture/Urban Interface) – Continue to promote the use of undeveloped land for active agricultural purposes by ensuring the new development does not unnecessarily or prematurely encroach or convert viable, productive and active agricultural lands. Design criteria for buffers should be as follows:

- Require a minimum 100 foot-wide physical separation, which may include roadways, pedestrian/bicycle routes, storm water basins, canals and sloughs, and open spaces between the agricultural use and any habitable structure.
- Require the use of vegetative plantings to reduce issues related to dust, noise, aesthetics and air quality.
- Where possible, minimize the use of structural features such barrier walls to mitigate land use incompatibilities.

Action LU-1.5.1 (Agricultural/Urban Interface) – Update the City's Zoning Ordinance or include within a future design review program, guidelines and standards for the buffering of incompatible land uses.

Policy CR-2.2 (Agricultural Buffers) – Protect agricultural resources by maintaining a clear boundary between urban, rural, and agricultural uses.

Action CR-2.2.1 (Agricultural Buffers) – Require appropriate buffers for new development adjacent to active agricultural operations to ensure context-sensitive and case-sensitive solutions for potential land use incompatibilities.

Action CR-2.2.2 (Agricultural Buffers) – Require the incorporation of a minimum 100-foot agricultural buffer from the property line where new urban development and active agricultural operations using air-applied or forced-air-applied chemicals are adjacent to each other.

Action CR-2.2.3 (Agricultural Buffers) – Allow for the use of vegetative screening and site design and grading options as methods of providing additional buffering of agricultural land uses from new development.

Action CR-2.2.4 (Agricultural Buffers) – As appropriate, consider the agricultural buffer guidelines established by the Butte Local Agency Formation Commission (LAFCo) as part of the project review requirements for projects requiring annexation and located in an area adjacent to an active agricultural use.

Action CR-2.2.5 (Agricultural Protection Line) – Prohibit new urban development west of the southerly extension of Riceton Highway, south of Afton Road and west of the city's wastewater treatment plant to Farris Road. Actively work with Butte County and the City of Gridley to ensure that no new developments of significance are located west of Biggs and West Biggs-Gridley Road south of the city.

Action CR-2.2.6 (Agricultural Land Conversion) – Discourage detachment from irrigation and agricultural drainage districts and the discontinuation of irrigation and farming activities until such time as non-agricultural use is imminent.

Action CR-2.2.7 (Agricultural Land Conversion) – New urban development requiring annexation and occurring in areas previously used for commercial agricultural purposes shall mitigate for the conversion of prime agricultural land and agricultural lands of statewide importance. Mitigation may include in-lieu fees to acquire like agricultural lands or easements or the placement of agricultural easements on similar quality and quantities of land. Participation in regional conservation efforts is encouraged where practical and feasible.

Action CR-2.2.9 (Regional Land Conservation Programs) – Where appropriate, the City will encourage the utilization of and participation in local and/or regional land conservation and agricultural mitigation programs to implement the policies of this plan.

Policy CR-2.3 (Project Review) – During the project review process, address the impacts of siting environmentally sensitive uses in areas where conflicts with agricultural production and processing activities may result.

Policy CR-2.5 (Use of Land) – Plan for and allow for the developed use of designated agricultural buffer areas as the city expands and new buffer areas are established.

Policy CR-2.6 (Right-to-Farm Ordinance) – Preserve and support agricultural enterprises by supporting right-to-farm policies.

Action CR-2.6.1 (Provision of Information) – Continue to evaluate and maintain the city's right-to-farm ordinance to inform residents of ongoing agricultural processes and protect agricultural interests from dumping, nuisance complaints, and other problems associated with new residents in agricultural areas.

Policy CE-3.2 (Natural Features) – Incorporate and utilize natural features in the design of new projects.

Action CE-3.2.1 Work to retain natural features in the design of new development.

Policy CE-3.3 (Buffering) – Utilize natural and physical buffering techniques as necessary and appropriate to minimize land use compatibility issues.

Policy CE-3.4 (Agricultural Consideration in Design) – Ensure that the design of new development is compatible with and will not negatively impact existing and robust agricultural operations.

Action CE-3.4.1 Utilize site design, building orientation and height, screening techniques, and vegetation to address design compatibility issues between new development and existing agricultural operations.

The Project does not include any construction or other development features. However, it is assumed that future development in the Project Area will occur and as such may affect the agricultural scenic vista surrounding the City. Subsequent development would be subject to General Plan policies and actions.

The General Plan has multiple policies and actions, listed above, designed to protect agricultural uses by requiring buffer areas between new development and agricultural land, farmland conservation and a right to farm ordinance. n of agricultural land. In addition, future development projects would be subject to Chapter 14.100 of the City's Biggs Municipal Code (BMC), which provides a design review process for development in the city intended to promote a visual environment of high aesthetic quality. The Biggs Planning Department promote responsible architectural design that is consistent with the city's character by enforcing the design standards as set forth in BMC Section 14.100.070. When applicable, the Planning Department may review architectural drawings or renderings, which are required to be submitted with an application for a building permit. The design process focuses on three major areas: site design, building design, and landscape design. Compliance with the Municipal Code development standards would reduce the visual impact of new development in the Project Area by ensuring that such development would be thoughtfully integrated with existing development and/or the existing natural setting.

The General Plan also includes extensive policies aimed at protecting scenic views of natural areas. For example, the Community Enhancement Element requires development projects to incorporate and highlight natural features in project design (Policy CE-3.2 and Action CE-3.2.1).

Implementation of the proposed General Plan, as well as existing City development and design standards, would ensure visual compatibility with existing development as well as the preservation of unique natural features and scenic resources in the city. Therefore, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

No impact.

The Proposed Project is not located within the vicinity of an officially designated scenic highway. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) In a non-urbanized area substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality	☐	☐	☒	☐

Less than significant impact.

The Proposed Project is in a non-urbanized area. While no development is proposed as a part of the Project, based on current Biggs General Plan land use densities, future development of up to 479 dwelling units and over 85,000 square feet of commercial uses could occur. This would result in a change in character of the Project Area from rural residential and agricultural uses to a developed urban area. However, this change in use is consistent with the City's General Plan land use designations and therefore, the Area was assumed to be developed in the future in the General Plan. Listed below are General Plan policies and actions designed to promote the aesthetic character of the City.

Policy CE-4.2 (Common Design Element) – Develop common design elements that can be used throughout the city that are recognizable to residents and visitors as being representative of the City of Biggs.

Action CE-4.2.1 Incorporate consistent visual elements and consistent visual messages in projects and features to assist in building the identity of the city.

Policy CE-4.3 (Public Art) – Explore ways to use and incorporate art features in the city.

Policy CE-4.4 (Downtown) – Continue and expand programs to strengthen the city's Downtown area and create a design program that recognizes the historic nature of the Downtown area and unique blend of services and facilities located there.

Policy CE-4.5 (Signs) – Ensure that signs and visual advertising media do not negatively impact the visual appeal of the city while recognizing the need to effectively communicate and identify businesses and provide information.

Policy CE-5.1 (Applicability of Design Standards) – Apply City design standards to both public and private development projects.

Policy CE-6.1 (Street Design) – Ensure that city streets maintain a pedestrian scale and incorporate landscaping elements.

Future development projects would be subject to those policies and actions listed above which would assist in promoting the visual character of the City. In addition, Chapter 14.100 of the City Municipal Code, which provides a design review process for development in the city intended to promote a visual environment of high aesthetic quality. As previously noted, the Biggs Planning Department and City Council promote responsible architectural design that is consistent with the city's character by enforcing the design standards as set forth in Chapter 14.100 of the Biggs Municipal Code.

The City's General Plan policies and actions and Chapter 14.100 would be effective in reducing the visual prominence and aesthetic impact of new development. In addition, the City's approach to protecting and maintaining the scenic qualities of the surrounding agricultural areas is comprehensive. Therefore, this impact is considered less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Less than significant impact.

While no development is proposed with the Project, implementation of the Project may introduce future new sources of daytime glare and may change nighttime lighting and illumination levels. Lighting nuisances typically are categorized by the following:

- Glare – Intense light that shines directly or is reflected from a surface into a person's eyes.
- "Skyglow"/Nighttime Illumination – Artificial lighting from urbanized sources that alters the rural landscape in sufficient quantity to cause lighting of the nighttime sky and reduction of visibility of stars and other astronomical features.
- "Spillover" Lighting – Artificial lighting that spills over onto adjacent properties, which could interrupt sleeping patterns or cause other nuisances to neighboring residents.

The main sources of daytime glare in Biggs are from sunlight reflecting from structures with reflective surfaces such as windows. Subsequent development under the Proposed Project would include residential

and commercial structures and other potential sources of glare. Building materials (e.g., reflective glass and polished surfaces) are the most substantial sources of glare. The amount of glare depends on the intensity and direction of sunlight, which is more acute at sunrise and sunset because the angle of the sun is lower during these times.

A source of glare during the nighttime hours is artificial light. The sources of new and increased nighttime lighting and illumination include, but are not limited to, new residential development, lighting from nonresidential uses, lights associated with vehicular travel (e.g., car headlights), street lighting, parking lot lights, and security-related lighting for nonresidential uses. Increased nighttime lighting and illumination could result in adverse effects to adjacent land uses through the spilling over of light into these areas and skyglow conditions.

As previously described, subsequent development would be subject to existing City development and design standards set forth in BMC Chapter 14.100. For instance, BMC Section 14.100.080 requires that all exterior lighting be functional, subtle, and architecturally integrated with the site and building design. In addition, Section 14.100.080 requires that all exterior lighting has to be directed onto the site and away from adjacent properties. All lighting fixtures must be appropriate in scale, intensity, and height to the use they are serving. Similarly, BMC Section 14.110.130 requires that exterior lighting within or adjacent to residential districts be located and/or shielded so as to be directed onto the site on which the lights are installed. Shielded is defined as no more than 20 percent of the light rays emitted by the fixture being directed outside the boundaries of the site.

Adherence to existing City standards and to Municipal Code Sections 14.100.080 and 14.110.130 would reduce the impacts to daytime glare and nighttime lighting by requiring design guidelines and standards to limit lighting leakage and glare. Therefore, this impact would be less than significant.

4.1.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

The California Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program, which identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classification of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS). The California DOC manages the California Important Farmland Finder, an interactive website program that identifies the Project Area as being within an area of Prime Farmland, Farmland of Statewide Importance, Urban and Built-Up land, and Other Land (DOC, 2021).

According to Butte County Williamson Act Parcels mapping, none of the land within the project Area is under a Williamson Act contract (Butte County, 2015).

The Project site is located in flat agricultural area that does not contain possible forest or timber resources.

4.2.2 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion

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

Less than significant impact.

The DOC identifies the Project Area as Prime Farmland (9.6 acres), Farmland of Statewide Importance (61.7 acres), Urban and Built-Up land (7.4 acres), and Other Land (0.8 acres). Project does not propose any development. However, the adoption of Biggs land use designations and prezoning in the Project Area would allow for urban development at densities not currently allowed under the Butte County General Plan land use designations or zoning. This future development would result in the conversion Prime Farmland and Farmland of Statewide Importance to urban uses.

Future development of the Project Area would result in the potential conversion of 9.6 acres of Prime Farmland and 61.7 acres of Farmland of Statewide Importance to urban uses. The following General plan policies and actions assist in the protection of farmland within the Project Area.

Policy LU-1.5 (Agriculture/Urban Interface) – Continue to promote the use of undeveloped land for active agricultural purposes by ensuring the new development does not unnecessarily or prematurely encroach or convert viable, productive and active agricultural lands. Design criteria for buffers should be as follows:

- Require a minimum 100 foot-wide physical separation, which may include roadways, pedestrian/bicycle routes, storm water basins, canals and sloughs, and open spaces between the agricultural use and any habitable structure.
- Require the use of vegetative plantings to reduce issues related to dust, noise, aesthetics and air quality.
- Where possible, minimize the use of structural features such barrier walls to mitigate land use incompatibilities.

Action LU-1.5.1 (Agricultural/Urban Interface) – Update the City's Zoning Ordinance or include within a future design review program, guidelines and standards for the buffering of incompatible land uses.

Policy CR-2.2 (Agricultural Buffers) – Protect agricultural resources by maintaining a clear boundary between urban, rural, and agricultural uses.

Action CR-2.2.1 (Agricultural Buffers) – Require appropriate buffers for new development adjacent to active agricultural operations to ensure context-sensitive and case-sensitive solutions for potential land use incompatibilities.

Action CR-2.2.2 (Agricultural Buffers) – Require the incorporation of a minimum 100-foot agricultural buffer from the property line where new urban development and active agricultural operations using air-applied or forced-air-applied chemicals are adjacent to each other.

Action CR-2.2.3 (Agricultural Buffers) – Allow for the use of vegetative screening and site design and grading options as methods of providing additional buffering of agricultural land uses from new development.

Action CR-2.2.4 (Agricultural Buffers) – As appropriate, consider the agricultural buffer guidelines established by the Butte Local Agency Formation Commission (LAFCo) as part of the project review requirements for projects requiring annexation and located in an area adjacent to an active agricultural use.

Action CR-2.2.6 (Agricultural Land Conversion) – Discourage detachment from irrigation and agricultural drainage districts and the discontinuation of irrigation and farming activities until such time as non-agricultural use is imminent.

Action CR-2.2.7 (Agricultural Land Conversion) – New urban development requiring annexation and occurring in areas previously used for commercial agricultural purposes shall mitigate for the conversion of prime agricultural land and agricultural lands of statewide importance. Mitigation may include in-lieu fees to acquire like agricultural lands or easements or the placement of agricultural easements on similar quality and quantities of land. Participation in regional conservation efforts is encouraged where practical and feasible.

Policy CR-2.6 (Right-to-Farm Ordinance) – Preserve and support agricultural enterprises by supporting right-to-farm policies.

Action CR-2.6.1 (Provision of Information) – Continue to evaluate and maintain the city's right-to-farm ordinance to inform residents of ongoing agricultural processes and protect agricultural interests from dumping, nuisance complaints, and other problems associated with new residents in agricultural areas.

The General Plan requires buffering for new urban uses adjacent to agricultural lands (Policies and Actions LU-1.5, CR-2.2, CR-2.2.1, CR-2.2.2, CR-2.2.3, CR-2.2.4 and CR-2.2.6), and Policy CR-2.6 supports right-to-farm policies which require that prospective buyers of property adjacent to agricultural land uses be

notified that they could be subject to inconvenience or discomfort resulting from accepted farming activities. Further Action CR-2.2.7 requires mitigation of the loss of commercial agricultural lands to non-agricultural uses. These policy provisions of the General Plan demonstrate the City's commitment to continued agricultural activities. However, the General Plan EIR determined that even with the General Plan policies and actions, the loss of agricultural land to urban uses would result in a significant and unavoidable impact. The Project Area was included in the General Plan Planning Area and therefore, was considered for the impact to agriculture as a result of urban development. Since the Proposed Project is consistent with the General Plan land use designations for the Area, the Proposed Project would not result in a greater impact to agriculture than those already identified in the General Plan EIR. As such, the Proposed Project's impact to for the loss of agriculture is less than significant as this loss has been previously considered and accepted by the City.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

No impact.

According to Butte County Williamson Act mapping, the are no properties within the Project Area or within the Project vicinity that are subject to a Williamson Act contracts (Butte County, 2015). The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

No impact.

The Project site is not located in a forestland protection or timber production area. The Project would have no impact in this area.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

No impact.

No identified forest lands exist on the Project site or within the vicinity of the Project. The Project would have no impact in this area.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

No impact.

Approval of the Proposed Project would allow for urban development adjacent to existing agricultural uses and may result in the conversion of farmland to non-agricultural. However, as discussed previously, the City's General Plan provides numerous policies and actions designed to protect farmland including a right-to-farm policy (CR-2.6). Continued application of these policies and actions will minimize the loss of agricultural land adjacent to the Project Area. No forest land exists within the Project vicinity. The Project would have a less than significant impact in this area.

4.2.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.3 Air Quality

4.3.1 Environmental Setting

The Project site is located within Butte County, and adjacent to the City of Biggs. The California Air Resource Board (CARB) has divided California into regional air basins according to topographic features. The County is in the Northern Sacramento Valley Air Basin (NSVAB) and under the jurisdiction of the Butte County Air Quality Management District (BCAQMD). The NSVAB is bounded on the north and west by the Coastal Mountain Range and on the east by the southern end of the Cascade Mountain Range and the northern end of the Sierra Nevada. These mountain ranges reach heights in excess of 6,000 feet above mean sea level, with individual peaks rising much higher. The mountains form a substantial physical

barrier to locally created pollution as well as to pollution transported northward on prevailing winds from the Sacramento metropolitan area (SVAQEEP 2015).

Both the US Environmental Protection Agency (USEPA) and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (O_3), carbon monoxide (CO), particulate matter (PM), oxides of nitrogen (NO_x), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Butte County portion of the NSVAB region is designated as being in State non-attainment for O_3, $PM_{2.5}$, PM_{10}, and Federal non-attainment for O_3 (CARB, 2019).

4.3.2 Regulatory Framework

4.3.2.1 *Butte County Air Quality Management District*

As noted above, the BCAQMD is the local air quality agency with jurisdiction over the Project site. The BCAQMD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs and regulates agricultural and nonagricultural burning. Other district responsibilities include monitoring air quality, preparing air quality plans, and responding to citizen air quality complaints.

All projects in the County are subject to applicable BCAQMD rules and regulations in effect at the time of construction. Descriptions of specific rules applicable to construction resulting from implementation of the Proposed Project may include, but are not limited to:

- Emissions must be prevented from creating a nuisance to surrounding properties as regulated under BCAQMD Rule 200, Nuisance.
- Visible emissions from stationary diesel-powered equipment are not allowed to exceed 40 percent opacity for more than 3 minutes in any one hour, as regulated under BCAQMD Rule 201, Visible Emissions.
- Particulate matter must not be in excess of 0.3 grains per cubic foot of gas at standard conditions under BCAQMD Rule 202 Particulate Matter Concentration.
- Fugitive dust emissions must be prevented from being airborne beyond the property line, as regulated under BCAQMD Rule 205, Fugitive Dust Emissions.
- Under BCAQMD Rule 300, General Prohibitions and Exemptions on Open Burning, certain materials are prohibited from open fires for the purpose of disposing petroleum waste, demolition debris, construction debris, tires or other rubber materials, materials containing tar, or for metal salvage or burning of vehicle bodies. Any open burning requires approval and issuance of a burn permit from the BCAQMD and shall be performed in accordance with the BCAQMD Rule and Regulations.

- Portable equipment, other than vehicles, must be registered with either CARB's Portable Equipment Registration Program (PERP) or with BCAQMD in accordance with BCAQMD Rule 440, Portable Equipment Registration.
- Architectural coatings and solvents used at the project shall be compliant with BCAQMD Rule 230, Architectural Coatings.
- Cutback and emulsified asphalt application shall be conducted in accordance with BCAQMD Rule 231, Cutback and Emulsified Asphalt.
- All stationary equipment, other than internal combustion engines less than 50 horsepower, emitting air pollutants controlled under BCAQMD rules and regulations require an Authority to Construct (ATC) and Permit to Operate (PTO) from the district.
- BCAQMD Rule 207, Residential Wood Combustion, prohibits installation of any new traditional "open hearth" type fireplaces or non-EPA-certified Phase II appliance.
- In the event that demolition, renovation, or removal of asbestos-containing materials is involved, CARB must be contacted.

4.3.3 Air Quality (III) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

Less than significant impact.

The Project site lies within the boundaries of the BCAQMD. As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. As previously stated, the Butte County portion of the NSVAB is classified nonattainment for the federal O_3 standard.

The *2018 Triennial Air Quality Attainment Plan (2018 Plan)* is the most recent air quality planning document covering Butte County. 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. State law makes CARB the lead agency for all purposes related to the *Air Quality Attainment Plan*. Local air districts prepare air quality attainment plans and submit them to CARB for review and approval. The *2018 Plan* provides population and vehicle miles traveled (VMT) projections for the entire NSVAB through the

year 2025. The plan also includes control strategies necessary to attain the California O_3 standard at the earliest practicable date, as well as developed emissions inventories and associated emissions projections for the region showing a downtrend for both ROG and NO_X.

The consistency of the Proposed Project with the *2018 Plan* is determined by its consistency with air pollutant emission projections in the plan. The *2018 Plan* addresses growth by projecting the growth in emissions based on different indicators. For example, population forecasts provided by the California Department of Finance (DOF) are used to forecast population-related emissions. Through the planning process, emission growth is offset by basin-wide controls on stationary, area, and transportation sources of air pollution. In other words, the plans and control measures in the *Air Quality Attainment Plan* are based on information derived from projected growth in order to predict future emissions and then determine strategies and regulatory controls for the reduction of emissions. Growth projections for the City are based on the City's General Plan using the population projections establish by the BCAG in their Long-Term Regional Growth Forecast 2010-2035 report. Because of the limited amount of vacant land in the City, it is assumed that the population growth established by BCAG must involve annexation of land.

However, since it is the intent of the NSVPA Air Quality Attainment Plan to achieve ozone attainment status, and the O_3 precursor emission ROG is projected to increase as a result of the General Plan, the General Plan would conflict with the Air Quality Attainment Plan and this impact would be considered significant and unavoidable.

The Project Area was included in the General Plan Planning Area and therefore, was included in the General Plan EIR analysis for the potential to conflict with or obstruct implementation of the applicable air quality plan. Since the Proposed Project is consistent with the General Plan land use designations for the Area, the Proposed Project would not result in a greater impact to the NSVAB Air Quality Attainment Plan than those already identified in the General Plan EIR. As such, the Proposed Project's impact to conflict with the NSVAB Air Quality Attainment Plan is less than significant as this conflict has been previously considered by the City.

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

Less than significant impact.

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable.

The Butte County portion of the NSVAB region is designated as being in State non-attainment for O_3, $PM_{2.5}$, PM_{10}, and Federal non-attainment for O_3 (CARB, 2019).

As discussed previously, the Proposed Project does not propose any new construction or development. However, approval of the annexation would allow for an increase in development densities and an increase in potential population above those currently allowed under Butte County jurisdiction, as shown in Tables 2.1-2, 2.1-3 and 2.1-4. These increases would add to the potential for exceeding air quality thresholds and therefore result in impacts to air quality. However, the following General Plan policies and actions promote a reduction in criteria air pollutants.

Policy CR-7.1	Plan and design Biggs to encourage walking, bicycling, and the use of transit.
Action CR-7.1.1	Utilize mixed land uses and walkable neighborhoods to allow residents to meet daily needs without the use of an automobile and to support viable transit.
Policy CR-7.2	Require new development projects to incorporate measures to reduce impacts to air quality as outlined by the BCAQMD Air Quality Handbook and the regional Sustainable Communities Strategy (SCS) Plan.
Policy CR-7.3	Cooperate with the BCAQMD in efforts to maintain air quality standards and to minimize air quality impacts associated with new development.
Policy CE-6.2	(Connectivity/Safety) – Create safe, inviting, and user-friendly pedestrian and bicycle environments.
Action CE-6.2.1	Maintain a well-connected pedestrian circulation system by seeking opportunities to enhance pedestrian connectivity.
Action CE-6.2.2	Prepare and adopt street design standards that accommodate pedestrian and bicycle transportation modes.

The General Plan requirements (Policies and Actions CR-7.1, CR-7.1.1, CE-6.2, CE-6.2.1 and CE-6.2.2) support improvements to streets and implementation of bicycle/ pedestrian pathway transit. This promotes a reduction in motor vehicle use within the City that, in turn, reduces the combustion of fossil fuels which is a principal contributor to criteria air pollutants. Further, Policy CR-7.2 and Policy CR-7.3 require cooperation with the BCAQMD to incorporate measures to reduce impacts to air quality. The Biggs General Plan EIR determined General Plan projected growth would result in an increase of criteria air pollutants and precursors for which the air basin is in nonattainment and therefore, impacts associated with long-term emissions from operations and use of subsequent development under the General Plan, including the Project Area, would be significant and unavoidable. The Project Area was included in the General Plan Planning Area and therefore, was considered for the impact to air quality as a result of urban development. While the Genal Plan EIR concluded that the future growth of the City would impact air quality at a significant and unavoidable level, since the Proposed Project is consistent with the General Plan land use designations for the Area, the Proposed Project would not result in a greater impact to air quality than those already identified in the General Plan EIR. As such, the Proposed Project's contribution of criteria air pollutants is less than significant as this increase has been previously considered by the City.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

Less than significant impact.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Short-Term Construction Impacts

The Proposed Project does not propose any new construction or development. However, approval of the annexation would allow for an increase in development densities within the Planning Area. As such, potential construction-related activities would result in temporary, short-term emissions of diesel particulate matter (DPM), reactive organic gases (ROG), nitrogen oxides (NOx), CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment. Health risks associated with these pollutants are primarily linked to long-term exposure and the associated risk of contracting health issues. For construing activities DPM is the primary toxic air contaminant (TAC) of concern. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk. Health-related risks associated with DPM emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The calculation of cancer risk associated with exposure to TACs is typically based on a 70-year period of exposure. The use of diesel-powered construction equipment, however, would be temporary and episodic and would occur over a relatively large area. Long-term health risks associated with short-term construction activities would therefore be considered less than significant.

Operational Air Contaminants

An increase in development densities within the Planning Area as a result of the annexation approval has the potential to expose sensitive receptors to substantial pollutant concentrations. However, the following General Plan policies from the Conservation, Open Space & Recreation Element assist in protecting sensitive receptors:

Policy CR-7.4 Avoid sitting sensitive land uses such as homes or schools in the vicinity of agricultural processing, industrial, or other uses where odors or emissions could adversely affect the sensitive use.

Policy CR-7.2 Require new development project to incorporate measures to reduce impacts to air quality as outlined by the BCAQMD Air Quality Handbook and the regional Sustainable Communities Strategy plan.

Policy CR-7.3 Cooperate with the BCAQMD in efforts to maintain air quality standards and minimize air quality impacts associated with new development.

Compliance with BCAQMD rules and regulations as well as the General Plan policies listed above would reduce the exposure of sensitive receptors to substantial TAC pollutant concentrations. As such, a less than significant impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Less than significant impact.

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

The Project does not include any construction or other development features. However, it is assumed that future development in the Project Area will occur and could contribute to the contribution of odors. During construction, there is the potential for generation of objectionable odors in the form of diesel exhaust. However, these emissions are short-term in nature and would rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Given that there are no natural topographic features (e.g., canyon walls) or manmade structures (e.g., tall buildings) that would potentially trap such emissions, construction-related odors would occur at magnitudes that would not affect substantial numbers of people. Therefore, construction odors as a result of future development would result in a less than significant impact related to odor emissions.

While no development is proposed as a part of the Project, based on current Biggs General Plan land use densities, future development of up to 479 dwelling units and over 85,000 square feet of commercial uses could occur. Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. None of these uses are allowed within the Biggs zoning districts proposed for the Project Area. For those existing agricultural uses in the Project Area, the City's General Plan policies and actions (Policy LU-1.5, Action LU-1.5.1, CR-2.2, Actions CR-2.2.1 through CR -2.2.4) require a separation between agricultural and residential uses. These would assist in reducing the potential for odor conflicts between agricultural and residential uses. Therefore, operational odors would result in a less than significant impact related to odor emissions.

4.3.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.4 Biological Resources

This section describes the existing biological resources, including special-status species and sensitive habitats known to occur or that potentially occur in the Biggs Planning Area, including the proposed Project Area. This information was provided in the Biggs General Plan and used in this document as background information. As no actual development is proposed with this Project, site-specific biological resource assessments at this time would be injudicious as the biological resources of a site may change over time.

4.4.1 Environmental Setting

According to the Biggs General Plan Draft EIR the land cover types within the Project Area fall under two broad categories: urban and agriculture.

4.4.1.1 *Urban*

Urban areas comprise approximately 5.5 acres in the Project Area and includes the residential areas along the Rio Bonita Road. Generally, urban communities are characterized by residential and commercial developments that generally include structures, roadways and other hardscape, remnant mature native

trees, and ornamental landscaping. Park communities are integrated into the urban community and include designated open space areas that are predominantly landscaped. Typical landscape species in the urban community are generally non-natives such as junipers (*Juniperus* spp.), roses (*Rosa* spp.), Bradford pear (*Pyrus callereyana* 'Bradford'), crepe myrtle (*Lagerstroemia indica*), oleander (*Nerium oleander*), and English ivy (*Hedera helix*). Ruderal habitats in vacant lots are generally dominated by species such as yellow star thistle (*Centaurea solstitialis*), prickly lettuce (*Lactuca serriola),* flax-leaved fleabane *(Conyza bonariensis),* and non-native grasses including soft chess *(Bromus hordeaceus),* ripgut brome *(Bromus diandrus),* and foxtail barley *(Hordeum jubatum)*. Vegetation within park communities largely consists of turf with occasional non-native tree species similar to those found in urban habitats (Biggs 2013).

Developed urban areas provide wildlife habitat for western scrub-jay *(Aphelocoma coerulescens),* rock dove *(Columba livia)*, northern mockingbird *(Mimus polyglottos)*, European starling *(Sturnus vulgaris)*, and house finch *(Carpodacus mexicanus)*. Associated mammals include raccoon *(Procyon lotor)*, western gray squirrel *(Sciurus griseus)*, and striped skunk *(Mephitis mephitis)*, and more densely vegetated "urban forests" can provide habitat for songbirds and some raptor species. Biggs is a small urban area similar to the Butte County communities of Durham, Cohasset, Forest Ranch, Magalia, and Dayton. Small and suburban areas such as these provide habitat for a greater diversity of wildlife, including various species of birds, mammals, amphibians, and reptiles (Biggs 2013).

4.4.1.2 *Agriculture*

Totaling approximately 74 acres, agricultural lands are the largest use of land within the Project Area. Agricultural areas occur on a variety of land types throughout California. Agricultural biological community includes orchards, rice, and row crops.

Typically, agricultural fields are monotypic; however, trees are sometimes planted as windbreaks at field edges, and some ruderal (weedy) vegetation can be found along roadsides, at field edges, between rows, and under the canopies in orchards. Cover crops are frequently planted between rows in orchards, creating microhabitat for insects and other wildlife. In the Biggs area, agricultural lands are most commonly associated with urban communities. Transitions between habitats are generally abrupt, marking the edge of cultivated areas.

According to the General Plan Draft EIR, within the Project Area, there are two types of established agriculture: irrigated cropland and orchard/vineyard.

- **Irrigated Cropland:** These are plowed fields with herbaceous crops such as wheat, corn, and beans. Within these areas are three locations constituting approximately 0.07 acre of "altered vernal pool," which are described as one-time vernal pools that have some indication of disturbance. Examples of disturbance include evidence of roads or manmade ditches, fence lines, roadsides, and other disturbances. These can be vernal pools that have been impounded and may be found in areas that appear to have been disked (but with no or little disruption to the duripan), resulting in areas of soil that appear to have been scraped.
- **Orchard/Vineyard:** This agricultural type consists of trees or vines planted in regular rows, which in Biggs Planning Area include almonds, walnuts, olives, peaches, and prunes. Special climatic

conditions also allow orange groves to flourish in the Planning Area, the northernmost citrus-growing area in the state.

Because of their high degree of disturbance, agricultural areas generally have a low habitat value for wildlife, although a number of species adapted for disturbed conditions can utilize these areas. Orchard, cropland, and vineyard generally provide less suitable habitat for wildlife than do pastures because of weed control, tilling, and insect control practices. Agricultural lands generally occur in areas that once supported productive and diverse biological communities. The conversion of native vegetation to agricultural lands has greatly reduced wildlife species' diversity and habitat value. However, some common and agricultural "pest" species forage in these habitats, and cultivated vegetation can provide benefits such as cover, shade, and moisture for these and other species during hot summer months. Fruit and nut orchards and fields of corn or pasture provide food and cover for squirrels, numerous birds, raccoons, and mule deer (*Odocoileus hemionus*). Other species that take advantage of these food sources are feral pig (*Sus scrofa*), ring-necked pheasant (*Phasianus colchicus*), American crow (*Corvus brachyrhynchos*), Norway rat (*Rattus norvegicus*), coyote (*Canis latrans*), opossum (*Didelphis virginiana*), and striped skunk (Biggs 2013).

Seasonally flooded pastures can provide habitat for migratory waterfowl. Many special-status species of birds can be observed utilizing rice fields for habitat within the Biggs General Plan Planning Area, including greater sandhill crane (*Grus canadensis tabida*), Aleutian Canada goose (*Branta canadensis leucopareia*), and great egret (*Ardea alba*). Additionally, rice fields are considered suitable habitat for the federally listed giant garter snake (*Thamnophis gigas*) (Biggs 2013).

Mature orchards can provide nesting habitat for various raptor species such as Swainson's hawks (*Buteo swansoni*). Swainson's hawks typically utilize some row croplands for foraging habitat. Many common species of wildlife have also adapted to use agricultural areas for food and cover such as raccoons, various songbirds, squirrels, rats, snakes, lizards, and American crows (Biggs 2013).

4.4.1.3 *Potential Waters of the U.S./State*

An aquatic resources delineation to identify potential Waters of the U.S./State was not conducted for the Project Area. However, according to the California Aquatic Resource Inventory, there are no previously mapped aquatic resources within the Project Area (SFEI 2017).

4.4.2 Evaluation of Potentially Occurring Special-Status Species

The General Plan EIR special-status species assessment included a preliminary analysis of impacts on biological resources anticipated to result from the implementation of the General Plan over the Planning Area, including the Project Area. For the purposes of this assessment, special-status species are defined as plants or animals that:

- Listed, proposed, or candidate for listing under the state or federal Endangered Species Acts;
- Protected under other regulations (e.g., local policies, Migratory Bird Treaty Act);
- California Department of Fish Wildlife's Species of Special Concern and California Fully Protected Species;

- Listed as species of concern (List 1A, 1B, 2, or 3 plants) by the California Native Plant Society; or
- Species that receive consideration during environmental review under the California Environmental Quality Act (CEQA).

The potential for special-status species to occur within the General Plan Planning Area was evaluated by querying the California Natural Diversity Database (CNDDB), the United States Fish and Wildlife Service *Federal Endangered and Threatened Species That Occur in or May Be Affected by Projects in the Biggs (560B) USGS 7.5- Minute Quad*, and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants for previously recorded occurrences of special-status species within the Biggs, California, US Geological Survey (1970) 7.5-minute quadrangle (Biggs 2013).

The California Department of Fish and Wildlife (CDFW) maintains records for the distribution and known occurrences of sensitive species and habitats in the CNDDB. The CNDDB is organized into map areas based on 7.5-minute topographic maps produced by the US Geological Survey (USGS). The CNDDB is based on actual recorded occurrences but does not constitute an exhaustive inventory of every resource. The absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from that area, but that no data has been entered into the CNDDB inventory. Detailed field surveys are generally required to provide a conclusive determination on presence or absence of sensitive resources from a particular location where there is evidence of potential occurrence.

Results of these queries are summarized in Tables 4.6-1 and 4.6-2 as identified in the General Plan. These tables identify the special-status species plant and animal species, respectively, that have potential to be affected by projects occurring within the General Plan Planning Area, including the Project Area. The habitat preferences for each special-status species were carefully reviewed and considered in the context of the Planning Area limits. Species having no potential for occurrence are not expected to occur based on the known elevation or distribution range of the species or the lack of suitable habitat.

Table 4.6-1. Special-Status Plant Species Potentially Occurring Within the Biggs Planning Area

Scientific Name Common Name	Status			Habitat Description	Considered in Impact Analysis	Species Occurrences and Habitat in Biggs Vicinity
	Federal	State	CNPS			
Ahart's dwarf rush Juncus leiospermus var. ahartii			1B	Found on margins of vernal pools Blooming period: March– May Elevation: 30–229 meters	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Ferris's milkvetch Astragalus tener var. ferrisiae			1B	Meadows and seeps (vernally mesic), Valley and foothill grassland (subalkaline flats). Known only from six extant occurrences. Blooming period: April– May Elevation: 5–75 meters	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Greene's tuctoria Tuctoria greenei	FE Critical Habitat	CR	1B	Vernal pools. Blooming period: May– July (rarely in	No	Suitable habitat is not present within the Biggs Planning Area. There are

				September) Elevation: 30–1,070 meters		no recorded occurrences within 1 mile of the Planning Area
Sanford's arrowhead *Sagittaria sanfordii*			1B	Marshes and swamps (assorted shallow freshwater). Blooming period: May– October Elevation: 0–650 meters	Yes	Suitable habitat is present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.

Code Designations

Federal status: 2009 USFWS Listing
FE = Listed as endangered under the Endangered Species Act
FT = Listed as threatened under the Endangered Species Act

State status: 2009 CDFG Listing
SE = Listed as endangered under the California Endangered Species Act
CR = Species identified as rare by California Department of Fish & Game

CNPS: 2009 CNPS Listing
1B = Plant species that are rare, threatened, or endangered in California and elsewhere
List 2 = Plant species that are rare, threatened, or endangered in California, but more common elsewhere

Source: Biggs 2013

Table 4.6-2. Special-Status Animal Species Potentially Occurring Within the Biggs Planning Area

Common Name *Scientific Name*	Status		Habitat Description	Considered in Impact Analysis	Species Occurrences and Habitat in Biggs Vicinity
	Federal	State			
Invertebrates					
California linderiella *Linderiella occidentalis*			Found in a variety of natural and artificial seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT		Occurs in association with elderberry shrubs (*Sambucus* spp.).	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Vernal pool fairy shrimp *Branchinecta lynchi*	FT		Occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. Although the species has been collected from large vernal pools, including one exceeding 25 acres, it tends to occur in smaller pools. It is most frequently found in pools measuring less than 0.05 acre, most commonly in grass- or mud bottomed swales, or basalt flow depression pools in unplowed grasslands.	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Vernal pool tadpole shrimp *Lepidurus packardi*	FT		Occurs in vernal pools and other seasonal freshwater habitats	No	Suitable habitat is not present within the Biggs Planning Area.

Common Name *Scientific Name*	Status		Habitat Description	Considered in Impact Analysis	Species Occurrences and Habitat in Biggs Vicinity
	Federal	State			
					There are no recorded occurrences within 1 mile of the Planning Area.
Fish					
Chinook salmon Central Valley spring-run ESU *Oncorhynchus tshawytscha*	FE	SE	Few wild spawning populations remain in the Sacramento River system, California; extirpated in San Joaquin River drainage. This ESU includes Chinook salmon entering the Sacramento River from March to July and spawning from late August through early October. Historically, the ESU was the dominant run in the Sacramento and San Joaquin river basins, but native populations in the San Joaquin River apparently all have been extirpated.	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Chinook salmon Central Valley winter-run ESU *Oncorhynchus tshawytscha*	FT	ST	Spawns primarily in the mainstem of the Sacramento River immediately downstream of Keswick Dam and below the historic spawning grounds downstream from Shasta Reservoir; most suitable spawning areas are between the Red Bluff Diversion Dam and Keswick Dam.	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Delta smelt *Hypomesus transpacificus*	FT		Located exclusively in the Sacramento- San Joaquin Delta. They have been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River. They extend downstream as far as San Pablo Bay. Delta smelt are found in brackish water. They usually inhabit salinity ranges of less than 2 parts per thousand (ppt) and are rarely found at salinities greater than 14 ppt.	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Green sturgeon *Acipenser medirostris*	FT		Widely distributed, ocean-oriented sturgeon found in near shore marine waters from Baja Mexico to Canada. Green sturgeons are anadromous, spawning in the Sacramento, Klamath, and Rogue rivers in the spring.	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.

Common Name *Scientific Name*	Status		Habitat Description	Considered in Impact Analysis	Species Occurrences and Habitat in Biggs Vicinity
	Federal	State			
Steelhead Central Valley ESU *Oncorhynchus mykiss irideus*	FT		Spawns in the Sacramento and San Joaquin rivers and their tributaries; now extirpated from most of historical range; the majority of native, natural production occurs in upper Sacramento River tributaries below Red Bluff Diversion Dam	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Amphibians					
California redlegged frog *Rana aurora draytonii*	FT	ST	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands. Upland habitat should have burrows or other soil during their dormancy period (November–mid March).	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1mile of the Planning Area.
Reptiles					
Giant garter snake *Thamnophis gigas*	FT	ST	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands. Upland habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November–mid March).	Yes	Suitable habitat is present within the Planning Area. There are two recorded occurrences within the Biggs Planning Area.
Birds					
Northern harrier *Circus cyaneus*	MNBMC	CSC	Meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands. Nests on ground, usually at marsh edge. Mostly nests in emergent wetland or along rivers or lakes, but may nest in grasslands, grain fields, or on sagebrush flats several miles from water. Breeds April to September.	Yes	Suitable habitat is present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Swainson's hawk *Buteo swainsoni*	MNBMC	ST	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.).	Yes	Suitable habitat is present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Greater sandhill crane *Grus canadensis tabida*	MNBMC	ST; CFP	(Rookery) This species establishes nesting territories in wet meadows, often interspersed with marsh land habitat. They nest on the ground in dense emergent marsh vegetation. In California,	Yes	Suitable habitat is present within the Biggs Planning Area. There is one recorded occurrence within 1 mile of the Planning Area.

Common Name *Scientific Name*	Status		Habitat Description	Considered in Impact Analysis	Species Occurrences and Habitat in Biggs Vicinity
	Federal	State			
			pairs generally nest in open habitats.		
Burrowing owl *Athene cunicularia*		CSC	Open grasslands and shrublands up to 5,300 feet with low perches and small mammal burrows. Resident year-round. Breeds March through August.	Yes	Suitable habitat is present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
Mammals					
Silver-haired bat *Lasionycteris Noctivagans*			Prefers forested (frequently coniferous) areas adjacent to lakes, ponds, and streams. Summer roosts and nursery sites are in tree foliage, cavities, or under loose bark, sometimes in buildings.	Yes	Suitable habitat is present within the Biggs Planning Area. There is one recorded occurrence within 1 mile of the Planning Area.

Code Designations

Federal status: 2009 USFWS Listing
ESU = Evolutionary Significant Unit (a distinctive population)
FE = Listed as endangered under the Federal Endangered Species Act (FESA)
FT = Listed as threatened under the FESA
MNBMC = Migratory Nongame Bird of Management Concern, protected under the Migratory Bird Treaty Act

State status: 2009 CDFG Listing
SE = Listed as endangered under the California Endangered Species Act (CESA)
ST = Listed as threatened under the CESA
CSC = Species of Concern as identified by the CDFG
CFP = Listed as fully protected under CDFG code

Source: Biggs 2013

Species that have the potential for occurrence within the Biggs Planning Area and therefore within the Project Area are described further below.

Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) has no federal or state status yet is designated as List 1B by the CNPS. This perennial herb of the water-plantain family (Alismitaceae) occurs in assorted shallow freshwater marshes and swamps and artificial ponds and lakes. This species blooms from May to October. Suitable habitat is present within the Biggs Planning Area. Suitable habitat (freshwater emergent wetland) occurs in the along the margins of the perennial streams in the Planning Area, most notably in sections of Hamilton Slough. There are no recorded occurrences of this species within a 1-mile radius of the Planning Area (Biggs 2013).

Giant Garter Snake

Giant garter snake (*Thamnophis gigas*) is state and federally listed as threatened. The giant garter snake is a California endemic species found only in the Sacramento and San Joaquin valleys. Giant garter snakes inhabit agricultural wetlands and associated waterways. These include irrigation and drainage canals, rice fields, marshes, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands. Features of these habitats important to giant garter snakes include:

- Sufficient water during the snake's active season (early spring through mid-fall) to maintain an adequate prey base;

- Emergent vegetation such as cattails (*Typha* spp.) and bulrushes (*Scirpus* spp.) for escape cover and foraging habitat;
- Upland habitat with grassy banks and openings to waterside vegetation for basking; and
- Adjacent upland areas for cover and refuge from floodwaters during the species' inactive season. Suitable habitat is present within the Planning Area. There are two recorded occurrences within 1 mile of the Planning Area (Biggs 2013).

Northern Harrier

The northern harrier (*Circus cyaneus*) is a California species of special concern and is protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703–712). It is found in meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands. They nest on the ground, usually at marsh edges. Typically, they nest in emergent wetland or along rivers or lakes, but may nest in grasslands, grain fields, or on sagebrush flats several miles from water. They breed April to September. Suitable habitat is present within the Planning Area. There are no recorded occurrences of this species within a 1-mile radius of the Planning Area (Biggs 2013).

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is state listed as threatened and is protected under the MBTA. In California, Swainson's hawk nesting distribution includes Great Basin sage-steppe communities and associated agricultural valleys in extreme northeastern California, isolated valleys in the Sierra Nevada in Mono and Inyo counties, the Sacramento and San Joaquin valleys, and at least one known isolated breeding site in the Mojave Desert. The historic breeding distribution also included much of Southern California, particularly the inland valleys, where the species was once considered common.

In California, Swainson's hawk habitat generally consists of large, flat, open, undeveloped landscapes that include suitable grassland or agricultural foraging habitat and sparsely distributed trees for nesting. Swainson's hawks usually nest in large, native trees such as valley oaks (*Quercus lobata*), cottonwoods (*Populus fremontii*), and willows (*Salix* spp.), although nonnative trees such as eucalyptus (*Eucalyptus* spp.) are also used. Nests occur in riparian woodlands, roadside trees, trees along field borders, isolated trees, small groves, trees in windbreaks, and the edges of remnant oak woodlands. Swainson's hawks typically forage in large fields that support low vegetative cover (to provide access to the ground) and provide the highest densities of prey. Suitable habitat is present within the Planning Area. There are no recorded occurrences of this species within a 1-mile radius of the Planning Area (Biggs 2013).

Greater Sandhill Crane

The greater sandhill crane (*Grus canadensis tabida*) is listed as threatened under the California Endangered Species Act (CESA), is protected under the MBTA, and is a California fully protected species. It occurs in and near wet meadow, shallow lacustrine, and fresh emergent wetland habitats. It winters primarily in the Sacramento and San Joaquin valleys from Tehama County south to Kings County, where it frequents annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands. It prefers relatively treeless plains. Outside of known wintering grounds, it is extremely rare

except that it migrates over much of interior California in great flocks. They are particularly sensitive to human disturbance when nesting, especially within a mile of the nest site. Grazing can also be detrimental to nest sites. Suitable habitat is present within the Planning Area. There is one recorded occurrence within 1 mile of the Planning Area, to the south at the northern limits of Gridley (Biggs 2013).

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a California species of special concern and protected by the MBTA. In California, the range of the western burrowing owl extends through the lowlands south and west from north central California to Mexico, with small, scattered populations occurring in the Great Basin and the desert regions of the southwestern part of the state. Burrowing owls are found in open, dry grasslands, agricultural and range lands, and desert habitats, often associated with burrowing animals. They can also inhabit grass, forbs, and shrub stages of piñon and ponderosa pine habitats. They can be found at elevations ranging from 200 feet below sea level to 9,000 feet above. Burrowing owls commonly perch on fence posts or on mounds outside the burrow. They can be found at the margins of airports and golf courses and in vacant urban lots.

Burrowing owls tend to be resident where food sources are stable and available year-round. They disperse or migrate south in areas where food becomes seasonally scarce. Burrowing owls in migratory populations also often re-nest in the same burrow, particularly if the previous year's breeding was successful. Other birds in the same population may move to burrows near their previous year's burrow. Suitable habitat is present within the Planning Area. There are no recorded occurrences of this species within a 1-mile radius of the Planning Area (Biggs 2013).

Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) prefers forested (frequently coniferous) areas adjacent to lakes, ponds, and streams. Summer roosts and nursery sites are in tree foliage, cavities, or under loose bark, sometimes in buildings. Suitable habitat is present within the Planning Area. There is one recorded occurrence within 1 mile of the Planning Area, also at the northern limits of Gridley (Biggs 2013).

According to the General Plan EIR, the silver-haired bat had no formal special status at the time of General Plan adoption in 2014, but like many other species of bats in California, its numbers are declining rapidly enough that the CDFW considers any potential impacts to individual or roosting silver-haired bats from a proposed project worthy of consideration and analysis. As of April 2021, this species of bat has not been listed as a California special status species (CDFW 2021).

4.4.3 Biological Resources (IV) Environmental Checklist and Discussion

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

Less than significant impact.

According to the General Plan EIR, the Project site is potential habitat for one special-status plant species: Stanford's arrowhead, one special status reptile: giant garter snake, and four special-status bird species: northern harrier, Swainson's hawk, greater sandhill crane and the burrowing owl. The General plan EIR determined that any development in areas that are currently undeveloped, such as those within the Project Area, could result in impacts to special-status species. Where there are direct impacts to special-status species, indirect impacts would occur as well. Indirect impacts may include habitat modification, increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows and general hydrology due to development of previously undeveloped areas (Biggs 2013). However, the General Plan includes the following policies designed to protect special-status species:

Policy CR-3.1 (Biological Resources) – Applicants for projects that have the potential to negatively affect special-status species shall 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.

Policy CR-4.1 (Riparian Habitat Loss) – Require new development to make all reasonable efforts to minimize and avoid the loss of federal and state protected wetlands. If loss is unavoidable, require the applicants to mitigate the loss in accordance with federal and state law.

Policy CR-4.2 (Open Space Options) – Promote the establishment of open space reserves along riparian corridors for habitat protection and enhancement as well as community connectivity and open space.

While the Proposed Project does not, in and of itself, propose development, approval of the annexation would allow for development levels not currently allowed. General Plan Policy CR-3.1 ensures that applicants for future development projects that have the potential to negatively affect special-status species will conduct a biological resources assessment and identify design solutions that avoid such

impacts. If adverse impacts cannot be avoided, Policy CR-3.1 requires that impacts be mitigated as prescribed by the appropriate state or federal agency. Policy CR-4.1 requires new development to make all reasonable efforts to minimize and avoid the loss of federal and state protected wetlands. If loss is unavoidable, development applicants would be required to mitigate the loss in accordance with federal and state law. Individual projects associated with the implementation of the proposed General Plan would be required to address and mitigate special-status species and habitat impacts. Thus, this impact would be less than significant.

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

Less than significant impact.

The Project Area does not have any bodies of water and associated riparian areas. As such the Project would have no impact to riparian habitats. However, development of previously undeveloped or agricultural land for residential and commercial uses could directly modify the habitat of special-status species through construction activities such as grading and tree removal, as well as development effects such as increased impervious surfaces. Habitat modification could also include increased human presence and fragmentation.

As discussed previously, General Plan Policy CR-3.1 ensures that applicants for future development projects that have the potential to negatively affect special-status species will conduct a biological resources assessment and identify design solutions that avoid such impacts. If adverse impacts cannot be avoided, Policy CR-3.1 requires that impacts be mitigated as prescribed by the appropriate state or federal agency. Individual projects associated with the implementation of the Proposed Project would be required to address and mitigate special-status species and habitat impacts. Thus, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

No impact.

The Project Area does not have any rivers, creeks, streams, or any other water features. on the Project site. As such, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐

Less than significant impact.

No water bodies occur onsite that would have the potential for migratory fish. Wildlife movement corridors are routes frequently utilized by wildlife that provide shelter and sufficient food supplies to support wildlife species during migration. Open space, including agricultural lands, also provides an opportunity for dispersal and migration of wildlife species. New development in currently undeveloped open space and agricultural areas resulting from implementation of the Proposed Project could interfere with wildlife migration and thus restrict the range of special-status species. Migratory birds may use the agricultural areas and other natural habitats within the Project Area during migration and breeding.

As discussed previously, General Plan Policy CR-3.1 ensures that applicants for future development projects that have the potential to negatively affect special-status species will conduct a biological resources assessment and identify design solutions that avoid such impacts. If adverse impacts cannot be avoided, Policy CR-3.1 requires that impacts be mitigated as prescribed by the appropriate state or federal agency. Individual projects associated with the implementation of the Proposed Project would be required to address and mitigate special-status species and habitat impacts. Thus, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

No impact.

The Proposed Project does not include the construction of any structures and therefore, the Project, in and of itself would not result in a conflict with General Plan polices protecting biological resources or conflict with Biggs Municipal Code Chapter 9.15 Trees. All future development which may be constructed

in the Project Area would be required to comply with General Plan polices as well as Chapter 9.15. Therefore, no conflict with occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Less than significant impact.

The Project Area is located within the proposed Butte Regional Conservation Plan (BRCP). The BRCP is both a federal Habitat Conservation Plan (HCP) and a state Natural Community Conservation Plan (NCCP). It provides streamlined state and federal endangered species act and wetlands permitting for transportation projects, land development and other covered activities over the 50 year term of the permits. It also provides comprehensive species, wetlands and ecosystem conservation and contributes to the recovery of endangered species within the Plan Area. At the writing of this Initial Study, the BRCP has not been adopted. However, because the City of Biggs is a participating member of the BRCP, if and when the BRCP is formally adopted, all future development within the Project Area will be required to comply with those requirements in the BRCP that are relevant to the individual development. As such. the Project would have a less than significant impact in this area.

4.4.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.5 Cultural Resources

The Biggs General Plan Draft EIR provided information on the cultural resources found in the General Plan Planning Area, which included the Project Area. This information is used in this Initial Study to provide a cultural resources background setting.

4.5.1 Environmental Setting

4.5.1.1 *Prehistory*

The archaeology of the Central Valley and the area encompassing Biggs is complex and also related to surrounding areas such as the central Sierra Nevada and the Great Basin. While there have been relatively few extensive archaeological investigations in the Biggs vicinity, large-scale archaeological investigations were undertaken in the neighboring Lake Oroville area during the 1960s through the 1970s for the construction of Oroville Dam and Lake Oroville. Archaeological research undertaken in the Lake Oroville area may be used to characterize the prehistory of the Biggs Planning Area. Ritter summarized the

archaeological investigations in the area, which identified four prehistoric cultural complexes: Mesilla, 1,000 BC–AD 1; Bidwell, AD 1–AD 800; Sweetwater, AD 800–AD 1500; and Oroville, AD 1500–AD 1850.

The Mesilla Complex represents hunter-gatherer occupation of the foothills of the Sierra Nevada and is characterized by large and heavy (usually weighing over 3.5 grams) leaf-shaped, stemmed, or side-notched points made of local "non-glassy" material; boatstones; milling stones and manos; *haliotis* and *olivella* shell beads and ornaments; and flexed burials. The Mesilla Complex points show considerable similarity with points from Martis Complex sites from the northcentral Sierra Nevada, such as CA-Nev-15 which is only 35 miles from the Oroville area. Shell beads, shell ornaments, and flexed burials, however, also suggest a relationship of the Mesilla Complex to the Middle Horizon of the Central Valley.

Archaeologists have recognized the similarity of the Mesilla Complex to both the Martis Complex and the Middle Horizon of the Central Valley, but they believed that the Mesilla Complex had unique elements and its "intermediate" geographic position in the foothills between the other two cultures warranted its designation as a distinct complex. Similarities of the Mesilla Complex to the Martis Complex, the Middle Horizon of Central California, and other cultural complexes further to the north of Butte County in Tehama and Shasta counties have been identified by researchers. Similarities across the entire area, particularly regarding point types, shell beads, the presence of manos and milling stones, and type of burial, have been identified (PMC 2008). The Bidwell Complex represents a continuation and elaboration of the Mesilla Complex, with an increase in the number of traits adopted from the Central Valley and an intensification and diversification of subsistence activities. The Bidwell Complex is characterized by large corner and side-notched, wide-stemmed, leaf-shaped, small corner-notched, and stemmed projectile points primarily made of basalt; large basalt drills; net weights; steatite vessels; wooden mortar and pestles; and bone awls.

The Sweetwater Complex represents a period of population growth and intensification of acorn use during the Late Period. The Sweetwater Complex is characterized by large leaf-shaped and small corner-notched projectile points, cobble and slab mortars and pestles, bone fish gorges, shell beads, and clam shell spoons. It is believed by some that the Sweetwater Complex is associated with the arrival of Maiduan peoples in the region.

The Oroville Complex represents a continuation of the Sweetwater Complex, particularly in terms of population growth, further intensification of acorn use, and the proliferation of certain artifacts such as beads. The Oroville Complex is characterized by small side-notched, corner-notched, and triangular projectile points; manos and metates; mortars and pestles; bone fish gorges; bone awls; clam shell disk beads; and *haliotis* ornaments. The Oroville Complex probably culminates in the culture of the ethnographic Konkow (Biggs 2013).

4.5.1.2 *Historic Context*

The Spanish period in California lasted from about 1769 to 1821. Euroamerican contact with Native American groups living in the Central Valley of California began during the last half of the eighteenth century. At this time, the attention of Spanish missionaries shifted away from the coast and its dwindling Native American population to the conversion and missionization of interior populations. Luis Argüello led

an early expedition into the area in 1820. The expedition left San Francisco and followed a northerly course to the Sacramento River, intersecting the river a short distance north of Grimes. The group then followed the river north to Cottonwood Creek, passing through Konkow territory. The area remained relatively unoccupied by Euroamericans until the Gold Rush. The latter half of the nineteenth century witnessed an ongoing and growing immigration of Euroamericans into the area, which was also accompanied by regional cultural and economic changes. These changes are highlighted by the development of towns and businesses associated with either gold mining or agriculture and a dramatic decline of Native American culture and people.

The Mexican Period (ca. 1821–1848) in California is an outgrowth of the Mexican Revolution and its accompanying social and political views affected the mission system. The end of the Mexican-American War and the signing of the Treaty of Guadalupe Hidalgo in 1848 marked the beginning of the American period (ca. 1848–present) in California history.

The first non-Native American to enter current Butte County was probably Gabriel Moraga, a Spanish soldier, who led an expedition into Alta California, crossing the Feather River in 1808 near Oroville. Following Moraga, Captain Luis Argüello explored Butte County in 1820 and named the Feather River (Rio de la Plumas). In 1825, Jedediah Strong Smith entered California from the south and by 1827 had made his way to the Feather River. Hudson's Bay Company trappers also extensively explored the area in the 1820s and 1830s looking for furs. Then, in the 1830s and 1840s, Joseph R. Walker and Joseph B. Chiles explored parts of Butte County, traveling along the Sacramento River and the South Fork of the Feather River, either looking for travel routes in the area or bringing settlers to the area.

The search for gold drew thousands of miners to what is today Plumas County. By 1880, the largest ethnic percentage of these miners was Chinese. In 1880, neighboring Butte County had the second largest Chinese population in the nation. Swiss-Italian immigrants traveled to the county during the 1860s. The Swiss-Italians produced dairy products and hay for nearby gold mining operations, and some of their descendants raise cattle today.

Biggs was founded in 1871 by A. M. Pitts and Lewis Posey. It was named Biggs Station after Major Marion Biggs, a prominent local political leader. After two serious fires in the summer of 1878, a community water system was constructed. Biggs was rebuilt with brick stores and the word "station" was dropped from the town's name. By 1882, the town had more than 600 inhabitants. In the summer of 1903, all of the buildings on the south side of B Street, in the first block east of the railroad, were consumed by fire. Four years later, flooding from the Feather River covered a quarter of the town to a depth of almost 4 feet Biggs 2013).

4.5.1.3 *Known Historic and Cultural Resources in the Project Area*

The General Plan Draft EIR identified a number of historically significant buildings within the city limits although none of these were listed in the National Register of Historic Places or the California Register of Historic Places. None of these buildings are located within the Project Area. Additionally, the records search and field survey conducted as part of the General Plan EIR did not identify any archaeological resources in the Biggs Planning Area, including the Project Area (Biggs 2013).

4.5.2 Cultural Resources (V) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐

Less than significant impact.

As discussed above, there are no known historic resources within the Project Area. However, while the Project, in and of itself, does not propose development, future residential and commercial construction at increased densities may occur as a result of the Project. This future construction may uncover unknown historical resources. As such, future development has the potential to destroy and/or degrade known and unknown historical resources.

The following General Plan policies and actions from the Community Enhancement Element address cultural resources within the Project Area:

Policy CE-8.5 (Cultural Resources) – Protect and preserve archaeological and other cultural resources to serve as significant reminders of the City's heritage and values.

Action CE-8.5.1 Consult and require record searches for discretionary projects with the Northeast Center of California Historical Resources Information System (CHRIS) location at CSU Chico.

General Plan Action CE-8.5.1 requires that future discretionary projects under the General Plan conduct record searches for with the Northeast Center of California Historical Resources Information System (CHRIS) location at CSU Chico. While there are no known recorded historical resources within the Project Area, Policy CE-8.5 would assist in the protection for those historical resources discovered during the construction process for new development. For the reasons described above, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐

Less than significant impact.

As discussed above, there are no known archaeological resources within the Project Area. However, while the Project, in and of itself, does not propose development, future residential and commercial

construction at increased densities may occur as a result of the Project. This future construction may uncover unknown archeological resources. As such, future development has the potential to destroy and/or degrade known and unknown archaeological resources.

The following General Plan policies and actions address cultural resources within the Project Area:

Policy CE-8.5 (Cultural Resources) – Protect and preserve archaeological and other cultural resources to serve as significant reminders of the City's heritage and values.

Action CE-8.5.1 Consult and require record searches for discretionary projects with the Northeast Center of California Historical Resources Information System (CHRIS) location at CSU Chico.

Action CE-8.5.2 Consult with and distribute environmental review documents to the Native American Heritage Commission through the State Clearinghouse.

General Plan Action CE-8.5.1 requires that future discretionary projects under the General Plan conduct record searches for with the Northeast Center of California Historical Resources Information System (CHRIS) location at CSU Chico. Additionally, Action CE-8.5.2 requires future development to consult with and distribute environmental review documents to the Native American Heritage Commission through the State Clearinghouse. Treatment options under California Public Resource Code (PRC) Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource). Future development in the Project Area would be required to adhere to CEQA on a project-by-project basis. In addition, CEQA Guidelines Section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission and/or tribe that would be the most probably descendent must be contacted within 24 hours. At that time, the City of Biggs, as the lead agency, must consult with the appropriate Native Americans, if any, as timely identified by the Native American Heritage Commission. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

For the reasons described above, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Less than significant impact.

As discussed above, there are no known formal or informal cemeteries within the Project Area. However, while the Project, in and of itself, does not propose development, future residential and commercial construction may occur as a result of the Project. This future construction may uncover unknown human resources.

The following General Plan policies and actions address cultural resources within the Project Area:

Policy CE-8.5 (Cultural Resources) – Protect and preserve archaeological and other cultural resources to serve as significant reminders of the City's heritage and values.

Action CE-8.5.1 Consult and require record searches for discretionary projects with the Northeast Center of California Historical Resources Information System (CHRIS) location at CSU Chico.

Action CE-8.5.2 Consult with and distribute environmental review documents to the Native American Heritage Commission through the State Clearinghouse.

California Health and Safety Code (HSC) Section 7050.5 provides regulations for the discovery of human remains. These regulations require that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Additionally, if human remains are discovered, treatment options defined under California Public Resources Code (PRC) Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource). Future development in the Project Area would be required to adhere to CEQA on a project-by-project basis. In addition, CEQA Guidelines Section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission and/or tribe that would be the most probably descendent must be contacted within 24 hours. At that time, the City of Biggs, as the lead agency, must consult with the appropriate Native Americans, if any, as timely identified by the Native American Heritage Commission. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

For the reasons described above, this impact would be less than significant.

4.5.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.6 Energy

4.6.1 Environmental Setting

Energy consumption is analyzed in this Initial Study due to the potential direct and indirect environmental impacts associated with the Proposed Project. Such impacts include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) and emissions of pollutants. It is noted that energy use/consumption was not analyzed in the General Plan EIR.

4.6.1.1 *Electricity/Natural Gas Services*

The Biggs City Electric Utility is the sole provider of electric power to residences and businesses within the City limits. It is responsible for maintaining and operating the local electric distribution system, is involved in engineering and advance planning for improvements, replacement and expansion of distribution system, and maintenance and operation of the City's street lighting system. The City has one of the smallest public power electric utilities in California, serving about 5 megawatts during the warmest parts of the summer. The Pacific Gas and Electric Company (PG&E) provides natural gas services to Biggs and many of the surrounding areas with a service area of more than 70,000 total square miles.

4.6.1.2 *Energy Consumption*

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all uses in Butte County from 2015 to 2019 is shown in Table 4.6-1. As indicated, the demand has slightly decreased since 2015.

Table 4.6-1. Non-Residential Electricity Consumption in Butte County 2015-2019

Year	Electricity Consumption (kilowatt hours)
2019	1,396,246,344
2018	1,475,788,821
2017	1,529,818,607
2016	1,482,073,760
2015	1,492,098,630

Source: CEC 2019

The natural gas consumption associated with all uses in Butte County from 2015 to 2019 is shown in Table 4.6-2. As indicated, the demand has decreased since 2015.

Table 4.6-2. Natural Gas Consumption in Butte County 2015-2019

Year	Natural Gas Consumption (therms)
2019	39,225,366
2018	41,980,110
2017	44,838,804
2016	42,367,872
2015	40,433,034

Source: CEC 2019

Automotive fuel consumption in Butte County from 2016 to 2020 is shown in Table 4.6-3 Fuel consumption has decreased between since 2016.

Table 4.6-3. Automotive Fuel Consumption in Butte County 2016-2020

Year	Total Fuel Consumption (gallons)
2020	115,253,389
2019	117,632,337
2018	120,080,285
2017	122,436,165
2016	122,781,730

Source: CARB 2017

4.6.2 Energy (VI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐

Less than significant impact.

While no development is proposed as a part of the Project, based on current Biggs General Plan land use densities, future development of up to 479 dwelling units and over 85,000 square feet of commercial uses could occur. This would result in a change in character of the Project Area from rural residential and agricultural uses to a developed urban area. Thus, increasing energy use/consumption in the Project Area. The three sources of energy relevant to future development (electricity, natural gas, and the automotive fuel necessary for operations) are analyzed below. It is noted that the equipment-fuel necessary for

construction was not analyzed as the timing of possible future development is unknown. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For the purpose of this analysis, the amount of electricity estimated to be consumed by the potential future development is quantified and compared to that consumed by all land uses in Butte County. Similarly, the amount of fuel necessary for long-term operations is calculated and compared to that consumed in Butte County.

The analysis of electricity gas usage is based on CalEEMod modeling conducted by ECORP Consulting (see Attachment 4.6), which quantifies energy use for operations. The amount of operational automotive fuel use was estimated using the CARB's EMFAC2017 computer program, which provides projections for typical daily fuel usage in Butte County. Energy consumption associated with the potential future development of up to 479 dwelling units and over 85,000 square feet of commercial uses is summarized in Table 4.6-4.

Table 4.6-4. Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Electricity Consumption[1]	5,099,890 kilowatt-hours	0.3 percent
Natural Gas[1]	141,984 therms	0.3 percent
Automotive Fuel Consumption		
Project Operations[2]	680,586 gallons	0.5 percent

Source: [1]CalEEMod, [2]EMFAC2017 (CARB 2017)
Notes: The Project increases in electricity consumption are compared with all buildings in Butte County in 2019, the latest data available. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2020, the most recent full year of data. 469 dwelling units were analyzed discounting the 10 existing residential units.

Future development of up to 479 dwelling units and over 85,000 square feet of commercial uses would include electricity and usage from lighting, space and water heating, and landscape maintenance activities. As shown in Table 4.6-4, this could result in 5,099,890 kilowatt-hours of electricity consumption, resulting in an approximate 0.3 percent increase countywide. However, this is potentially a conservative estimate. In September 2018 Governor Jerry Brown Signed EO B-55-18, which established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Carbon neutrality refers to achieving a net zero CO_2 emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for GHG emission reduction. Governor's Executive Order B-55-18 requires CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." Additionally, the Project's increase in natural gas usage of 0.3 percent across all uses in Butte County would also be negligible. Furthermore, future development fuel consumption could reach up to 680,586 gallons annually resulting in a 0.5 percent countywide increase. This analysis conservatively assumes that all of the automobile trips generated would be new to Butte County. For these reasons, the

Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy or fuel consumption. As such, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Less than significant impact.

The Project does not include any construction or other development features. However, it is assumed that future development in the Project area will occur and can include up to 479 dwelling units and over 85,000 square feet of commercial uses. All future buildings in the Planning Area will be built to the Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (Title 24). Title 24 was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years; the 2016 standards became effective January 1, 2017. The 2019 Title 24 updates went into effect on January 1, 2020. The 2019 Energy Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Energy Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 Energy Standards are a major step toward meeting Zero Net Energy. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments. Additionally, in January 2010, the State of California adopted the California Green Building Standards Code (CalGreen) that establishes mandatory green building standards for all buildings in California. The code was subsequently updated in 2013. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality.

For these reasons, this impact would be less than significant.

4.6.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.7 Geology and Soils

4.7.1 Environmental Setting

Biggs and the surrounding area are predominantly flat with slopes generally not exceeding two percent. The Project Area is generally flat with little to no slope. Elevation is approximately 96 feet above mean sea level (AMSL).

Biggs and the Project Area are located on two primary geologic formations: Riverbank and Modesto, both of the Pleistocene era. These terrace deposits typically consist of 1–3 meters of dark gray to red fine sand and silt overlying 1.5–2 meters of poorly sorted gravel. The Riverbank Formation is light red in color and consists of gravel, sand, silt, and clay. The Modesto formation is younger than the Riverbank formation, is usually less than 2.5 meters thick, and is composed of gravel, sand, silt, and clay. In much of the Sacramento Valley, especially east of the Sacramento River, the Modesto Formation overlies the Riverbank Formation. The Modesto Formation consists of sand, silt, and clay seams deposited by rivers and ranges in depth from 10 to 200 feet, depending on location. It was deposited during the Pleistocene Age, from 42,000 to 14,000 years ago. The formation consists of tan and light grey gravelly sand, silt, and clay. The Riverbank and Modesto formations are generally erosion resistant.

4.7.1.1 *Geomorphic Setting*

The Biggs Planning Area is located within the Great Valley Geomorphic Province (Great Valley), which includes the area known as the Great Central Valley of California. The Great Valley extends 400 miles north to south and 60 miles east to west and is encompassed by the Coast Ranges (metamorphic), the Klamath Ranges (metamorphic), the Cascade Range (volcanic), and the Sierra Nevada Range (granitic and metamorphic). The Great Valley consists of an elongated structural trough that has been filled with a sequence of sedimentary deposits ranging in age from Jurassic to recent. Geophysical evidence suggests that the Great Valley is underlain at depth with granitic rocks of the Sierra Nevada Province. The majority of rocks and deposits found within the Great Valley Geomorphic Province are sedimentary. The age of these rocks and deposits ranges from Upper Jurassic (between 154 and 135 million years ago) to recent. [CGS] 2002).

4.7.1.2 *Site Soils*

According to the USDA's National Resources Conservation Service (NRCS) via the Web Soil Survey database, the Project site is composed of two soil units: Boga-Loemstone , 0 to 1 percent slopes and Gridley taxadjunct loam, 0 to 2 percent slopes, as shown in Figure 4 and Table 4.7-1. The Web Soil Survey also identifies drainage, flooding, erosion, runoff, frost action, and the linear extensibility potential for the Project soils. According to this survey, the Project soils are moderately well drained and somewhat poorly drained, have a moderate and high runoff potential, and have no potential for flooding or frost action. The Project site soils also have a slight erosion potential and moderate linear extensibility (shrink-swell) (NRCS 2021).

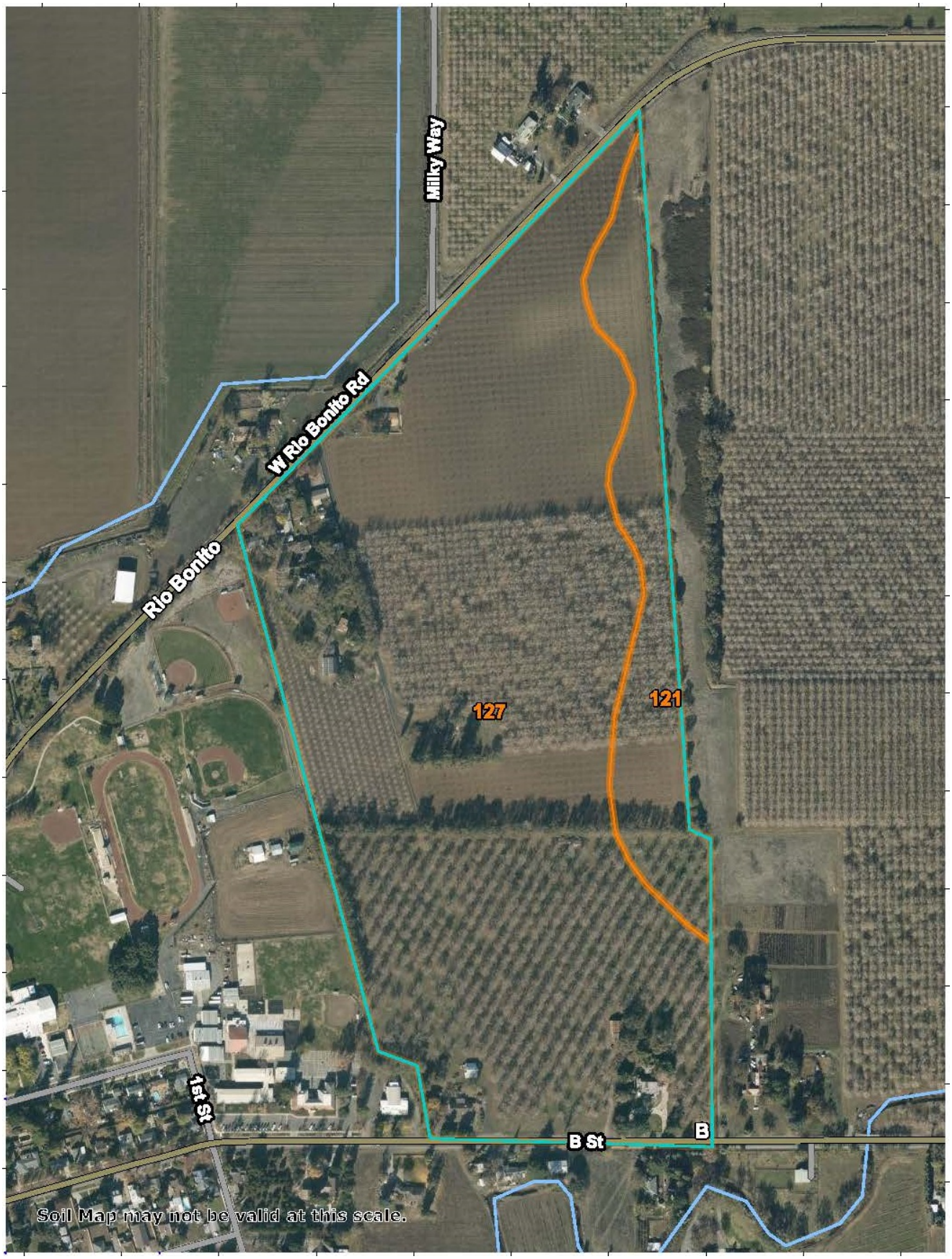
Table 4.7-1. Project Area Soil Characteristics

Soil (Map Unit Symbol, Map Unit Name)	Percentage of Site	Drainage	Flooding Frequency Class	Frost Action[1]
121, Boga-Loemstone , 0 to 1 percent slopes	12.4%	Moderately well drained	None	None
127, Gridley taxadjunct loam, 0 to 2 percent slopes	87.6%	Somewhat poorly drained	None	None
	Runoff Potential[2]	**Linear Extensibility[3]**	**Erosion Hazard[4]**	
121, Boga-Loemstone , 0 to 1 percent slopes	C (moderate)	3.8%, moderate	Slight	
127, Gridley taxadjunct loam, 0 to 2 percent slope	D (high)	5.4%, moderate	Slight	

Source: NRCS 2021

Notes:

1. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.
2. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation.
Group A: Soils having a high infiltration rate (low runoff potential) when thoroughly wet.
Group B: Soils having a moderate infiltration rate when thoroughly wet.
Group C: Soils having a slow infiltration rate when thoroughly wet.
Group D: Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet.
3. Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3%, moderate if 3 to 6%, high if 6 to 9%, and very high if more than 9%. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.
4. The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and offsite damage are likely, and erosion-control measures are costly and generally impractical.



Source: NRCS 2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 4. Project Soils
City of Biggs - Phase 1 Annexation Area

4.7.1.3 *Regional Seismicity and Fault Zones*

In California, special definitions for active faults were devised to implement the Alquist-Priolo Earthquake Fault Zoning Act of 1972, which regulates development and construction in order to avoid the hazard of surface fault rupture. The State Mining and Geology Board established policies and criteria in accordance with the act. The board defined an active fault as one which has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault was considered to be any fault that showed evidence of surface displacement during Quaternary time (last 1.6 million years). Because of the large number of potentially active faults in California, the State Geologist adopted additional definitions and criteria in an effort to limit zoning to only those faults with a relatively high potential for surface rupture. Thus, the term sufficiently active was defined as a fault for which there was evidence of Holocene surface displacement. This term was used in conjunction with the term well-defined, which relates to the ability to locate a Holocene fault as a surface or near-surface feature (CGS 2011).

According to the Biggs General Plan Draft EIR, several faults are located close enough to the Biggs area to potentially have an effect on the City. The identified faults area as follows:

Cleveland Hills Fault. This fault is the only identified active fault located in Butte County is the Cleveland Hills fault. This fault is responsible for the 1975 Oroville earthquake of Richter magnitude 5.7, an event that produced surface displacement along about 2.2 miles of the fault. The fault is located approximately 13 miles southeast of the Project Area.

Foothills Shear Zone. The Foothills shear zone extends into southern Butte County and reaches a point approximately 15 miles northeast of Biggs. A possible magnitude 7.0 earthquake in this zone would result in intensities as high as MMI IX in the Project Area.

Chico Monocline Fault. The Chico Monocline fault, which extends northwesterly from Chico based on its length of approximately 42 miles, this fault could produce at least a magnitude 7.0 earthquake, which would cause damage in the Project Area. The fault is located approximately 17 miles north of the Project Area.

Willows Fault. The 40-mile-long Willows fault is approximately 40 miles northwest of Biggs and could produce a magnitude 7.0 earthquake.

Coast Ranges Thrust Zone. The Coast Ranges thrust zone is approximately 55 miles northwest of Biggs. This fault zone could potentially produce a magnitude 8.0 earthquake, which could be felt in the Project Area.

Midland-Sweitzer Fault. The 80-mile-long Midland-Sweitzer fault lies approximately 55 miles southwest of Biggs. Historically, earthquakes of Richter magnitudes between 6.0 and 6.9 have occurred on or near this fault, including two strong earthquakes in 1892. Based on the fault length and the historic activity, this fault is capable of producing a magnitude 7.0 earthquake, which would be experienced in Butte County with MMI as high as VIII or IX.

Eastern Sierra Faults/Russell Valley Fault. The Eastern Sierra contain a number of active faults, including the Russell Valley fault, which produced the 1966 Truckee earthquake with a magnitude of

approximately 6.0, and several faults in the Last Chance and Honey Lake fault zones, which have produced several magnitude 5.0 to 5.9 earthquakes. These fault zones are approximately 75 miles east of Biggs. Earthquakes on these faults could be experienced in Butte County with MMI as high as VII or VIII.

Last Chance-Honey Lake Fault Zones. The Last Chance-Honey Lake fault zones are approximately 100 miles long and trend north-northwest along the California-Nevada border. These faults are active and have resulted in earthquakes ranging between magnitude 5.0 and 5.9. These fault zones are approximately 85 miles east of Biggs, and earthquakes along these fault zones are not anticipated to result in major damage in the Project Area.

Other Potentially Active Faults. Other potentially active faults in the vicinity of the Biggs Planning Area include the Sutter Buttes faults, Dunnigan fault, Camel's Peak fault, Melones-Dogwood Peak faults, and Hawkins Valley fault. All of these faults should be considered potentially active due to geologic, historic, or seismic data.

4.7.1.4 *Paleontological Resources*

A paleontological records search was completed using the University of California Museum of Paleontology (UCMP) Locality Search website on June 9, 2021. The search included a review of the institution's paleontology specimen collection records for Butte County, including the Project Area and vicinity. In addition, a query of the UCMP catalog records; a review of regional geologic maps from the CGS; a review of local soils data; and a review of existing literature on paleontological resources of Butte County by ECORP. The purpose of the assessment was to determine the sensitivity of the Project Area, whether or not known occurrences of paleontological resources are present within or immediately adjacent to the Project Area, and whether or not implementation of the Project could result in significant impacts to paleontological resources. Paleontological resources include mineralized (fossilized) or unmineralized bones, teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains.

The results of the search of the UCMP indicated that 144 paleontological specimens were recorded from 69 identified localities and 75 unidentified localities in Butte County indicating that there is a potential for paleontological discoveries in Butte County. The vast majority of the fossilized remains are invertebrates, however, some plant fossilized remains are recorded for Butte County (UCMP 2021). The General Plan Draft EIR did not identify any paleontological resources with the Biggs Planning Area; however, the EIR did indicate that there was a possibility that paleontological resources may be discovered in during construction and buildout of land uses allowed under the General Plan.

4.7.2 Geology and Soils (VII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐

Less than significant impact.

i) The Proposed Project site is not located within an Alquist-Priolo Earthquake Zone (CGS 2011). There would be no impact related to fault rupture.

ii) According to CGS' Earthquake Shaking Potential for California mapping, the Proposed Project site is located in an area with a low likelihood of experience ground shaking (CGS 2016). During most earthquakes, only weaker masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking in the area (CGS 2016). The Biggs General Plan includes the following policies and actions to assist in the reduction of impacts from earthquakes:

Policy S-3.1 (Potential Damage to New Structures) – Prevent damage to new structures caused by seismic, geologic, or soil conditions.

Action S-3.1.1 (Soils Report) – A soils report, prepared by a licensed soils engineer, shall be required for all new residential subdivisions and nonresidential development projects. Soils reports shall evaluate shrink/swell and liquefaction potentials of sites and recommend measures to minimize unstable soil hazards.

Action S-3.1.2 (Potential Soil Hazards) – In areas identified as having highly expansive soils, require appropriate studies and structural precautions through project review.

The Proposed Project does not include the construction structures however, future structures which could be constructed as a result of the Proposed Project which could be affected by ground shaking. Any new structures would be required to comply with the California Building Code (CBC) in affect at that time, including all required seismic mitigation standards. Because of the required compliance with the CBC seismic mitigation standards and the General Plan policies and actions, the Proposed Project would have a less than significant impact related to strong ground shaking.

iii) Liquefaction occurs when loose sand and silt saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:

Loss of bearing strength – soils liquefy and lose the ability to support structures

Lateral spreading – soils slide down gentle slopes or toward stream banks

Flow failures – soils move down steep slopes with large displacement

Ground oscillation – surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking

Flotation – floating of light buried structures to the surface

Settlement – settling of ground surface as soils reconsolidate

Subsidence – compaction of soil and sediment

Liquefaction potential has been found to be greatest where the groundwater level and loose sands occur within a depth of about 50 feet or less. DOC provides mapping for areas susceptible to liquefaction in California. According to this mapping, the Project site is not located in an area identified for the risk of liquefaction (CGS 2020). Additionally, all future structures constructed as a result of the Proposed Project would be required to comply with the CBC and General Plan policies and actions, including Policy S-3.1 and Action S-3.1.1 which require liquefaction analysis. As such, the Proposed Project would result in less than significant impacts with regard to seismic-related ground failure, including liquefaction.

iv) The Project Area is of minimal elevation gain and the Area does not have steep hillsides or other formations susceptible to landslides during a seismic event. As such, the potential for landslides would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Less than significant impact.

As shown in Table 4.6-1, the Project Area's soils have a slight erosion potential. While the Proposed Project does not include the construction of new structures, any future construction involving grading, excavation, and soil hauling, would disturb soils and potentially expose them to wind and water erosion.

General Pan policies from the Conservation, Open Space & Recreation Element designed to reduce erosion are as follows:

Policy CR-5.3 (Best Management Practices) – Require the use of design techniques and best management practices to reduce storm water runoff levels, improve infiltration to replenish groundwater sources, and reduce pollutants close to their source.

Any development involving clearing, grading, or excavation that causes soil disturbance of 1 or more acres, or any project involving less than 1 acre that is part of a larger development plan and includes clearing, grading, or excavation, is subject to National Pollutant Discharge Elimination System (NPDES) State General Permit (Order No. 2009-0009-DWQ) provisions. Any development of this size in the Biggs Planning Area, including the Project Area, would be required to prepare and comply with an approved stormwater pollution prevention plan (SWPPP) that provides a schedule for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design details and a time schedule. The SWPPP would consider the full range of erosion control best management practices including any additional site-specific and seasonal conditions. Erosion control best management practices include, but are not limited to, the application of straw mulch, hydroseeding, the use of geotextiles, plastic covers, silt fences, and erosion control blankets, as well as construction site entrance/outlet tire washing. The State General Permit also requires that those implementing SWPPPs meet prerequisite qualifications that would demonstrate the skills, knowledge, and experience necessary to implement SWPPPs. NPDES requirements would significantly reduce the potential for substantial erosion or topsoil loss to occur in association with new development. In addition, subsequent development projects under the Proposed Project would be required to use best management practices to control runoff from all new development and thus limit erosion (Policy CR-5.3).

Since erosion impacts are often dependent on the type of development, intensity of development, and amount of lot coverage of a particular project site, impacts can vary. However, compliance with NPDES and SWPPP requirements, as well as implementation of the General Plan PolicyCR-5.3, would ensure that soil erosion and related impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

Less than significant impact.

As discussed previously, the Project Area has little potential for landslides.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion and unconsolidated material or, more commonly, by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope, resulting in gravitationally driven movement. One indicator of potential lateral expansion is frost action. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing (NRCS 2021). As indicated in Table 4.7-1, the Web Soil Survey identifies the Project site as having soils with no frost action potential. Additionally, as discussed in Item a) iii) above, the Project Area is not identified as being susceptible to liquefaction. As such, the potential for impacts due to lateral spreading would be less than significant.

With the withdrawal of fluids, the pore spaces within the soils decrease, leading to a volumetric reduction. If that reduction is significant enough over an appropriately thick sequence of sediments, regional ground subsidence can occur. This typically only occurs within poorly lithified sediments and not within competent rock.[2] This can occur as a result of high-volume water, oil or gas extraction operations. No oil, gas, or high-volume water extraction wells are known to be present in the Project area. According to the USGS Areas of Land Subsidence in California webpage, the City of Biggs, including the Project Area, is not located in an area of land subsidence (USGS 2021a). As such, the potential for impacts due to subsidence would be less than significant.

Collapse occurs when water is introduced to poorly cemented soils, resulting in the dissolution of the soil cementation and the volumetric collapse of the soil. In most cases, the soils are cemented with weak clay (argillic) sediments or soluble precipitates. This phenomenon generally occurs in granular sediments situated within arid environments. Collapsible soils will settle without any additional applied pressure when sufficient water becomes available to the soil. Water weakens or destroys bonding material between particles that can severely reduce the bearing capacity of the original soil. The collapse potential of the Project Area soil must be determined for consideration in the foundation design.

General Plan Action S-3.1.1 requires a soils report for all new subdivisions and nonresidential development projects. The soils report would identify the potential for that settlement/collapse at a new construction site. If a potential site were to be identified as having a potential for settlement or collapse, mitigations would be required by the City to reduce this potential. As such, there is a less than significant impact in this area.

[2] The processes by which loose sediment is hardened to rock are collectively called lithification.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐

Less than significant impact.

Expansive soils are types of soil that shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand. Expansive soils can be determined by a soil's linear extensibility. There is a direct relationship between linear extensibility of a soil and the potential for expansive behavior, with expansive soil generally having a high linear extensibility. Thus, granular soils typically have a low potential to be expansive, whereas clay-rich soils can have a low to high potential to be expansive. The shrink-swell potential is low if the soil has a linear extensibility of less than three percent, moderate if three to six percent, high if six to nine percent, and very high if more than nine percent. If the linear extensibility is more than three, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. As shown in Table 4.7-1, the Project site soils exhibit a linear extensibility value of 3.8 and 5.4 percent. Soils with linear extensibility at this range correlate to having a moderate expansion potential. Despite the shrink-swell potential identified for Project site soils, standard procedures used in the construction of concrete footings as required by the California Building Code will reduce this potential impact.

Additionally, General Plan Action S-3.1.1 mandate that a soils report, prepared by a licensed soils engineer, be required for all new residential subdivisions and nonresidential development projects in Biggs. Soils reports must evaluate the shrink-swell potential of sites and recommend measures to minimize such hazards through recommend geotechnical special provisions. Such geotechnical special provisions would address any site-specific expansive soil hazards for future development under the Proposed Project . As such, the potential for the Proposed Project to be affected by expansive soils is less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒

No impact.

General Plan Policy PFS-3.2, as shown below, requires all new development to connect to the City wastewater system.

Policy PFS-3.2 (Wastewater Treatment) – Require all new development to connect to the city's wastewater system. Septic tank systems will not be allowed except for special cases defined by city ordinance.

All future developments within the Project Area would be required to connect to the City's wastewater collection and treatment plant. The proposed Project would not use a septic system or other wastewater disposal system.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Less than significant impact.

A search of the UCMP failed to indicate the presence of paleontological resources in the Project Area (UCMP 2021). Although paleontological resources sites were not identified in the Project site and the Project, in and of itself, does not include any construction activities, there is a possibility that unanticipated paleontological resources will be encountered during future projects and related ground-disturbing activities. However, future project requiring discretionary approvals, such has a subdivision, that could result in the potential disturbance of paleontological resources would be subject to individual CEQA review. Additionally, General Plan Policy CE-8.5 requires the protection of archaeological and other cultural resources. This would include paleontological resources. As such, this impact would be less than significant.

4.7.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

Greenhouse Gas (GHG) emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

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). Expressing GHG emissions in carbon dioxide equivalents 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.

To date, neither the BCAQMD nor the City of Biggs have adopted GHG significance thresholds applicable to potential development.

4.8.2 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Less than significant impact.

Construction-Generated Greenhouse Gas Emissions

While no development is proposed as a part of the Project, based on current Biggs General Plan land use densities, future development of up to 479 dwelling units and over 85,000 square feet of commercial uses could occur. This would result in construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). All future development projects under the proposed General Plan would be subject to BCAQMD rules and regulations to limit criteria air pollutants in effect at the time of construction. BCAQMD rules and regulations intended to limit criteria air pollutants as well as limit GHG emissions as both result from the same sources. Listed below are General Plan policies and actions designed to limit the generation of GHG emissions from construction and design features.

Policy LU-4.2 (Urban Forest) Require the planting of native and locally appropriate trees in all new development to provide shade and visual interest

Action LU-4.2.1 (Street Tree Program) Explore options related to the establishment of a street tree planting program.

Action LU-7.1.1 (Annexation Policy) Adopt annexation policies consistent with the General Plan policies to guide the timing of growth and expansion within the Planning Area.

Policy CIRC-1.5 (Street Improvements) All new streets within Biggs shall be constructed with curb, gutter, and sidewalks. Sidewalks shall be separated from curb by a landscape strip a minimum of 4 feet in width.

Action CIRC-1.5.1 (Street Improvement Standards) Prepare and adopt street design standards that address the use of curb types, sidewalk type and location, and other street improvements.

Policy CIRC-4.1 (Bicycle System) Pursue the development of comprehensive and interconnected bicycle route systems in Biggs.

Action CIRC-4.1.1 (Grant Funding) Continue to pursue grant funding opportunities to enhance the City's bicycle system.

Action CIRC-4.1.2 (Bicycle Transportation Plan Implementation) As financially feasible, implement the bicycle system improvements outlined in the City's Bicycle Transportation Plan.

Policy CIRC-4.2 (Construction and Maintenance) Require that new development projects provide connections and facilities for bicycles.

Policy CIRC-4.3 (Pedestrian-Friendly Streets) Ensure that streets in high-traffic areas, near schools, recreation facilities, and public buildings provide pedestrian safety features such as separate or wider-with sidewalks, enhanced pedestrian crossings, signage, and markings.

Action CIRC-4.3.1 (Detached Sidewalks) Continue to require detached sidewalks for new development projects adjacent to collector and arterial streets.

Action CIRC-4.3.1 (Sidewalk Design) Discourage the use of curvilinear sidewalks on local streets.

Policy CIRC-4.5 (Prioritization of Improvements) Pedestrian and bicycle improvements shall be prioritized in the following order:

1) Projects that increase safety for children traveling to and from school.
2) Projects that remove barriers to handicapped individuals.
3) Projects that increase overall convenience and safety for pedestrians and bicyclists.

Policy CR-7.1	Plan and design Biggs to encourage walking, bicycling, and the use of transit.
Action CR-7.1.1	Utilize mixed land uses and walkable neighborhoods to allow residents to meet daily needs without the use of an automobile and to support viable transit.
Policy CR-7.3	Cooperate with the BCAQMD in efforts to maintain air quality standards and minimize air quality impacts associated with new development.
Policy CE-6.2	(Connectivity/Safety) Create safe, inviting, and user-friendly pedestrian and bicycle environments.
Action CE-6.2.1	Maintain a well-connected pedestrian circulation system by seeking opportunities to enhance pedestrian connectivity.
Action CE-6.2.2	Prepare and adopt street design standards that accommodate pedestrian and bicycle transportation modes.
Policy CE-6.4	(Pedestrian Features) Accommodate pedestrian design elements into the design of roadways.
Action CE-6.4.1	As appropriate and where feasible, continue to utilize separated sidewalks and planter strips on primary City streets.
Action CE-6.4.2	Promote the use of street furniture at appropriate locations to encourage non-vehicular circulation and increase pedestrian comfort.

Future development projects would be subject to those policies and actions listed above which would assist in limiting the generation of GHG emissions. Specifically, Action LU-7.1.1, pertains directly to annexation and the timing of growth and expansion within the Planning Area. Scheduling the construction of future development to occur over an extended timeline with limiting overlap of various development projects would assist in the reduction of GHG emissions. However, the General Plan EIR determined that even with the General Plan policies and actions, the contribution to GHG emissions during construction would be cumulatively considerable. Since the Proposed Project is consistent with the General Plan land use designations for the Planning Area, the Proposed Project would not result in a greater impact to GHG emissions than those already identified in the General Plan EIR. As such, the Proposed Project's impact to GHG emissions is less than significant as this contribution has been previously considered by the City. As such, a less than significant impact would occur.

Operation-Generated Greenhouse Gas Emissions

While no development is proposed with the Project, implementation of the Project may introduce future new sources of operational GHG emissions. As discussed in the General Plan EIR the majority of estimated GHG emissions generated will be from mobile emissions sources. The General Plan contains numerous policies and actions, listed above, that seek to reduce GHG emissions from land use development projects by increasing the viability of walking, biking, and transit within the City thus reducing vehicle trips, a main contributor of GHG emissions. However, the General Plan EIR determined that even with the General Plan policies and actions, the contribution to GHG emissions during operations would be cumulatively

considerable. Since the Proposed Project is consistent with the General Plan land use designations for the Planning Area, the Proposed Project would not result in a greater impact to GHG emissions than those already identified in the General Plan EIR. As such, the Proposed Project's impact to GHG emissions is less than significant as this contribution has been previously considered by the City. As such, a less than significant impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Less than significant impact.

The City of Biggs does not currently have an adopted plan for the purpose of reducing GHG emissions. However, Policy CR-7.6 states that as funding permits, the City will prepare a GHG inventory and climate action plan designed to reduce GHG's. Until then the City must rely on GHG inventories and climate action plans prepared by the state or other local jurisdictions for the evaluation of development projects. The State of California promulgates several mandates and goals to reduce statewide GHG emissions, including the goal to reduce statewide GHG emissions to 40 percent below 1990 levels by the year 2030 and 80 percent below 1990 levels by the year 2050 (Senate Bill 32). The General Plan EIR determined that the City is unable to embark on the process of a GHG inventory and climate action plan thus, the impact is cumulatively considerable and significant and unavoidable. However, since the Proposed Project is consistent with the General Plan land use designations for the Planning Area, the Proposed Project would not conflict with any applicable plan adopted for the purpose of reducing GHG emissions beyond those already identified in the General Plan EIR. As such, the impact is less than significant.

4.8.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.9 Hazards and Hazardous Materials

4.9.1 Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined by the California Health and Safety Code, § 25501 as follows:

> "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a

> handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

A hazardous material is defined in Title 22, Section 662601.10, of the CCR as follows:

> A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Most hazardous materials regulation and enforcement in Butte County is managed by the Environmental Health division of the Butte County Public Health Department. Environmental Health is charged with the responsibility of enforcement of pertinent California health laws, rules, and regulations, and is responsible for responding to incidents involving any release or threatened release of hazardous materials. Environmental Health programs and services strive to prevent human injury and illness and promote well-being by identifying and evaluating environmental sources and hazardous agents; and limiting exposures to hazardous physical, chemical, and biological agents in air, soil, food, and other environmental media or settings that may adversely affect human health. Environmental Health is also responsible for requiring all business that use hazardous materials to comply with the State-required hazardous materials business plan submittal and registration with the California Environmental Reporting System.

Under Government Code § 65962.5, both the California Department of Toxic Substance Control (DTSC) and the State Water Resources Control Board (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. A search of the DTSC (2021) and the SWRCB (2021) identified no open cases of hazardous waste violations on the Project site. A search of the DTSC list and the SWRCB list identified no open cases of hazardous waste violations within 0.5 mile of the Project Area.

4.9.2 Hazards and Hazardous Materials (IX) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

Less than significant impact.

The Biggs General Plan includes the following policies and actions designed to reduce the potential for hazardous materials release:

Policy S-8.1 (Hazardous Materials Safety Coordination) – Support efforts to reduce the potential for accidental releases of toxic and hazardous substances.

Action S-8.1.1 (Butte County EOP) – Continue to coordinate hazardous waste management programs with the Butte County Hazardous Waste Management Plan and the Butte County Emergency Operations Plan.

Action S-8.1.2 (Planning for Hazardous Materials Safety) – Consult with the State Office of Emergency Services, the State Department of Toxic Substances Control, the California Highway Patrol, Butte County, and other relevant agencies regarding hazardous materials routing and incident response programs.

Action S-8.1.3 (Transporting Hazardous Materials) – Strive to ensure that hazardous materials are used, transported, and disposed in the city in a safe manner and in compliance with local, state, and federal safety standards.

Action S-8.1.4 (Hazardous Waste Facility Siting) – Ensure that new hazardous waste facilities and those commercial and industrial land uses that use or produce hazardous waste are sited in an appropriate manner.

Action S-8.1.5 (Contamination Prevention) – Protect soils, surface water, and groundwater from contamination.

Action S-8.1.6 (Increase Public Awareness) – Work to educate the public as to the types of household hazardous waste and the proper method of disposal.

Action S-8.1.7 (Household Hazardous Waste) – Encourage household hazardous waste to be disposed of properly and continue to support local household hazardous waste disposal events.

Action S-8.1.8 (Designated Routes for Hazardous Materials) – Designate hazardous materials routes and require that hazardous materials transported within the city be restricted to routes that have been designated for such transport.

Policy S-8.2 (Reduce Toxic Materials Use) – Strive to reduce the use of hazardous and toxic materials in City operations.

Businesses that sell and store hazardous materials are subject to the Hazardous Material Business Plan program, which is regulated by the Environmental Health as part of the Certified Unified Program. The program requires the preparation of a document that provides an inventory of hazardous materials on-site, emergency plans and procedures in the event of an accidental release, and training for employees on safety procedures for handling hazardous materials and what to do in the event of a release or threatened release. These plans are routine documents that are intended to disclose the presence of hazardous materials and provide information on what to do if materials are inadvertently released.

While the Project does not include the development of any structures, potential construction-related hazards could be created during the course of future construction in the Project Area. Construction may include the use of hazardous materials, given that construction activities involve the use of heavy equipment, which uses small and incidental amounts of oils and fuels and other potentially flammable substances. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials used during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal law.

Generally, the potential to release hazardous material from residential uses is relatively minor. While some hazardous materials may be used for residential purposes such as household cleaners and lawn care equipment and chemicals, the amount of these materials are small and the potential for hazardous releases is minute. In addition, compliance with General Plan Policy S-8.1, Action S-8.1.6 and Action S-8.1.7 would assist in reducing the potential for hazardous materials releases from residential uses. Therefore, potential residential impacts for creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials from residential uses would be less than significant.

The Proposed Project would allow of the construction of over 85,000 square feet of commercial uses. Uses allowed under the City's C-G zoning district are varied but do allow uses that may involve the routine use and transport of hazardous materials such as a gas station or home improvement store. However, business that use hazardous materials are subject to routine inspection by federal, state, and local regulatory agencies with jurisdiction over hazardous materials. For instance, California Health and Safety Code Section 25290.1(a) mandates that all fuel storage tanks installed after 2004 meet durability, structural integrity, and size requirements to greatly reduce the likelihood of hazardous waste leakage or combustion. All businesses that use hazardous material use are also required to comply with applicable provisions of Title 49 CFR Parts 100–185 and all amendments through December 9, 2005 (Hazardous Materials Regulations). Hazardous materials must be stored in designated areas designed to prevent accidental release to the environment. Further, businesses that store hazardous materials are subject to the Hazardous Material Business Plan program, which is regulated by Butte County Environmental Health as part of the Certified Unified Program. The program requires the preparation of a document that

provides an inventory of hazardous materials onsite, emergency plans and procedures in the event of an accidental release, and training for employees on safety procedures for handling hazardous materials and in the event of a release or threatened release. These plans are routine documents that are intended to disclose the presence of hazardous materials and provide information on what to do if materials are inadvertently released.

While future commercial use operation may involve the routine transport, use, or disposal of hazardous materials. These materials are regulated by a number of different state and federal agencies and safety regulations are in place to limit the potential for accidental release. All hazardous materials located at future business would be required to be handled in accordance with city, state, and federal regulations. In addition, compliance with General Plan Policy S-8.1, Action S-8.1.1, Action S-8.1.2, Action S-8.1.3, Action S-8.1.4, Action, and Action S-8.1.7 would assist in reducing the potential for hazardous materials releases from residential uses. Therefore, the impact is less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

Less than significant impact.

As discussed in Issue a), the Project, in and of itself, would not result in the routine transport, use, disposal, handling, or emission of any hazardous materials that would create a significant hazard to the public or the environment. However, future uses that may be developed as a result of Project approval may involve the use of hazardous materials. Any use of hazardous materials would require the hazardous materials to be utilized, stored, and transported pursuant to state and federal safety regulations and adhere to General Plan policies and actions discussed previously. Therefore, the Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐

Less than significant impact.

The Project Area is directly adjacent to the Biggs Elementary School and Biggs High School. However, the Proposed Project designated land uses do not allow for future uses that would involve acutely hazardous

materials, substances, or waste. However, while not anticipated, it is possible that implementation of the Proposed Project could result in the need for additional school sites in the city. The City of Biggs does not determine the siting of new schools. This responsibility is left to the Biggs Unified School District (BUSD) and the California Department of Education (CDE).

The CDE establishes standards for school sites pursuant to Education Code Section 17251 and adopts school site regulations, which are contained in the California Code of Regulations, Title 5, commencing with Section 14001. The regulations define certain health and safety requirements for school site selection, including a potential school site's proximity to airports, high-voltage power transmission lines, railroads, and major roadways. School siting regulations also restrict the presence of toxic and hazardous substances and hazardous facilities and hazardous air emissions within one-quarter mile of a proposed school site. In addition, as required by Education Code Section 17213, the written findings of the environmental impact report or negative declaration prepared for a proposed school site must include a statement verifying that the site is not currently or formerly a hazardous, acutely hazardous substance release, or solid waste disposal site or, if so, that the wastes have been removed. Also, the written findings must state that the site does not contain pipelines which carry hazardous wastes or substances other than a natural gas supply line to that school or neighborhood. If hazardous air emissions are identified, the written findings must state that the health risks do not and will not constitute an actual or potential danger to public health of students or staff. If corrective measures of chronic or accidental hazardous air emissions are required under an existing order by another jurisdiction, the governing board is required to make a finding that the emissions have been mitigated prior to occupancy of the school.

In addition, the DTSC's School Property Evaluation and Cleanup Division is responsible for assessing, investigating, and cleaning up proposed school sites. The division ensures that proposed school sites are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy the new school. All proposed school sites that will receive state funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under the DTSC's oversight.

Since any future siting of schools would be required to comply with state statutory and regulatory requirements addressing safety from hazards, including hazardous materials, impacts from siting schools in the vicinity of such hazards are anticipated to be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

No impact.

Under Government Code § 65962.5, both the 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. A search of the DTSC and SWRCB lists identified that the Proposed Project site is not located on a hazardous materials site. As such, the Project will have no impact in this area.

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

No impact.

The City of Biggs is not located within 2 miles of a public airport nor is it located in the vicinity of a private airstrip. The closest public airport is the Oroville Municipal Airport, located approximately 11 miles to the east, and the nearest private airport is the Richvale Airport, located approximately 7 miles to the north of the Biggs Planning Area. Therefore, the Project Area is more than 2 miles from a public or private airport. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Less than significant impact.

In the event of a hazardous material emergency, several agencies are responsible for timely response. The Butte County Hazardous Materials Response Team responds to large-scale, emergency hazardous material incidents in the county. This team is made up of specially trained representatives of the Butte County Fire Department, Cal-Fire, and members of the Chico, Paradise, Oroville, Gridley, and Biggs fire departments.

The City of Biggs is responsible for emergency operations within city boundaries. The City of Biggs Emergency Plan specifies actions for the coordination of operations, management, and resources during emergencies. The Proposed Project would not alter the city's overall land use patterns or land use designations to such an extent that they would conflict with either the City of Biggs Emergency Plan or the operations of the Butte County Hazardous Materials Response Team.

Additionally, an efficient circulation system is vital for the evacuation of residents and the mobility of fire suppression, emergency response, and law enforcement vehicles during an emergency. While the Proposed Project, in and of itself, would not result in the creation of new residential and commercial projects, implementation of the Project may eventually result in an increased number of people who would require evacuation in case of an emergency. However, all future projects and residential subdivisions would be required to provide a circulation plan that would include additional roadway connections which offer escape routes and emergency access options. These connections would be required to conform with the City circulation plan for the Area. As such, implementation of the Proposed Project would not result in the interference of an adopted emergency response plan or emergency evacuation plan. Therefore, impacts are considered less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

No impact.

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope).

Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

According to the General Plan Draft EIR, the Biggs Planning Area, entirely within the Sacramento Valley, is not subject to the threat of significant wildland fires. Fire Hazard Severity Zone mapping is performed by the California Department of Forestry and Fire Protection (Cal-Fire) and is based on factors such as fuels, terrain, and weather. Fire Hazard Severity Zones around Biggs were mapped as part of Butte County in 2007. According to Butte County Fire Hazard Severity Zone mapping, no unique or significant fire hazards exist in the rural/urban interface between the city and surrounding open spaces, or within the Biggs Planning Area (City of Biggs 2010). The Project would have no impact in this area.

4.9.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.9.4 Hydrology and Water Quality

4.9.5 Environmental Setting

4.9.5.1 *Regional Hydrology*

Surface Water

The City of Biggs and the Project Area are located in the area between the Feather River to the east and the Sacramento River to the west.

According to the California Department of Water Resources (DWR), the state has been subdivided into ten hydrologic regions (DWR 2021a). Biggs is located in the northcentral portion of the Sacramento River Hydrologic Region, which covers approximately 17.4 million acres (27,200 square miles) (Biggs 2013) and includes all or large portions of Modoc, Siskiyou, Lassen, Shasta, Tehama, Glenn, Plumas, Butte, Colusa, Sutter, Yuba, Sierra, Nevada, Placer, Sacramento, El Dorado, Yolo, Solano, Lake, and Napa counties. Geographically, the Sacramento River Hydrologic Region extends south from the Modoc Plateau near the Oregon border to the Sacramento-San Joaquin River Delta. The Sacramento River Hydrologic Region is the main water supply for much of California's urban and agricultural areas. Annual runoff in the Sacramento River Hydrologic Region averages about 22.4 million acre-feet (AF), which is nearly one-third of the state's total natural runoff. n Major water supplies in the region are provided through surface storage reservoirs. Shasta Lake is one of the two largest surface water projects in the region. In total, the region has 43 reservoirs with a combined capacity of almost 16 million AF (DWR 2005). However, according to DWR, as of June 13, 2021, the Sacramento Hydrologic Region has received only about 46 percent of the average rainy season precipitation in 2021, through June 13, 2021. All of the major reservoirs that serve the Sacramento Hydraulic Region, the Shasta, Oroville, New Bullard's, and Folsom reservoirs, are between 34 percent and 57 percent capacity as of June 13, 2021 (DWR 2021b).

Groundwater

Biggs and the Project Area lie above the Sacramento Valley Groundwater Basin and the Butte Subbasin. The Butte Subbasin, which a subbasin that had boundary modifications and was renamed as a result of changes to boundaries of surrounding subbasins, since the 2013 General Plan Draft EIR, is the portion of the Sacramento Valley Groundwater Basin (DRW 2918). The current boundaries of the Butte Subbasin was a result of combining and modifying the boundaries of the now defunct West Butte and East Butte subbasins (DWR 2021c).

Groundwater is found in perched, unconfined, and confined zones in the valley portion of Butte County. Perched groundwater zones are most common in shallow, consolidated soils with low permeability. Major portions of groundwater are unconfined or semi-confined, occurring in the floodplain and alluvial fan deposits. High permeability in these soils yields large amounts of water to shallow domestic and irrigation wells. Well-sorted coarse sand and gravel of the Older Alluvium and Recent Stream Alluvium are highly permeable and yield large amounts of water to domestic and irrigation wells (Biggs 2013).

The general groundwater geology of the Biggs area comprises the primary water-bearing Tuscan Formation of the Plio-Pleistocene Age. The Tuscan Formation contains an important deep aquifer that is theorized to underlie most of the valley area. Confined water occurs in the Tuscan and Laguna formations, and in the younger alluvium, where it is overlain by flood basin deposits. Although moderate amounts of water are yielded from the fine-grained strata of the Laguna Formation, permeable sand and gravel zones are infrequent and minor in extent and thickness. The highest producing wells in alluvial uplands occur when older alluvium or the deeper Tuscan volcanic rocks are tapped (Biggs 2013).

4.9.5.2 *Project Area Hydrology and Onsite Drainage*

The Project site is located on level terrain situated at an average elevational range of 96 feet AMSL. The Project Area contains no wetlands or features classified as other waters.

The average winter low temperature in the vicinity of the Project Area is 41.0 degrees Fahrenheit (˚F) in December and the average summer high temperature is 96.4˚F in July. Average annual precipitation is approximately 21.34 inches (NOAA 2021). In the Project Area, the rainy period of the year lasts for approximately five months, from November through March. On average, throughout the year there are 81.5 rainfall days in Biggs. The least rain falls in July, with an average total accumulation of 0.4 inches of precipitation (Weather Atlas 2021).

As mapped by the FEMA (2011) National Flood Hazard Layer, the Project site is in Flood Zone X, indicating that the site is an area of minimal flood hazard. Flood Zone X includes areas outside the Special Flood Hazard Area (SFHA) and higher than the elevation of the 0.2-percent-annual-chance flood (FIRM Map 06007C0975E).

4.9.6 Hydrology and Water Quality (X) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐

Less than significant impact.

The following proposed General Plan policies and actions address impacts to hydrology and water quality–related issues:

Policy CR-5.3 (Best Management Practices) – Require the use of design techniques and best management practices to reduce storm water runoff levels, improve infiltration to replenish groundwater sources, and reduce pollutants close to their source.

Action CR-5.3.1 (Improvement Standards) – Revise improvement standards as necessary to encourage use of natural drainage systems and low impact development principles in order to reduce storm water infrastructure costs and improve water quality. Emphasize the dispersal of storm water by using swales, the use of landscaped infiltration basins along roadways and parking areas, and other best management practices, as appropriate.

Action CR-5.3.2 (Improvement Standards) – Establish standards and fee programs to require and/or incentivize methods to manage and filter storm water, such as reduced pavement, permeable pavement, and retention and filtration through vegetation.

Policy PFS-4.1 (Storm Drainage Master Plan) – Regularly update the City's Storm Water Master Plan to address current and future storm drainage needs.

Action PFS-4.1.1 (Storm Drainage Discharge) – Adopt best management practices for the discharge of storm water that address water quality and water standards.

Action PFS-4.1.2 (Storm Drainage Retention) – Coordinate city policies and standards for the retention or detention of storm water with regional flood control providers.

Policy PFS-4.2 (Public Safety) – Restrict development in areas where significant drainage and flooding problems are known to exist until adequate drainage and/or flood control facilities can be provided.

Policy PFS-4.3 (Storm Drainage Standards) – Adopt storm drainage standards compatible with the ability of receiving waters to accommodate storm water drainage and consistent with recognized standards.

Policy PFS-4.4 (Aquifer Protection) – Protect the quality of water runoff that enters receiving surface waters and drainage facilities.

Action PFS-4.4.1 (Storm Drainage Management) – Continue to require the development of Storm Water Management Plans (SWMP) to address storm water discharge quality issues.

In addition to those General Plan policies and actions listed above, in accordance with National Pollutant Discharge Elimination System (NPDES) regulations, the State of California requires that any construction activity affecting one acre or more, or discharges from smaller sites that are part of a larger common plan of development or sale, obtain a General Construction Activity Stormwater Permit (General Permit) to minimize the potential effects of construction runoff on receiving water quality. As described previously, the Project does not propose any new construction, however new construction may result at densities not currently allowed under the Butte County land use designations because of annexation of the area to the City. The General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP). The SWPPP should contain a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list best management practices the discharger will use to protect stormwater runoff and the placement of those BMPs.

Construction Related Issues

There is potential for future development projects to result in degradation of water quality during both the construction and operational phases. Polluted runoff from the construction site during construction and operation could include sediment from soil disturbances, oil and grease from construction equipment, and pesticides and fertilizers from landscaped areas. Construction related to grading and vegetation removal activities could increase soil erosion rates on the areas proposed for development. Construction activities would result in the exposure of raw soil materials to the natural elements (wind, rain, etc.). In rainy periods during the summer season, grading operations may impact the surface runoff by increasing the amount of silt and debris carried by runoff. Areas with uncontrolled concentrated flow would experience loss of material within the graded areas and could potentially impact downstream water quality.

Refueling and parking of construction equipment and other vehicles on-site during construction may result in spills of oil, grease, or related pollutants that may discharge into Project Area drainages. Improper handling, storage, or disposal of fuels and materials or improper cleaning of machinery close to area waterways could cause water quality degradation. However, all future construction would be required to comply with Biggs General Plan policies and actions, specifically Policy CR-5.3 which requires the use of design techniques and best management practices to reduce pollutants close to their source, Action CR-5.3.1 which requires the dispersal of stormwater by using swales, the use of landscaped infiltration basins along roadways and parking areas, and other best management practices, as appropriate and finally, Action PFS-4.4.1 would require development to prepare Storm Water Management Plans (SWMP) to address stormwater discharge quality issues. Additionally, any future developments one-acre in size or greater would be required to comply with NPDES requirements including those BMPs required by the

SWPPP to protect water quality. As such, construction related water quality impacts would be less than significant.

Operational Related Issues

Runoff from urban land use typically contains oils, grease, fuel, antifreeze, and byproducts of combustion (such as lead, cadmium, nickel, and other metals), as well as nutrients from fertilizers and animal waste, sediment, pesticides, herbicides, and other pollutants. Also, sizable quantities of animal waste from pets contribute bacterial pollutants into surface and source waters.

Precipitation during the early portion of the wet season displaces these pollutants into the stormwater runoff, resulting in high pollutant concentrations in the initial wet weather runoff. This initial runoff, containing peak pollutant levels, is referred to as the "first flush" of storm events. It is estimated that during the rainy season, the first flush of heavy metals and hydrocarbons would occur during the first inches of seasonal rainfall.

The amount and type of runoff generated by land uses with implementation of the proposed Project may be greater than that under existing conditions due to increases in impervious surfaces. There would likely be a corresponding increase in urban runoff pollutants and first flush roadway contaminants such as heavy metals, oil, grease, nutrients (i.e., nitrates and phosphates), pesticides, and herbicides from landscaped areas. These constituents may result in water quality impacts to on- and off-site drainage flows and to downstream area waterways.

As stated previously, the Biggs General Plan contains policies and actions with requirements that address surface water quality impacts. For instance, Policy CR-5.3 requires the use of design techniques and BMPs to reduce pollutants close to their source and Action CR-5.3.1 emphasizes the dispersal of stormwater by using swales, the use of landscaped infiltration basins along roadways and parking areas, and other BMPs. Furthermore, Action PFS-4.4.1 would require development to prepare Storm Water Management Plans (SWMP) to address stormwater discharge quality issues. Compliance with the NPDES requirements (where applicable) and the General Plan policy and actions described above would reduce operational water quality impacts associated with implementation of the Proposed Project to a less than significant level.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐

Less than significant impact.

Future development within the Project Area would receive water from the City's municipal water supply. The sole source of water supply for Biggs is groundwater extracted from the Sacramento Valley Groundwater Basin, more specifically the Butte Subbasin.

Table 2.1-4 illustrates the potential population within the Project Area under full buildout conditions. As shown, based on the potential number of dwelling units (479) and the current (2021) average household size (2.58 persons per household) for the City of Biggs, buildout of the Project Area is anticipated to result in a population growth of 1,235 persons. According to the USGS (2105), the average water use per person in Butte County in 2015 was 88 gallons per day (gpd). Based on this number and the projected population for the Project Area, at full buildout of the Project, the water demand would be 108,680 gpd or 39,668,200 gallons per year or 121.737 acre-feet per year (AFY). Groundwater storage capacity for the Butte Subbasin has not yet been established by the DRW, however, storage for the East Butte and West Butte subbasins was determined in 2004. The estimated storage capacity to a depth of 200 feet for the East Butte Subbasin is approximately 3,128,959 AF (DWR 2004a). The estimated storage capacity to a depth of 200 feet for the West Butte Subbasin is approximately 2,794,330 AF (DWR 2004b). Combining these two storage capacities would give 5,923,283 AF. The Butte Subbasin has not been identified by DWR as a critically overdrafted basin[3].

Table 4.9-1 illustrates the change in depth to groundwater from the surface between the fall of 2009 to the fall of 2019 for six wells in the Project Area vicinity. As shown, a change in the depth to groundwater (shown as surface to water elevation or SWE) has varied depending on location from a rise of 14.9 feet to a drop of 2.4 feet from 2009 to 2019 (DWR 2021b). While the SWE has varied slightly in the Project vicinity over the ten-year period, according to the DWR's SGMA Data Viewer on-line tool, the overall SWE contour in the greater Butte Subbasin indicates that SWE remains steady with little to no change over the 2009 to 2019 time period (DWR 2021b).

Table 4.9-1. Depth to Groundwater Change 2009-2019

State Well Number	Well Use	Distance and Direction from Project Area	Surface to Water Elevation		Surface to Water Elevation Change
			Fall 2009	Fall 2019	
18N02E16F001M	Irrigation	1.2 mi W	75.92	75.92	0
18N01E13A002M	Irrigation	5.3 mi W	75.24	74.64	-0.6
18N02E25M001M	Irrigation	2.5 mi S	81.7	80.6	-1.1
18N03E18F001M	Irrigation	1.2 mi E	92.8	90.4	-2.4
18N03E08B003M	Irrigation	2.6 mi NE	83.3	98.2	+14.9
18N03E21G001M	Irrigation	3.5 mi SE	83.88	86.88	+3.0

Source: DWR 2021b

As discussed above, estimated water demand for future development in the Project Area is approximately 121 AF and the groundwater storage capacity is 5.9 million AF. The Project demand would represent 0.002 percent increase in groundwater demand on the Butte Subbasin. Additionally, as shown above, the

[3] A basin is subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts. Overdraft occurs where the average annual amount of groundwater extraction exceeds the long-term average annual supply of water to the basin.

groundwater levels have not changed or minimally changed since 2009. Therefore, the Project would have a less than significant impact on groundwater supply.

While the Project would not construct any residential or commercial developments, future resultant construction projects, such as homes, driveways, commercial buildings, parking lots and roadways, would result in an increase in impervious surfaces. As shown in Table 4.9-2, based on the Biggs Municipal Code Title 14 Zoning and maximum lot coverages therein, future development the Project Area could result in approximately 33.1 acres of impervious surface over the 79.5-acre Project Area. However, of the 13 parcels within the Project Area, nine of the lots have existing single family homes and four of these are smaller lots with little room for additional development. For those larger lots, to develop the lot to the maximum potential shown in Table 2.1-2, a subdivision of the land would be required. The subdivision would require future CEQA project level analysis.

Table 4.9-2. Analysis of Impervious Area Potential

Zoning District	**R-1**	**R-2**	**C-G**	**Total**
Total Area	73.5 acres	3.2 acres	2.8 acres	79.5 acres
Maximum Lot Coverage	40%	50%	75%	-
Impervious Area Potential	29.4 acres	1.6 acres	2.1 acres	33.1 acres

The Biggs General Plan includes policies and actions which would assist in groundwater recharge. Specifically, Policy CR-5.3, as shown previously, requires the use of design techniques and best management practices to improve infiltration to replenish groundwater sources. Action CR-5.3.1 emphasizes the dispersal of storm water by using swales, the use of landscaped infiltration basins along roadways and parking areas, and other best management practices which would allow for additional groundwater recharge on the site. Finally, Action CR-5.3.2 promotes the use of methods to manage and filter storm water, such as reduced pavement, permeable pavement, and retention and filtration through vegetation. In addition, Biggs Municipal Code Chapter 9.05 mandates that development provide storm drainage facilities that will convey stormwater runoff to an existing drainage channel as these features are the primary areas of groundwater recharge.

Because future land subdivision projects would require further CEQA analysis and would be subject to those General Plan policies and actions as well as Chapter 9.05, the Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:	☐	☐	☒	☐

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
i) result in substantial erosion or siltation on- or offsite;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☐	☒

Less than significant impact.

i-iii)

No creeks, streams or rivers exist on or nearby the Project site. As such, siltation of on- or offsite waterways would not occur.

Future construction activities within the Project Area would result in soil disturbances. For those activities that disturb one-acre or more of land, a NPDES Construction General Permit would be required prior to the start of construction. To comply with the requirements of the NPDES Construction General Permit, these projects will be required to file an NOI with the State of California and submit a SWPPP defining BMPs for construction and post-construction-related control of the Proposed Project site runoff and sediment transport. Requirements for the SWPPP include incorporation of both erosion and sediment control BMPs. SWPPPs generally include the following applicable elements:

- Diversion of offsite runoff away from the construction area,
- Prompt revegetation of proposed landscaped areas,
- Perimeter straw wattles or silt fences and/or temporary basins to trap sediment before it leaves the site,
- Regular sprinkling of exposed soils to control dust during construction during the dry season,
- Installation of a minor retention basin(s) to alleviate discharge of increased flows,
- Specifications for construction waste handling and disposal,
- Erosion control measures maintained throughout the construction period,
- Preparation of stabilized construction entrances to avoid trucks from imprinting debris on city roadways,
- Contained wash out and vehicle maintenance areas,

- Training of subcontractors on general construction area housekeeping,
- Construction scheduling to minimize soil disturbance during the wet weather season, and
- Regular maintenance and storm event monitoring.

Preparation of, and compliance with a required SWPPP would effectively prevent onsite erosion and sediment transport offsite for future projects one-acre or more in size. This will reduce potential runoff, erosion, and siltation associated with construction and operation.

Those projects less than one-acre in size would be required to comply with Biggs General Plan policies and actions designed to reduce the potential for substantial erosion or siltation. Specifically, Policy CR-5.3 which requires the use of design techniques and best management practices to reduce pollutants close to their source, Action CR-5.3.1 which requires the dispersal of stormwater by using swales, the use of landscaped infiltration basins along roadways and parking areas, and other best management practices, as appropriate and finally, Action PFS-4.4.1 would require development to prepare Storm Water Management Plans (SWMP) to address substantial erosion or siltation issues.

As such, the effects of the Proposed Project on- and offsite erosion and siltation would be less than significant.

Implementation of the Proposed Project may result in the substantial increase of the rate or amount of surface runoff as the Area is development in the future. General Plan policies and actions designed to address stormwater runoff are as follows:

Policy PFS-1.2 (Infrastructure Timing) – Ensure the development of quality infrastructure to meet community needs at the time that they are needed.

Policy PFS-1.3 (infrastructure installation) – Construction of oversized or off-site facilities may be required of development projects to provide capacity for future development.

In addition to those policies listed above, Policy CR-5.3 would require BMPs to reduce stormwater runoff levels, Action CR-5.3.1 encourages the dispersal of storm water by using swales, the use of landscaped infiltration basins along roadways and parking areas, and other best management practices, as appropriate, and Action PFS-4.4.1 requires the development of Storm Water Management Plans (SWMP) to address storm water discharge quality issues. Finally, Biggs Municipal Code Chapter 9.05 mandates that development provide storm drainage facilities that will convey stormwater runoff to an existing drainage channel or drainage system. Implementation of General Plan policies and actions as well as adherence to Chapter 9.05 of the Biggs Municipal Code would reduce this impact to less than significant by ensuring that adequate drainage facilities are provided for future development in the Project Area.

iv)

FEMA flood hazard map 06007C0975E indicates that the entire Project Area is in unshaded Zone X. The Project site is not located within a flood zone. Therefore, implementation of The Proposed Project will not have an impact related to impeding or redirecting flood flows

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐

Less than significant impact.

The Project site is not located near an ocean or large body of water with potential for seiche or tsunami. According to the DWR Division of Safety of Dams (DSOD), the City of Biggs and Project Area are subject to dam inundation from Oroville Dam and the Thermalito Afterbay Dam (DSOD 2021). Oroville Dam and Thermalito Afterbay Dam are of sufficient height and capacity to be regulated by the California Division of Safety of Dams (DSD). The DSD performs annual maintenance inspections of this and other dams under state jurisdiction, including monitoring for compliance with seismic stability standards. Regular inspection by the DSD ensures that dams are kept in safe operating condition. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event. Therefore, the project would not expose people or structures to a significant loss, injury, or death involving flooding as a result of the failure of a dam. Impacts would be considered less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

No impact.

The Project Area is located within the boundaries of the Integrated Regional Water Management Plan (IRWMP) which includes the Northern Sacramento Valley (NSV) IRWMP region. This area includes all or portions of the following counties: Butte, Colusa, Glenn, Shasta County, Sutter County and Tehama counties. The purpose of the IRWMP is to document the regional water resource management conditions, needs and strategies; to describe the process and projects that will improve regional water resources management in the IRWM region; and, to comply with the Final California Department of Water Resources (DWR) Integrated Regional Water Management (IRWM) Grant Program Guidelines (DWR 2014).

The City of Biggs is identified in the IRWMP as one of the municipalities considered in the IRWMP. Future populations are projected through 2035 in the plan using population projections provided by DOF. The Project Area anticipated population is within the projected population for the City of Biggs. As such, the Proposed Project would not conflict with or obstruct implementation of the IRWMP and would have no impact in this area.

The Sustainable Groundwater Management Act (SGMA) is a state-wide planning and information law that requires local water agencies and district to form groundwater sustainability agencies (GSAs) for the high and medium priority basins. The Butte Subbasin is a medium priority basin. GSAs are required to develop and implement groundwater sustainability plans (GSPs) to avoid undesirable results and mitigate overdraft within 20 years. Eleven independent Groundwater Sustainability Agencies (GSA), including the City of Biggs, have signed a cooperation agreement to develop, adopt and implement a single Groundwater Sustainability Plan (GSP) for the Butte Subbasin. The GSP for the Butte Subbasin is currently in process and is required to be adopted by January 2022. As such, the Project would not conflict with or obstruct implementation of the GSP. As such, the Project would have no impact on the implementation of the groundwater management plan.

4.9.7 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.10 Land Use and Planning

4.10.1 Environmental Setting

The Project Area consists of 79.48-acre area just east the existing Biggs city limit, as illustrated in Figure 3.

The Project includes in annexation and pre-zoning of the area to be consistent with the General Plan land use designations, as shown in Table 2.1-1. The Project does not include any proposed development or changes to the existing area other than the annexation and pre-zoning.

4.10.2 Land Use and Planning (XI) Environmental Checklist and Discussion

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

No impact.

As discussed above, there are existing residential and agricultural uses within the Project Area. However, the only established community in the Project vicinity would be the City of Biggs. As the Proposed Project is a continuance of the future growth objectives of the Biggs General Plan, is consistent with the General Plan land use designations for the area, and there are no established communities within the Project Area, the Proposed Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

No impact.

As explained above, the Project is consistent with the General Plan land use designations. The Project would rely on General Plan policies and actions, especially those adopted to assist in the protection the environment. As analyzed in each section of this IS/ND, the Project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur.

4.10.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.11 Mineral Resources

4.11.1 Environmental Setting

The state-mandated Surface Mining and Reclamation Act of 1975 requires the identification and classification of mineral resources in areas within the State subject to urban development or other irreversible land uses that could otherwise prevent the extraction of mineral resources. These designations categorize land as Mineral Resource Zones (MRZs, MRZ-1 through MRZ-4).

Neither the City, Mineral Resources Data System, nor the California DOC Division of Mine Reclamation (DMR), identify the Project Area as a mineral resource zone (Biggs 2014, DMR 2021, USGS 2021b).

4.11.2 Mineral Resources (XII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

No Impact.

As discussed above, Project Area is not identified as having the mineral resources. Therefore, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

No impact.

The Project site is not identified as a mineral resource recovery site by City or DMR. There would be no impact in this area.

4.11.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.12 Noise

4.12.1 Fundamentals of Sound and Environmental Noise

4.12.1.1 *Addition of Decibels*

The decibel (dB) scale is logarithmic, not linear; 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 (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions (Federal Transit Administration [FTA] 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the

source strength increases the sound pressure by 3 dB). Under the dB scale, three sources of equal loudness together would produce an increase of 5 dB.

4.12.1.2 *Sound Propagation and Attenuation*

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB (dBA) for each doubling of distance from a stationary or point source (FHWA 2011). Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dBA for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2017). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dBA per doubling of distance is normally assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about 5 dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction of 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the "line of sight" between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend length-wise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the line of sight between the source and the receiver.

The manner in which older structures in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (California Department of Transportation [Caltrans] 2002). The exterior-to-interior reduction of newer structures is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. [HMMH] 2006).

4.12.1.3 *Noise Descriptors*

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL (Community Noise Equivalent Level) are measures of community noise. Each is applicable to this analysis and defined as follows:

- **Equivalent Noise Level (L_{eq})** is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **Day-Night Average (L_{dn})** is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
- **Community Noise Equivalent Level (CNEL)** is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 p.m. to 10:00 p.m. and a 10-dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

4.12.1.4 *Human Response to Noise*

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. 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.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60- to 70-dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA), or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA noise levels, the following relationships should be noted in understanding this analysis:

- 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.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

4.12.2 Vibration Fundamentals

Ground vibration can be measured several ways to quantify the amplitude of vibration produced. This can be through peak particle velocity or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively. Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

4.12.3 Noise-Sensitive Noise Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

4.12.4 Noise (XIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

Less than significant impact.

Construction Noise Impacts

While no development is proposed as a part of the Project, based on current Biggs General Plan land use densities, future development of up to 479 dwelling units and over 85,000 square feet of commercial uses could occur resulting in noise impacts as a result of construction activities. Construction noise associated with future development would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., building construction, paving). Noise generated by construction equipment, including dozers, loaders, and excavators, can reach high levels. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at

lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive receptors in the vicinity of the Planning Area. The following General Plan actions assist in the protection of noise sensitive land uses within the City.

Action N-1.6.1 9 (Construction Hours)- Consider the establishment of a construction noise ordinance or standards to regulate hours of construction to the hours of 7:00 a.m. to 7:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on weekends, with the exception for emergency repair work

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.

The City does not promulgate numeric thresholds pertaining to the noise associated with construction, yet instead limits the time that construction can take place. This is due to the fact that construction noise is temporary, short term, intermittent in nature, and would cease on completion. Furthermore, the City of Biggs is a developing rural community and construction noise is generally accepted as a reality within the developing environment. As such, noise generated during construction activities, as long as conducted within the permitted hours, would not exceed City noise standards. A less than significant impact would occur.

Operational Noise Impacts

The Project does not include any construction or other development features. However, it is assumed that future development in the Project area will occur and can include up to 479 dwelling units and over 85,000 square feet of commercial uses. Listed below are General Plan policies and actions designed to protect noise-sensitive land uses from uses that generate significant amounts of noise to benefit public health, welfare and the local economy.

Policy N-1.1 (New Development and Transportation Noise) New development of noise-sensitive land uses should not be permitted in areas exposed to existing or planned transportation noise sources that exceed the levels specified in Table 1, unless the project design includes measures to reduce exterior and interior noise levels to those specifies in Table 1.

Table 1. Maximum Allowable Noise Levels from Transportation Noise Sources

Land use	Outdoor Activity Areas[1] L_{dn}/CNEL,dB	Interior Spaces	
		L_{dn}/CNEL,dB	L_{eq}, dB[2]
Residential	65[3]	45	-

Table 1. Maximum Allowable Noise Levels from Transportation Noise Sources			
Land use	**Outdoor Activity Areas[1] L_{dn}/CNEL,dB**	**Interior Spaces**	
		L_{dn}/CNEL,dB	**L_{eq}, dB[2]**
Transient Lodging	-	45	-
Hospitals, Nursing Homes	65[3]	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls	65[3]	-	40
Office Buildings	-	-	45
Schools, Libraries, Museums	65[3]	-	45
Playgrounds, Neighborhood Parks	70	-	-

Notes: [1]Noise standards are to be applied at outdoor activity areas with the greatest exposure to the noise source. When it is not practical to mitigate exterior noise levels at the patios or balconies of multi-family dwellings, a common area or on-site park may be designated as the outdoor activity area. For noise-sensitive land uses that do not include outdoor activity areas, only the interior noise standard shall apply. [2] As determined for a typical worst-case hour during periods of use. [3] Where it is not possible to reduce noise in outdoor activity areas to 65 dB Ldn/CNEL or less using all feasible noise reduction measures, an exterior noise level of up to 70 dB Ldn/CNEL may be allowed provided that interior noise levels are in compliance with this table.

Policy N-1.2 (New Development and Non-Transportation Noise) New development of noise-sensitive land uses should not be permitted in areas exposed to existing non-transportation noise sources that exceed the levels specified in Table 2, unless the project design includes measures to reduce exterior noise levels to the adjustable levels specified in Table 2.

Table 2. Maximum Allowable Noise Levels from Transportation Noise Sources		
Land use	**Exterior Noise Levels (dBA)**	
	Daytime (7:00 p.m. to 10:00 p.m.)	**Nighttime (10:00 p.m. to 7:00 a.m.)**
Average-Hourly Noise Levels (L_{eq})	55	50
Intermittent Noise Levels (L_2 or L_{max})	75	65

Notes: [1] Noise levels shall be lowered by 5 dB for simple tone noises, for noises consisting primarily of speech or music, or for recurring impulsive noises. Noise-level standards do not apply to mixed-use residential units established in conjunction with industrial or commercial uses provided interior noise levels remain below 45 dB Ldn/CNEL. [2]In areas where the existing ambient noise level exceeds the established daytime or nighttime standard, the existing level shall become the respective noise standard and an increase of 3 dBA or more shall be significant. Noise levels shall be reduced 5 dBA if the existing ambient hourly Leq is at least 10 dBA lower than the standards. [3]Noise standards are to be applied at outdoor activity areas with the greatest exposure to the noise source. When it is not practical to mitigate exterior

noise levels at patio or balconies of multi-family dwellings, a common area or on-site park may be designated as the outdoor activity area.

Policy N-1.4 (Roadway improvement Projects) Where proposed roadway improvement projects are likely to expose noise-sensitive land uses to noise levels exceeding standards in Table 1 or an increase of 10 dB L_{dn} or more in ambient noise levels, conduct an acoustical analysis to determine the level of impacts and to identify feasible noise mitigation measures that could be included in the project design to minimize impacts.

Action N-3.1.2 (Street Noise Environment) Periodically assess the noise levels associated with City streets by reviewing traffic count data as an indication of increasing traffic noise.

Action N-3.1.3 (Communication and Cooperation) As necessary, communicate and cooperate with the Butte County Development Services Department to address noise related issues occurring outside of the City to address potential noise impacts on City residents.

Implementation of the General Plan policies and actions listed in the City's Noise Element would ensure the protection of noise-sensitive land uses within the City. Therefore, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Less than significant impact.

Construction-Generated Vibration

The Project does not include any construction or other development features. However, it is assumed that future development in the Project area will occur and can include up to 479 dwelling units and over 85,000 square feet of commercial uses. Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to potential future development would be primarily associated with short-term construction-related activities. Construction would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Planning Area. Groundborne vibration levels associated with construction equipment are summarized in Table 4.12-1.

Table 4.12-1. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity (PPV) at 25 Feet (inches per second)
Large Bulldozer	0.089
Pile Driver	0.170
Caisson Drilling	0.089
Loaded Trucks	0.076
Rock Breaker	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: FTA 2018; Caltrans 2020

The City does not regulate vibrations associated with construction and there are no federal, state, or local regulatory standards for vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. For instance, the California Department of Transportation (Caltrans) has developed vibration criteria based on human perception and structural damage risks. For most structures, Caltrans considers a PPV threshold of 0.2 inches per second to be the level at which architectural damage (i.e., minor cracking of plaster walls and ceilings) to normal structures may occur. As shown in Table 4.12-1 above, at 25 feet no piece of construction equipment would exceed the recommended PPV threshold of 0.2 inches per second. Additionally, vibration as a result of constructor would be temporary and diminishes rapidly with distance. For the reasons listed above, the impact would be less than significant.

Operational-Generated Vibration

The Project does not include any construction or other development features. However, it is assumed that future development in the Project area will occur and can include up to 479 dwelling units and over 85,000 square feet of commercial uses. None of these approved uses include would not include the use of any stationary equipment that would result in excessive vibration levels. Therefore, the Project would not result ground-borne vibration impacts during operations. A less than significant impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project Area to excessive noise levels?	☐	☐	☐	☒

No impact.

The City of Biggs is not located within 2 miles of a public airport nor is it located in the vicinity of a private airstrip. The closest public airport is the Oroville Municipal Airport, located approximately 11 miles to the east, and the nearest private airport is the Richvale Airport, located approximately 7 miles to the north of the Biggs Planning Area. Although occasional aircraft overflights of the City occur, the City of Biggs is located well beyond the noise impact zones of these airports. As a result, the existing ambient noise environment of the City of Biggs is not significantly influenced by aircraft noise. Implementation of the Proposed Project would not affect airport operations nor result in increased exposure of noise-sensitive receptors to aircraft noise. For this reason, no impact would occur.

4.12.5 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.13 Population and Housing

4.13.1 Environmental Setting

According to the California DOF, which provides estimated population and housing unit demographics by year throughout the State, the City had a population of 1,727 as of January 1, 2021 with an estimated 696 total housing units. Compared to the 2011 DOF City estimates of 1,711 residents and 617 total households, this is an increase of 1.2 and 11.4 percent, over a 10-year period, in population and total number of households, respectively. Vacancy rates for the City have continuously decreased from 8.3 percent in 2011 to 3.7 percent as of January 2021. The Proposed Project does not include residential construction components. However, it is acknowledged that there is a potential for future residential development within the Project Site. Potential population growth for the Site, if developed at the maximum allowable levels based on current City and County land use designations, is projected to reach 1,235 additional residents to the City, with an additional 479 dwelling units (see Table 2.1-4 above).

In January 2011, the BCAG published a population forecast report that projected a range of potential growth scenarios for Biggs ranging from an average annual population and housing growth rate of 3.3 percent to 4.1 percent This would result in the potential to double the current population size by the year 2035. Given the current estimated population of 1,727, the anticipated growth rate ranging between 3.3 to 4.1 percent was not achieved as predicted (Biggs 2014). However, implementation of the Proposed Project, and the future development within the Project Site, would have the potential for a 71.5 percent increase in population. Therefore, future development in the Project Site would support the projected doubling of population for the City of Biggs by the year 2035.

4.13.2 Population and Housing (XIV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Less than significant impact.

The Project does not include any construction or other development features. However, it is assumed that future development in the Project Site will occur and as such may affect the population density of the City. Subsequent development would be subject to General Plan policies and actions. The following General Plan policies and actions address population and housing:

Policy LU-2.1 (Land Use Diagram) – Update and maintain the Land Use Diagram to designate the location and extent of each land use designation within the Planning Area to address the evolving needs of the City.

Policy LU-2.2 (Managed Growth) – Manage the growth of the City to balance land uses and provide a mix of uses to meet the needs of the City.

Action LU-2.4.1 (Strategic Planning) – Strategically identify, target and pursue new business and industry that would diversify the City's employment base and create opportunities for new business development options.

Action LU-3.2.1 (Zoning) – The City shall zone an adequate supply and mix of developable residential land to accommodate future housing needs.

Policy CE-1.1 (Compact Form) – Maintain the compact form of the city through the efficient use of land and the maintenance of the grid-based street system as a primary feature of the city's physical design.

As indicated in the Final Municipal Service Review (FMSR) – conducted for the City of Biggs and adopted in 2015 – the City will not have enough vacant residentially zoned land to accommodate growth within the current City boundaries by 2021, based on the anticipated future growth rate of approximately 2.95 percent. According to the Regional Housing Needs Plan (RHNP), which spans from January 2014 to June 2022 and identifies and quantifies the existing housing needs for the City, the City's housing needs are for the extremely low income (13 percent of 24 units), very low income (13 percent or 24 units), low income (16 percent or 30 units), moderate income (13 percent or 24 units), and above moderate income (45 percent or 82 units) residents of the community. Including the units that had permits pulled as part of the North Biggs Estates project, the total RHNA for the City was 165, with a site inventory realistic capacity of

250 units, and a total RHNA surplus of 85 units for all income groups. Additionally, the RHNP indicated that the City's capacities [at the time when the RHNP was adopted] for new housing units exceeded the 2014-2022 RHNP Allocation. However, to meet this need, the use of underutilized land was required as there was not an adequate supply of available vacant land (Butte LAFCO 2015).

The Project proposes the annexation of agricultural land into the limits of the City of Biggs and does not include the development of new residential housing or businesses. However, with the assumption for future development in the Project Site, the City is anticipated to have a significant increase in population growth. This population increase would be consistent with the City's future population growth in the area as projected in the General Plan Population and Housing Element and would comply with Policies such as Policy LU-2.1 and LU 2.2 above.

A key goal of the City's General Plan policies is to accommodate anticipated growth in a compact urban form, including mixed-use development. This strategy is intended to reduce the amount of undeveloped land needed to meet the City's future housing and jobs needs when compared to a more "business-as-usual" sprawling growth pattern. The proposed General Plan and its Land Use Diagram would provide for this growth and minimize outward expansion of the city's boundaries. For example, proposed General Plan Action CR-2.2.5 prohibits new urban development west of the southerly extension of Riceton Highway, south of Afton Road, and west of the City's wastewater treatment plant to Farris Road. Growth accommodated under the General Plan seeks to avoid the growth effects of sprawl development patterns.

Nonetheless, realization of full theoretical buildout under the General Plan, while unlikely, would result in growth beyond that anticipated by BCAG. As stated above, a BCAG-projected average growth rate of 3.3 percent annually (more than triple the historic growth rate average yet consistent with BCAG's lowest growth scenario) would result in an estimated increase of 2,367 people and 825 dwelling units for a total of 4,059 people living within 1,440 units in Biggs by 2035. As of January 1, 2021, the BCAG-projected growth rate has not been actualized. Full theoretical buildout in the Proposed Project Site would result in an increase of 1,235 people and 479 units for a total of 2,962 residents living in 1,175 dwelling units in Biggs. Since full theoretical buildout in the Project Site would result in growth consistent with that anticipated by BCAG, this impact is considered to be less than significant.

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

No impact.

No persons or residences would be displaced or removed as a result of the Proposed Project, and the Project would have no impact in this area.

4.13.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.14 Public Services

4.14.1 Environmental Setting

Public services include fire protection and emergency medical services, law enforcement services, public schools, parks and recreation, water service (supply and infrastructure), wastewater services, and solid waste, and electricity. Generally, impacts in these areas are related to an increase in population from a residential development. Levels of service are generally based on a service-to-population ratio, except for fire protection, which is usually based on a response time.

4.14.1.1 *Police Services*

As of July 1, 2020, the Butte County Sheriff's Office began providing law enforcement services in the City of Biggs. This includes twenty four-hour / seven days per week law enforcement and response, as well as 911/ public safety dispatch services, records management, evidence/property management, and criminal investigation services. The Butte County Sheriff's Office (BCSO) utilizes a combination of BCSO personnel to provide law enforcement services to the City of Biggs, which include Designated Area Deputies (DADS), patrol deputies, and a newly created position of Sheriff Community Service Officer (SCSO). The SCSO works throughout the City in an effort to prevent criminal activity and identify public safety risks. When the SCSO is not out in the community, the SCSO works in an office located inside Biggs City Hall at 465 C Street (Biggs 2020).

4.14.1.2 *Fire Services*

Fire protection services in Biggs are provided by the Biggs Fire Department, which is staffed by two fire fighters twenty-four hours a day and supported by a volunteer company that supports both Biggs and Gridley. The fire station (Station 73) is located at 434 B Street. The Department also provides Basic Life Support services. Although the personnel are volunteers, the City of Biggs owns and pays for the operational costs of one fire engine through the City's service contract with the State of California and through the resources of the Mutual Aid Agreement with Butte County. According to Cal-Fire, the City of Biggs and the Project Site are not considered to be a Very High Fire Hazard Severity Zone (VHFHSZ) in the Local Responsibility Area (LRA). The service boundaries of the Department are the City limits, although the Department has a mutual aid agreement with Butte County Fire Department and Cal-Fire to provide fire protection services to outlying areas (Cal-Fire 2008).

4.14.1.3 *Schools*

The Biggs Unified School District (BUSD) operates three schools in Biggs and adjacent unincorporated areas of Butte County. There are two elementary schools, one with classes from TK (pre-kindergarten) through eighth grades (Biggs Elementary), and the other with classes from first through fifth grades

(Richvale Elementary). Additionally, BUSD currently has one high school with classes from ninth through twelfth grades (Biggs High). The BUSD currently employs a total of 38 teachers (Biggs 2021).

4.14.1.4 *Parks*

The City of Biggs maintains five parks which are available for public enjoyment, recreation and sporting events. City parks comprise of Biggs Family Park, completed in 2006 with features including a skate park, playground, basketball court, covered pavilion, BBQ's, and picnic tables; Downtown's "Pocket Park", a centerpiece to the business district and sire of the living City Christmas Tree; Rio Bonito Park, although on school district property, this City park includes newly refurbished amenities through a public-private partnership between the City and SunWest Milling; Trent Street Park, located on Trent Street near Fifth Street; and North Biggs Estates Park, located at the corner of Fourth and L Streets (Biggs 2019).

Refer to Section 4.17 *Recreation* for further information regarding Parks and Recreation

4.14.2 Public Services (XV) Environmental Checklist and Discussion

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

Less than significant impact.

<u>Fire Protection</u>

The Project does not include any construction or other development features. Therefore, in and of itself, the Project would not impact fire protection in the area. However, it is assumed that future development in the Project Site will occur and as such may affect the level of services required by local fire protection services. Subsequent development would be subject to General Plan policies and actions. The following General Plan policies and actions from the Public Facilities & Services Element and the Public Health & Safety Element address fire protection services:

Policy PFS-1.1 (Development Impact Fees) – Maintain a development fee system that ensures that infrastructure improvements necessary to serve new development be paid for by the new development.

Action PFS-1.1.1 (Impact Fee Program) – Periodically review the City's Development Impact Fee Program to ensure that the fees are equitable and appropriate to cover the costs of providing services.

Policy PFS-1.2 (Infrastructure Timing) – Ensure the development of quality infrastructure to meet community needs at the time that they are needed.

Action PFS-1.2.1 (Infrastructure Phasing Plans) – Prepare infrastructure phasing plans for the development of new public facilities that result in the logical and orderly development of new infrastructure facilities.

Action PFS-1.2.2 (Infrastructure Funding) – Establish a policy or program to ensure that adequate funding is available through the use of bonds, special districts or other financial mechanisms to ensure that costs associated with the provision of new services are addressed and that new services do not place an unnecessary burden on existing residents and businesses.

Policy S-4.1 (Fire Safety Staffing) – At a minimum, maintain current levels of service for fire protection by continuing to require development to provide and/or fund fire protection facilities, personnel, and operations and maintenance.

Policy S-4.2 (Fire Hydrants) – Ensure all fire hydrants within the city are maintained and can sufficiently provide fire suppression services.

Action S-4.2.1 (Hydrant Spacing) – Require all new development to design public facility improvements to ensure that water volume and hydrant spacing are adequate to support efficient and effective fire suppression.

Action S-4.2.2 (Hydrant Maintenance) – Work with Butte County Fire/Cal-Fire to properly test and maintain fire hydrants.

Policy S-4.3 (ISO Rating) – Biggs shall strive to achieve an Insurance Service Office (ISO) rating of Protection Class 3.

Policy S-4.4 (Vegetation Management) – Support vegetation management and weed abatement programs that reduce fire hazards.

Action S-4.4.1 (Hazard Reduction) – Continue to enforce the requirements of Public Resources Code Sections 4290 and 4291 and Biggs Municipal Code Section 6.25 in all new development projects and within the existing developed areas of the City. This includes, but is not limited to, the following:

- Maintain roofs of structures free of vegetative growth and debris.

- Remove any portion of trees growing within ten (10) feet of chimney/stovepipe outlets.
- Maintain screens over chimney/stovepipe outlets or other devices that burn any solid or liquid fuel.

Policy S-4.5 (Interagency Coordination) – Continue to maintain interagency relationships to maximize fire protection services and support programs that reduce fire hazards.

Action S-4.5.1 (Interagency Programs) – Continue to work with Cal-Fire and the Butte County Fire Department on programs that will enhance fire protection and firefighting capabilities in the Planning Area, including maintaining aid agreements.

Policy S-4.6 (Fire Safety Standards and Programs) – Support the development and implementation of standards and programs to reduce fire hazards and review development and building applications for opportunities to ensure compliance with relevant codes.

Action S-4.6.1 (Standards to Protect Structures) – Maintain, and update as needed, the standards manual for protecting structures in wildland fire areas.

Action S-4.6.2 (Structural Standards) – Incorporate building construction standards for the Local Resource Area (areas that are provided City fire suppression services) that are consistent with the requirements for the State Responsibility Areas (areas that are provided state and county fire suppression services) designated as Very High, High, and Moderate Fire Hazard Severity Zones.

Action S-4.6.3 (Project Design) – As part of the project review process in wildland fire areas, require consideration of emergency evacuation routes and defensible buffer areas.

Action S-4.6.4 (Development Standards) – Encourage and work with the County to require development in unincorporated areas within the City's Sphere of Influence to conform to the City's development standards.

Action S-4.6.5 (Fire Sprinklers, New Structures) – Conform to all California Building Code requirements requiring fire sprinklers for new construction.

Action S-4.5.6 (Mutual Response Agreements) – Continue participation in regional mutual response agreements to address issues of fire safety within and around the city and to provide options for fire protection services on the west side of the railroad tracks in the event of track blockage.

Action S-4.5.7 (Equipment Modernization Funding) – Continue to fund equipment modernization efforts and participate in grant funding to enhance firefighting resources.

Future development of the annexation area would result in a need to maintain current levels of service, at a minimum, for fire protection by continuing to require development to provide and/or fund fire protection facilities, personnel, and operations and maintenance (Policy S-4.1) and to maintain an

Insurance Service Office (ISO) rating of Protection Class 3 (Policy S-4.3). Action S-4.5.1 ensures continued work with Cal-Fire and the BCFD on programs that will enhance fire protection and firefighting capabilities in the Biggs Planning Area, including maintaining aid agreements. Policy PFS-1.1 maintains a development fee system which ensures that infrastructure improvements necessary to serve new development, including fire protection facilities, be paid for by the new development. Policy PFS-1.2 and its associate Action PFS-1.2.2 requires the guarantee of quality infrastructure to meet community needs at the time they are needed and establishes a mechanism to ensure that adequate funding is available.

Future development of the annexation area would be subject to City development standards addressing general requirements for new development (e.g., City Municipal Code Chapter 13.15, Improvements) and proposed General Plan requirements which ensure that new city infrastructure provides for water flow and pressure at sufficient levels to meet domestic, commercial, industrial, institutional, and firefighting needs (Policy PFS-1.2). The site-specific environmental impacts associated with off-site improvements necessary for fire flows would be determined through project-level CEQA analysis at such time as they are proposed for development. Implementation of the proposed General Plan policy cited above would ensure that adequate fire flow would be available to serve existing and future new development.

Compliance with the 2019 California Fire Code, City fees, and implementation of the above General Plan policies and actions would ensure the provision of adequate fire protection services. Project-level CEQA review of future fire protection facilities would identify and mitigate significant environmental impacts associated with the provision of additional fire protection personnel and facilities. Therefore, impacts associated with fire protection services would be reduced to a less than significant level.

Police Services

The Project does not include any construction or other development features. However, it is assumed that future development in the Project Site will occur and as such may affect the level of services required by the applicable law enforcement agency.

As of July 1, 2021, the BCSO is the lead law enforcement agency providing services in the City of Biggs. The Project Site proposes the annexation of land into the City limits and therefore subsequent development would be subject to General Plan policies and actions. The following General Plan policies and actions from the Public Health & Safety Element address police and other law enforcement services:

Policy S-5.1 (Law Enforcement Service Level) – At a minimum, the City shall strive to maintain the current levels of coverage for law enforcement services by the City's law enforcement provider.

Policy S-5.2 (Law Enforcement Service Provision) – Ensure that law enforcement services are provided in a manner that maximizes the use of the City's limited financial resources while maximizing service coverage.

Action S-5.2.2 (Level Coverage) – Continue to explore and consider local law enforcement coverage options to include community services officers, law enforcement volunteers and law enforcement partnership arrangements to ensure a maximum level of service coverage to the City.

Policy S-5.3 (Visible Presence) – Law enforcement providers shall make all reasonable efforts to maintain a visible presence in the City.

Action S-5.3.1 (Law Enforcement Visibility) – Continue to seek ways to maintain a law enforcement presence at local events to include parades, shows, festivals and school events.

Action S-5.3.2 (Public Safety Presence) – Law enforcement providers shall make all reasonable efforts to maintain a high level of public visibility in the City and shall consider the following options as part of the City's law enforcement coverage program:

- Maintain a regular and on-going local office presence.
- Maintain a regular and on-going circulating presence in the City to increase visibility and provide a visual sense of security to City residents.
- Consider the use of alternative community circulation presence to include bicycle or equestrian officers.

Policy S-5.4 (Public Interaction) – Continue to encourage programs that present that City's law enforcement personnel in a positive light and that encourage residents to interact with and "get-to-know" the City's law enforcement providers.

Action S-5.4.1 (Public Interaction) – Work to incorporate a law enforcement presence at events that reflect the positive attributes of the City's law enforcement providers. Events may include school activities, civic events, public meetings and holiday activities.

Policy S-6.1 (CPTED) – Utilize Crime Prevention Through Environmental Design (CPTED) principles in the design of projects and buildings.

Action S-6.1.1 (CPTED Guidelines) – Adopt, and update as necessary, development standards and design provisions consistent with current Crime Prevention Through Environmental Design (CPTED) guidelines. Specifically, incorporate provisions to address the following:

Action S-6.1.2 (Natural Surveillance) – Intended to keep intruders easily observable, natural surveillance provisions maximize visibility of people, parking area, and building entrances (e.g., doors and windows that look out on to streets and parking areas, pedestrian-friendly sidewalks and streets, front porches, adequate nighttime lighting).

Action S-6.1.3 (Territorial Reinforcement) – Physical design can create or extend a sphere of influence. Users then develop a sense of territorial control while potential offenders, perceiving this control, are discouraged. This design concept is implemented by features that define property lines and distinguish private spaces from public spaces using landscape plantings, pavement designs, gateway treatments, and fences.

Action S-6.1.4 (Natural Access Control) – A design concept directed primarily at decreasing crime opportunity by denying access to crime targets and creating a perception of risk for offenders. This design concept is achieved by designing streets, sidewalks, building

entrances, and neighborhood gateways to clearly indicate public routes and also by discouraging access to private area with structural elements.

Action S-6.1.5 (Target Hardening) – This is accomplished by adding features that prohibit entry or access, including window locks, deadbolts for doors, and interior door hinges.

According to the BCSO, there are currently two law enforcement officers charged with providing services to the City of Biggs. At a population of 1,852 residents in 2020 (according to the California DOF, which provides estimated population and housing unit demographics by year throughout the State), the current police officer-to-resident ratio is nearly 1:1000. Considering the anticipated population increase of the Proposed Project at 1,235 residents, the Project would require one (1) additional officer to meet the current levels of coverage and to satisfy the requirements under Policy S-5.1.

All new development within the annexation area would be required to pay development impact fees as discussed above. These fees would assist in funding the law enforcement facilities and equipment necessary to adequately serve growth. In addition, Policy PFS-1.1 maintains a development fee system which ensures that infrastructure improvements necessary to serve new development, including law enforcement needs and facilities, be paid for by the new development. Policy PFS-1.2 requires the guarantee of quality infrastructure to meet community needs at the time they are needed, and associated Action PFS-1.2.2 establishes a mechanism to ensure that adequate funding is available through the use of bonds, special districts, or other financial mechanisms to ensure that costs associated with the provision of new services, such as law enforcement facilities and/or equipment, are addressed and that new services do not place an unnecessary burden on existing residents and businesses.

Future development of the annexation area could potentially result in a need for police protection services to respond to any potential incidents that may occur at the site. However once adopted, the annexation area would be located within City limits and therefore compliance with the General Plan policies and actions and City fees and standards would ensure the provision of adequate law enforcement services. Project-level CEQA review of future police facilities would identify and mitigate significant environmental impacts. Therefore, this impact is less than significant.

Schools

As previously discussed, BUSD is comprised of three schools providing educational services for grade levels TK through twelfth grades. The Project Site proposes the annexation of land into the City limits and therefore subsequent development would be subject to General Plan policies and actions. The following proposed General Plan policies and actions from the Public Facilities & Services Element address public school services:

Policy PFS-7.1 (Education Support) – Continue to support the activities of the Biggs Unified School District to provide quality educational instruction to the youth of the City.

Policy PFS-7.2 (Shared Resources and Facilities) – Continue to work closely with the Biggs Unified School District to identify opportunities for cost sharing and the sharing of available resources.

Policy PFS-7.3 (Public Works Coordination) – Actively seek to engage representation from the Biggs Unified School District when pursuing municipal public works projects that may impact school operations, school facilities or student activities.

Action PFS-7.3.1 (Pursuit of Grant Opportunities) – Work closely with the Biggs Unified School District to pursue grant funding for the continued implementation of sidewalks and pedestrian improvements along key school facility access routes.

The Project does not include any construction or other development features. However, it is assumed that future development in the Project Site will occur and as such may affect the population in the Butte Unified School District service area, which would subsequently increase student enrollment in BUSD schools. New or expanded school facilities may be necessary to serve the increased demand. Subsequent development would be subject to school facility fees to pay for additional school facility needs. If any new or expanded school facilities were required, the BUSD would be required to conduct the appropriate environmental review prior to any significant expansion of school facilities or the development of new school facilities. General Plan Policy PFS-7.2 requires the City to coordinate with the BUSD regarding future school sites in an effort to minimize environmental impacts. Given that the BUSD will be required to conduct environmental review prior to any significant expansion of school facilities or the development of new school facilities, as well as current state law requirements that the environmental impact of other new development on school facilities is considered fully mitigated through the payment of required development impact fees, this impact is considered less than significant.

Parks

Refer to Section 4.15. Recreation.

4.14.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.15 Recreation

4.15.1 Environmental Setting

As previously described, the City of Biggs maintains five parks which are available for public enjoyment, recreation and sporting events. City parks comprise of Biggs Family Park, completed in 2006 with features including a skate park, playground, basketball court, covered pavilion, BBQ's, and picnic tables; Downtown's "Pocket Park", a centerpiece to the business district and sire of the living City Christmas Tree; Rio Bonito Park, although on school district property, this City park includes newly refurbished amenities through a public-private partnership between the City and SunWest Milling; Trent Street Park, located on Trent Street near Fifth Street; and North Biggs Estates Park, located at the corner of Fourth and L Streets (Biggs 2019).

4.15.2 Recreation (XVI) Materials Checklist

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

Less than significant impact.

The City of Biggs currently maintains five city parks, as previously described. The Proposed Project has the potential to accommodate population growth, which could subsequently increase the use of existing parks and recreation facilities and/or require the construction or expansion of park and recreational facilities to meet increase demand. The current Park Dedication Standard for the City requires 5.0 acres of active or passive recreation land per each 1,000 residents. Taking into consideration the projected population increase of approximately 1,235 residents coinciding with the Proposed Project, an additional 6.18 acres of recreation land would be required to meet the expectations promulgated in the General Plan (see Action CR-1.1.1 below). The Project proposes the annexation of land into the City limits and therefore subsequent development would be subject to General Plan policies and actions. The following General Plan policies and actions from the Conservation, Open Space & Recreation Element address City parks and concurrent services:

Policy CR-1.1 (Parkland Needs) – Provide adequate parkland acreage and facilities in both location and size to meet the recreational needs of existing and future residents.

Action CR-1.1.1 (Park Dedication Standard) – Adopt a minimum park dedication standard of 5.0 acres of active or passive recreation land per each 1,000 residents.

Policy CR-1.2 (Partnership and Cooperation) – Partner with local service providers, community organizations and other agencies to provide parks and recreation facilities.

Action CR-1.2.1 (Recreation Partnerships) – Continue to work with the Biggs Unified School District in the development, maintenance, and operation of school/public park sites.

Action CR-1.2.3 (Recreation Partnerships) – Work with local service organizations, civic groups and volunteers to expand recreation options and to help facilitate the efforts of these groups to provide recreation options in the community.

Policy CR-1.3 (Parks and Recreation Facilities) – Maintain and improve the physical condition and amenities of parks and recreational buildings and facilities.

Action CR-1.3.2 (Park and Recreation Funding) – Actively Pursue local, state, federal, and other funds for the development of parks and recreational facilities.

Action CR-1.3.4 (Parkland Dedication) – Require that all new residential development dedicates park and recreational facilities or pays appropriate in-lieu fees.

The policies and actions included in the General Plan support continued cooperation with other agencies (such as Butte County, the BUSD, and the City of Gridley) to provide parks and recreation facilities that offer recreation opportunities for the community (Policy CR-1.2 and associated Actions CR-1.2.1 through 1.2.3). To that end, future development projects would be required to pay development impact fees for park facilities in order to fund the acquisition and development of neighborhood and community parks and community use facilities to the extent they are needed as a result of new development (Action CR-1.3.4). Implementation of the General Plan policies and actions, along with project-level environmental review, as needed, would ensure that future development in the Project Site would provide adequate park, recreation, and greenway facilities consistent with parkland standards. Therefore, this impact is less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Less than significant impact.

The Project does not include any construction or other development features that include recreational facilities or require the construction or expansion of such facilities. Therefore, in and of itself, the Project would not impact recreational facilities in the area. However, it is assumed that future development in the Project Site will occur and as such may require the need for further construction or expansion of recreational facilities. Subsequent development would be subject to General Plan policies and actions such as Policy CR-1.1 and associated Action CR-1.1.1, as described above. The Proposed Project does not include or allow for the creation of recreational facilities. As such, the Proposed Project will have a less than significant impact due to potential construction and expansion of recreational facilities required for future development in the Project Site.

4.15.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.16 Transportation

4.16.1 Environmental Setting

A draft engineers report was prepared for the Proposed Project on August 23, 2021 by Bennett Engineering Services (BEN|EN), which is included as Attachment 4.18 of this Initial Study. The report does

not indicate that the Proposed Project would be expected to generate daily trips as the Project does not include any actual residential or commercial development components. However, it is acknowledged that there is a potential for future development within the Project Site.

Existing Roadways

The Project Site is currently bordered by two roads, West Rio Bonito to the north and B Street to the south. The nearest cross connection between these two roads is Second Street (west of the Project Site) and Highway 99 to the east.

Both West Rio Bonito Road and B Street consist of two lanes and are striped with centerlines and edge lines. The speed limit on B Street is 35 miles per hour and is signed at the halfway point from Highway 99 to First Street. There are no existing intersections serving roads between First Street and Highway 99 along B Street.

West Rio Bonito is signed 35 miles per hour at the easterly edge of the proposed Phase 1 annexation area. There are two roads that connect to West Rio Bonito Road, both located on the northern side of the roadway. One of these connector roads, Randall Avenue, is near the center of the Proposed Project Site (BEN|EN 2021).

Transit Service

Public transportation services in Biggs are provided by the regional B-Line system, managed and operated by the BCAG. The B-Line provides a range of services from commuter routes throughout the county to local service routes in and around larger communities, such as Chico. Park-and-ride locations promote and support the B-Line system. Biggs is also serviced by the Butte College student transport bus. Comprehensive transit services are critical to the success of Biggs' transportation system, as they serve the needs of various segments of the population, including students, workers, shoppers, the elderly, youth, and the disabled community (Biggs 2014).

Pedestrian and Bicycle Facilities

In June of 2011, the City of Biggs adopted the revised Biggs Area Bicycle Transportation Plan (BTP) that identifies existing and proposed bicycle facilities citywide. The purpose of the BTP is to improve and encourage bicycle and pedestrian transportation in the City and to allow the City to pursue funding opportunities through Caltrans. The BTP identifies the current and future needs of bicyclists and establishes goals and policies for planning and implementing bicycle facilities within the City (Biggs 2014). The BTP anticipates the development of three types of bicycle facilities in the City, which are defined as follows:

- **Class I Bicycle Paths** provide a completely separated facility designed for the exclusive use of bicycles and pedestrians with minimal interruption by motorists. Class I bikeways typically have a minimum of 8 feet of pavement with 2-foot graded shoulders on either side. These bikeways must also be at least 5 feet from the edge of a paved roadway.

- **Class II Bicycle Lanes** provide a restricted right-of-way designated for the exclusive or semiexclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with

vehicle parking and cross flows by pedestrians and motorists permitted. Class II bicycle lanes are typically a 5-foot striped and signed lane.

• **Class III Bicycle Routes** provide designated areas where bicycles share the road with other modes of travel (such as vehicles). Class III routes are typically signed as such. For pedestrians, sidewalks exist on a majority of streets within the city. Pedestrian facilities comprise paths, sidewalks, and pedestrian crossings.

4.16.2 Regulatory Setting

4.16.2.1 *Regional Transportation Planning*

The Butte County Association of Governments is the agency that manages local and regional public transit as well as prepares and implements regional transportation plans in Butte County. The BCAG 2035 Regional Transportation Plan (RTP) is the long-range regional planning document that identifies and programs roadway improvements throughout Butte County. The RTP does not focus on local transportation needs. BCAG is also responsible for implementing Senate Bill 375, which requires development of a Sustainable Communities Strategy (SCS) that links the RTP with state greenhouse gas reduction goals. The Butte County General Plan also includes transportation plans and policies for roadways, transit, bike, and pedestrian improvements in areas surrounding Biggs.

4.16.2.2 *City of Biggs 2014 General Plan*

Regional access to the Project Site is provided by SR 99 via the Biggs East Highway (B Street), which traverses the southern Project Site boundary; as well as West Rio Bonito Road, which traverses the Site's northern boundary. The General Plan recognizes that an efficient multimodal circulation system, along with good land use planning, is essential to supporting the goals of economic vitality, a high quality of life, reduced greenhouse gas emissions, and a sustainable community. The City aims to incorporate design elements and standards into new development to promote the connectivity of the City's current and future residents, businesses, and visitors. In addition, the Circulation Element, Community Enhancement Element, and Conservation, Open Space Recreation Element focus on meeting the needs of all users of the streets for safe and convenient travel through four modes of transportation: vehicles, transit, bicycles, and pedestrians. The City of Biggs General Plan contains the following transportation goals and policies related to the construction and operations of development projects, which may result from the Proposed Project:

Policy CE-1.1 (Compact Form) – Maintain the compact form of the city through the efficient use of land and the maintenance of the grid-based street system as a primary feature of the city's physical design.

Policy CE-1.2 (Access-Restricted Development) – Strongly discourage access restricted developments because they discourage connectivity and isolate specific areas of the city.

Policy CE-1.3	(New Development) – Direct that new growth will incorporate the basic framework of the established street patterns into development design.
Policy CE-6.1	(Street Design) – Ensure that city streets maintain a pedestrian scale and incorporate landscaping elements.
Policy CE-6.2	(Connectivity/Safety) – Create safe, inviting, and user-friendly pedestrian and bicycle environments.
Action CE-6.2.1	Maintain a well-connected pedestrian circulation system by seeking opportunities to enhance pedestrian connectivity.
Action CE-6.2.2	Prepare and adopt street design standards that accommodate pedestrian and bicycle transportation modes.
Action CE-6.2.4	Provide signage, lighting, and storage as necessary to enhance the safety and security of pedestrians and bicyclists.
Policy CE-6.4	(Pedestrian Features) – Accommodate pedestrian design elements into the design of roadways.
Action CE-6.4.1	As appropriate and where feasible, continue to utilize separated sidewalks and planter strips on primary city streets.
Action CE-6.4.2	Promote the use of street furniture at appropriate locations to encourage non-vehicular circulation and increase pedestrian comfort.
Policy CR-7.1	Plan and design Biggs to encourage walking, bicycling, and the use of transit.
Policy CIRC-1.1	(Circulation Diagram) – New development shall generally conform to the alignments depicted in Figure Circ-3 – Circulation Diagram.
Policy CIRC-1.2	(Right-of-Way Dedication) – New development projects shall dedicate adequate rights-of-way to allow for construction of roadways as designated within this element at the earliest feasible opportunity in the development process.
Policy CIRC-1.3	(Roadway Funding) – New development shall pay appropriate fees, as established within a City Roadway Master Plan or Development Impact Fee program, to offset impacts to the circulation system.
Policy CIRC-1.4	New development shall pay appropriate fees, as established within a City Roadway Master Plan or Development Impact Fee program, to offset impacts to State Route 99. The fair-share fees shall fund all feasible transportation improvements to reduce the severity of cumulative transportation impacts.
Policy CIRC-1.5	(Street Improvements) – All new streets within the City of Biggs shall be constructed with curb, gutter and sidewalks. Sidewalks shall be separated from curb by a landscape strip a minimum of four (4) feet in width.

Action CIRC-1.5.1 (Street Improvement Standards) – Prepare and adopt street design standards that address the use of curb types, sidewalk type and location and other street improvements.

Policy CIRC-1.6 (Level of Service Standards) New development shall provide off-site street improvements as needed to avoid creating significant traffic impacts on streets surrounding the proposed projects. Level of Service C has been established as the threshold for acceptable operations, unless maintaining this LOS is determined to be infeasible, undesirable or would conflict with other goals and policies of this Plan. Exceptions will be handled on a case-by-case basis.

Policy CIRC-2.1 (Roadway Impact Studies) – New development shall be responsible for conducting a transportation impact study to address potential impacts associated with the proposed project on the existing and planned roadway network.

Policy CIRC-4.1 (Bicycle System) – Pursue the development of a comprehensive and interconnected bicycle route system in Biggs.

Action CIRC-4.1.2 (Bicycle Transportation Plan Implementation) – As financially feasible, implement the bicycle system improvements outlined in the City's Bicycle Transportation Plan.

Action CIRC-4.1.5 (Street Improvements) – Ensure that new street improvement projects consider potential impacts to rider safety and convenience.

Policy CIRC-4.2 (Construction and Maintenance) – Require that new development projects provide connections and facilities for bicycles.

Policy CIRC-4.3 (Pedestrian Friendly Streets) – Ensure that streets in high-traffic areas, near schools, recreation facilities and public buildings provide pedestrian safety features such as separated or wider-width sidewalks, enhanced pedestrian crossings, signage and markings.

Action CIRC-4.3.1 (Detached Sidewalks) – Continue to require detached sidewalks for new development projects adjacent to Collector and Arterial streets.

Action CIRC-4.3.3 (Downtown and B Street Pedestrian Enhancements) – Evaluate options and opportunities to install enhanced pedestrian crossing facilities to include special markings, materials and signage at key locations in the Downtown and along B Street with special consideration given to areas adjacent to schools.

Policy CIRC-4.4 (Pedestrian Hazards) – Identify locations which present hazards to pedestrians and actively pursue remedies to identified hazards.

Action CIRC-4.4.1 (Sidewalk Replacement Program) – Continue the City's sidewalk replacement program to address issues related to pedestrian safety and hazard elimination.

Policy CIRC-4.5 (Prioritization of Improvements) – Pedestrian and bicycle improvements shall be prioritized in the following order.

- Projects which increase safety for children traveling to and from school.
- Projects which remove barriers to handicapped individuals.
- Projects which increase overall convenience and safety for pedestrians and bicyclists.

Action CIRC-5.1.1 (Engagement of Dialogue) – Maintain an active presence in regional transit planning activities and maintain an dialogue with the Butte County Association of Governments (BCAG) and neighboring communities to explore options for enhancing the level and convenience of service provided by the regional public transportation system to the City of Biggs.

4.16.3 Transportation (XVII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	☐	☐	☒	☐

Less than significant impact.

As indicated in the City of Biggs General Plan Circulation Element (Table Circ-2), the City identifies LOS C as the minimum acceptable level of service. The daily level of service volume threshold by roadway classification is defined below:

Table 4.16-1. Daily Level of Service Volume Threshold by Roadway Classification

Roadway Classification	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Local	-	-	1,500	>1,500	-	-
Collector	-	-	2,500	>2,500	-	-
Arterial	-	-	5,000	>5,000	-	-
Major Two-Lane Highway (SR 99)	<1,200	1,210	2,910	7,910	16,010	20,510

Source: Biggs 2014

Table CIRC-3 of the Circulation Element summarizes the existing traffic counts (collected in November of 2008) and LOS on study roadways within the City of Biggs Planning Area. As exhibited in Table CIRC-3, the roadway sections bounding the Project Site to the north and south (West Rio Bonito Road and B Street) are within the LOS threshold accepted by the City (Biggs 2014).

As the Project does not propose the development of any businesses or residences that would increase the levels of traffic within the Project vicinity, it is acknowledged that there is a potential for such development in the future. As such, BEN|EN was charged with analyzing the current transportation and circulation conditions surrounding the Project Site, and to provide a summary of findings and recommendations for the Phase 1 component of the annexation of the Proposed Project Site to be incorporated into the limits of the City.

In order to address questions raised by the City, in regard to the two bordering roadways to the north and south of the Project Site (West Rio Bonito Road and B Street), BEN|EN has emphasized the need for a cross connection to provide a reasonable circulation pattern thru the Site. This collector class road with residential class road intersections raises a concern that locals would use this route as a short cut to circumvent longer or slower routes, thus raising the risk of vehicles traveling at high speeds through the Project Site. In order to inhibit or prevent these high speeds, a roundabout is recommended. The round-a-bout would be a good method of slowing traffic and providing access to other portions of the Project. The round-a-bout would be in lieu of standard stop-controlled intersections. Residential class roads would provide access to both the west and east portions divided by the collector road and accessed from the round-a-bout.

The Phase 1 annexation would require a traffic analysis to determine the round-a-bout configuration, the connection to West Rio Bonito Road to the north, and B Street to the south. The study would be developer-funded and would analyze the impacts and the potential need of signals and dedicated left and right-hand turn lanes out of and into the various sections of the Project Site.

In addition, future development within the Project Site would be required to conform with any City, state, or federal regulations, including the aforementioned General Plan policies and actions. For example, pursuant to General Plan Policy CIRC-1.3, developers would be obligated to pay Development Impact Fees to offset impacts to the City's circulation system. Furthermore, developers would be required to adhere to the design standards and impact fees associated with improvements to the City's Bicycle System (Policy CIRC-4.1) by implementing measures outlined in the City's BTP.

Future development within the annexation area may increase use of public transit in the area. The City currently has three bus stops within its limits for the Biggs/Gridley B-line Transit system. The closest bus stop to the Project Site is located on 6th Street, fronting City Hall, approximately 0.5 mile west of the Project Site. Development of the Project may require the addition of a bus stop to service any future Project residents. In the case that such an improvement becomes a necessity, pursuant to Action CIRC-5.1.1, the City would continue to maintain an active presence in regional transit planning activities and maintain an open dialogue channel with BCAG and neighboring communities with regard to enhancing the level of convenience of public transportation services within the City limits.

Lastly, consideration and implementation of Policy CIRC-4.3 would ensure ample pedestrian access throughout the annexation area and the surrounding land uses, including safe access to schools and recreation facilities in the Project vicinity. Specifically, consistency with Action CIRC-4.3.1 would continue the City's efforts in requiring detached sidewalks for new developments.

As such, the Project would have a less than significant impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐

Less than significant impact.

Senate Bill 743 was signed into law in 2013, with the intent to better align CEQA practices with statewide sustainability goals related to efficient land use, greater multimodal choices, and greenhouse gas reductions. The provisions of SB 743 become effective Statewide on July 1, 2020. Under SB 743, impacts will be determined by changes to Vehicle Miles Traveled (VMT). VMT measures the number and length of vehicle trips made on a daily basis. VMT is a useful indicator of overall land use and transportation efficiency, where the most efficient system is one that minimizes VMT by encouraging shorter vehicle trip lengths, more walking and biking, or increased carpooling and transit.

Because of SB 743, for a CEQA analysis, determining the potential for exceeding a City's LOS thresholds transportation/traffic impacts is no longer valid and VMT thresholds are used instead. However, the City of Biggs has not yet established VMT thresholds. In order to assist in this type of circumstance, in December 2018, the California Governor's Office of Planning and Research (OPR) released its final Technical Advisory on Evaluating Transportation Impacts in CEQA. Generally, OPR recommends that a reduction of 15 percent or more in existing VMT should be the target (OPR 2018). Below is a summary of OPR's recommended VMT impact thresholds and methodologies for land use projects:

Residential or Work/Office Projects – A proposed project exceeding a level of 85 percent of the existing regional VMT baseline per employee may indicate a significant transportation impact.

Retail Projects – A net increase in total VMT may indicate a significant transportation impact.

Other Projects – Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types. In developing thresholds for other project types, or thresholds different from those recommended here, lead agencies should consider the purposes described in section 21099 of the Public Resources Code and regulations in the CEQA Guidelines on the development of thresholds of significance (e.g., CEQA Guidelines, § 15064.7).

OPR's Technical Advisory lists the following screening thresholds for land use projects. These types of development projects are presumed to have a less than significant impact on vehicle miles traveled and therefore, a less than significant adverse impact on transportation. OPR's Technical Advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing.

- Projects that are consistent with the SCS or General Plan and generate or attract fewer than 110 daily trips.
- Mat-based screening for residential and office projects located in low VMT areas, and incorporate similar features (density, mix of uses, transit accessibility).

- Certain projects within 0.5 mile of an existing major transit stop or an existing stop along a high-quality transit corridor. However, this will not apply if information indicates that the project will still generate high levels of VMT.
- Affordable Housing Development in infill locations.
- Locally-serving retail projects, typically less than 50,000 square feet.
- Projects that can be expected to generate no more than 85 percent of the baseline VMT as compared to the average VMT in the Region (Butte County in the case of projects in the City of Biggs).

As indicated in OPR's Technical Advisory, lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within 0.5 mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:

- Has a FAR of less than 0.75
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
- Is inconsistent with the applicable SCS (as determined by the lead agency, with input from the Metropolitan Planning Organization)

If any of these exceptions to the presumption might apply, the lead agency should conduct a detailed VMT analysis to determine whether the project would exceed VMT thresholds. As indicated in section 2.1.1 above, the General Plan identifies the maximum commercial FAR. The FAR in the C land use destination is 0.25 to 0.70.

Additionally, the OPR's Technical Advisory states locally-serving retail projects, less the 50,000 square feet, would be considered to not result in a substantial increase in VMT's. According to the Technical Advisory, "[b]ecause new retail development typically redistributes shopping trips rather than creating new trips, estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts.

By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact. Regional-serving retail development, on the other hand, which can lead to substitution of longer trips for shorter ones, may tend to have a significant impact. Where such development decreases VMT, lead agencies should consider the impact to be less-than-significant."

The Proposed Project does not include the development of residential or retail construction projects. However, it is acknowledged that there is a potential for future development within the Project Site. As such, prior to any future development within the Project Site, a detailed VMT analysis would be required to show adequate reductions in VMT over existing baseline conditions. As the annexation area designated

with both residential and commercial land uses, the potential for locating residential land uses near commercial spaces is presented. Locating residential land uses in close proximity to commercial uses is an adequate strategy to reduce VMT. Any future retail development within the Project Site would be considered a local-serving retail development. Due to the size and location of the City of Biggs, many retail trips from residents are conducted in the larger metropolitan areas such as Chico, Oroville, or even Sacramento to the south. Increasing the diversity of retail space within the limits of the City would shorten trips and thus reduce VMT. Additionally, because potential future Project employees would come from Biggs and the surrounding area, there would be a potential to decrease VMT as Biggs currently is the not a major employment center in the area and as such, any future employees would, most likely, reside in the Biggs area, thus reducing the need for residents to take up employment outside of the City.

Furthermore, any future development within the Project Site would be required to comply with all local, state, and federal mandates regarding transportation and circulation impacts within, and surrounding the Project Site. Consistency with the City's General Plan, Municipal Code, adherence to any VMT analysis outcomes and accompanying mitigation measures would ensure a less than significant impact in this area. As the main driving force behind VMT analyses is to inevitably reduce GHG levels associated with proposed projects, and in turn reduce impacts on the climate, future development within the Project Site would be subject to GHG reduction measures. As stated in section 4.10 Greenhouse Gas Emissions above, the General Plan EIR determined that even with the General Plan policies and actions, the contribution to GHG emissions during construction would be cumulatively considerable. Since the Proposed Project is consistent with the General Plan land use designations for the Planning Area, the Proposed Project would not result in a greater impact to GHG emissions than those already identified in the General Plan EIR. As such, the Proposed Project's impact to GHG emissions, and in turn VMT, is less than significant as this contribution has been previously considered by the City. Thus, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐

Less than significant impact.

According to the engineering report conducted by BEN|EN, the installation of a cross connection roadway is necessary to provide a reasonable circulation pattern thru the Project Site. However, this connector road would have the potential to increase hazards in the Project vicinity by supplying a potential shortcut for locals to circumvent longer or slower routes. Therefore, a round-a-bout is recommended to dampen speeds on this potential connector route. Additionally, any future development withing the Project Site would be subject to applicable local, state, and federal regulations and design parameters. For example, the City's General Plan Policy CE-1.1 and accompanying actions aim to maintain the compact form of the

City's street system as a primary feature of the City's physical design. Congruently, adherence to Policy CE-1.3 would direct new development projects to incorporate the basic framework of the established street patterns into development design. Thus, this impact would be less than significant.

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Result in inadequate emergency access?	☐	☐	☒	☐

Less than significant impact.

As previously discussed, any new development within the Project Site would be required to comply with all local, state, and federal regulations regarding emergency access within the Site. A less than significant impact would occur.

4.16.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.17 Tribal Cultural Resources

4.17.1 Environmental Setting

The following information was provided in the Biggs General Plan Draft EIR (2013). Further information on tribal cultural resources is provided in Section 4.5.

Prior to the arrival of Euroamericans in the region, California was inhabited by groups of Native Americans speaking more than 100 different languages and occupying a variety of ecological settings. Kroeber (1925) subdivided California into four subculture areas: Northwestern, Northeastern, Southern, and Central. Biggs is located in the Central area within the boundaries of Konkow or Northwestern Maidu territory. Konkow or Northwestern Maidu occupied a territory both along the Sacramento River and east into the foothills of the Sierra Nevada in the vicinity of Willows, Chico, and Oroville. Konkow are members of the Maiduan Language Family of Penutian Stock. Their population was divided into several "village communities," which were recognized as autonomous political units. Subsistence activities included hunting, fishing, and the collecting of a variety of plant resources including acorns, which were a staple food source for the Konkow. Konkow made a variety of bone, wood, and stone tools and basketry (Bigs 2013).

4.17.2 Tribal Consultation

AB 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project 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.

In October 2021, as part of outreach for the Project pursuant to Assembly Bill 52 (AB 52), the City of Biggs sent letters to the Native American Tribes listed in subsection 2.1.2.3 informing them of the Project and offering an opportunity to consult about the potential for Tribal Cultural Resources to exist in the Project site. Tribal Cultural Resources may be synonymous with cultural resources. As of the publication of this Draft IS/MND, November 5, 2021, no responses from the tribes has been received.

As of March 1, 2005, Senate Bill (SB) 18 (Government Code Sections 65352.3 and 65352.4) requires that, prior to the adoption or amendment of a general plan proposed on or after March 1, 2005, a city or county must consult with Native American tribes with respect to the possible preservation of, or the mitigation of impacts to, specified Native American places, features, and objects located within that jurisdiction. In October 2021, the City of Biggs initiated the consultation process by sending letters to the tribes listed in subsection 2.1.2.3 informing them of the Project. As of the publication of this Draft IS/MND, November 5, 2021, no responses from the tribes has been received.

4.17.3 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☒	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Less than significant impact.

Because the Project is for the annexation of approximately 79 acres adjacent to the City of Biggs' eastern boundary and no actual development is proposed as a part of the Project, the Project, in and of itself, would not result in direct impacts to tribal cultural resources. However, indirectly the Project has the potential to affect Tribal Cultural Resources through any new construction and densities which would be possible under the new land use designations and zoning districts brought about because of the annexation. This future construction may uncover unknown tribal cultural resources. As such, future development has the potential to destroy and/or degrade known and unknown resources.

The City contacted Native American tribes within the area as a part of the AB 52 and SB 18 process.

The following General Plan policies and actions address cultural resources within the Project Area:

Policy CE-8.5 (Cultural Resources) – Protect and preserve archaeological and other cultural resources to serve as significant reminders of the City's heritage and values.

Action CE-8.5.1 Consult and require record searches for discretionary projects with the Northeast Center of California Historical Resources Information System (CHRIS) location at CSU Chico.

Action CE-8.5.2 Consult with and distribute environmental review documents to the Native American Heritage Commission through the State Clearinghouse.

General Plan Action CE-8.5.1 requires that future discretionary projects under the General Plan conduct record searches for with the Northeast Center of California Historical Resources Information System (CHRIS) location at CSU Chico. This was done as a part of the General Plan EIR process in 2013 and no known cultural resources were found within the General Plan Planning Area, which includes the Proposed Project Area. Additionally, Action CE-8.5.2 requires future development to consult with and distribute environmental review documents to the Native American Heritage Commission through the State Clearinghouse. Treatment options under California Public Resource Code (PRC) Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource). Future development in the Project Site would be required to adhere to CEQA on a project-by-project basis. In addition, CEQA Guidelines Section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission and/or tribe that would be the most probably descendent must be contacted within 24 hours. At that time, the City of Biggs, as the lead agency, must consult with the appropriate Native Americans, if any, as timely identified by the Native American Heritage Commission. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

For the reasons described above, this impact would be less than significant.

4.17.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.18 Utilities and Service Systems

4.18.1 Environmental Setting

4.18.1.1 *Water Service*

The City's water system is currently within the Biggs-West-Gridley Water District (BWGWD), which supplies domestic water to the City by two functioning groundwater wells, a 40,000-gallon elevated water tank, a network of 6" and 8" water mains, and a third "stand-by" groundwater well used during the rare occasions when the water demand has taxed the other two potable wells to their capacity (BEN|EN 2021). The City's division of drinking water district (District 21) was serving a population of 1,805 residents with 650 service connections as of 2016 (SWRCB 2016). The first functioning potable water well is located west of the Project Site at the Ninth Street/B Street intersection (nicknamed Bertha); the second potable groundwater well is located on Second Street, west of the Project Site (nicknamed Henry); with the third well located on C Street (nicknamed Willard). Both functioning wells are capable of conveying a combined total of 2,600 gpm at 40 psi or 2,000 gpm at 55 psi (Butte LAFCO 2015).

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 approximately 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 recommends that storage systems hold an average daily 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 (Michael Baker 2018).

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.

In 2015, water samples taken from the C Street well indicated levels of manganese and arsenic that exceed the US EPA Secondary Maximum Contaminant Levels (MCL) for manganese and Primary MCL for arsenic. The City evaluated its system at the time for improving the quality of water being supplied for domestic purposes and determined the C Street well be relocated to a location with an adequate source

of quality water. The new 1.5-million-gallon tank, booster station, and well would be located southwest of the Project Site on the northeast corner of a 40-acre parcel containing the City's new wastewater treatment effluent disposal ponds which were recently installed along the West Biggs Gridley Road just south of the City (BEN|EN 2020).

With the addition of the new well and tank, it is anticipated that only a supply network would be needed to serve the Proposed Project Annexation water network. Two water service connections would be required to serve the Project Site: one to the north at West Rio Bonito Road (an 8" water line is supposedly stubbed out here according to BEN|EN), and one to the south at B Street (a 6" line to the Community Center currently exists here). These would be tied together within the Project Site. The City network and new layout and line sizes would need to be analyzed and sized based on maximum demands. All studies and any upgrades and upsizing of the City existing water system, along with any new facilities, would be the responsibility of the developer and thus would impose minimal, if any, financial burden to the City (BEN|EN 2021).

4.18.1.2 *Wastewater*

The City is served by a gravity sewer system which flows to the wastewater treatment plant (WWTP) at the southwest edge of the City limits, approximately 0.40 mile west of West Biggs Gridley Road. The WWTP has a design capacity of 0.38 million gallons per day (mgd) of average dry weather flow, with a peak flow of 1.0 MGD. Past monitoring has indicated an average daily flow of 0.19 mgd from 2014-2018. For effluent discharges, the limitations for biochemical oxygen demand and total suspended solids are 30 milligrams per liter (mg/L [30-Day average]) and 45 mg/L (45-day average); limitations for total nitrogen is 50 percent reduction calculated monthly from influent and effluent samples (CVRWQCB 2020). According to the FMSR, the treatment plant operates at around 65 percent capacity (0.27 mgd) and can handle up to approximately 85 percent capacity (0.32 mgd) before the City will need to begin the process of planning for an expansion. The difference (0.32 mgd – 0.27 mgd) provides enough equivalent capacity to serve approximately 340 additional persons or 113 additional single-family homes (based on the 2014 average household size of 3.0 persons per household). The ultimate service capacity up to the permitted limit of 0.38 mgd allows the servicing of approximately 2,583 additional persons or an additional 248 single-family homes over the existing conditions (Butte LAFCO 2015).

Currently there is only one lift station located in the northeastern portion of the City at the intersection of J and Second Streets, which mainly services the North Biggs Estates subdivision. Total capacity of this lift station is unknown at this time. According to the engineering report for the Proposed Project, the City has an infiltration and inflow (I&I) issue that plagues the current conveyance system. Once the I&I is addressed, the system would have additional capacity and the annexation of Phase 1 of the Proposed Project would not be a burden on the treatment facility's capacity limits (BEN|EN 2021).

Recent upgrades to the WWTP were completed in 2020 and include improvements to the existing influent pump station; the addition of a new mechanical waste separation screen; improvements to the existing rock filter; improvements to the chlorine delivery system; and improvements to the electrical power and controls for the treatment plant (Phase 1 of the treatment plant upgrade project). Additionally, as part of the WWTP improvements, the City annexed 160 acres of land for the conversion of the facility's discharge

system from a surface-discharge to a treated effluent land disposal facility (Phase 2). The City is currently discharging secondary treated effluent to a city owned land application area (LAA). Rotational fodder crop will be grown in the 103-acre LAA, which is separated into six check basins, and be either bailed and transported off site for beef cattle feed or used as irrigated pasture for beef cattle grazing. Associated infrastructure for Phase 2 of the WWTP project included an effluent pump station to support movement of the treated wastewater to the land disposal site; modifications to the irrigation, tail water, aeration system and chemical systems; and minor modifications to the existing facility controls (PMC 2013).

4.18.1.3 *Storm Drainage*

The City of Biggs is the sole operator of developed stormwater drainage facilities in the City. Reclamation District 833 (RD 883) also operates and manages the agricultural tailwater and slough system running through and around the City. Local RD 833 drainage ditches (Hamilton Slough and Lateral K) are occasionally subject to backup conditions due a lack of downstream discharge waterways that are also used by the State of California for flood control purposes. While RD 833 owns and operates discharge lands in the Butte Sink area for the discharge of water, the facilities contain inadequate capacity to accommodate full system discharges during large-scale storm events where outfall to state facilities is otherwise already impacted (Biggs 2013).

The City's storm drainage conduit system is comprised of 12, 15, 18 and 24 inches in diameter conduits on the east side of the City. The conduits are larger on the west side due to the natural slope of the City Streets and range from 24 inches to 36 inches in diameter. There are several smaller lines servicing individual parcels, however these are not part of the City main line drainage system. At the intersection of B and First Streets lies a 12-inch stub extending 113 feet to the east and terminating on the south side of B Street at a drainage inlet, and eventually outflowing into the Hamilton Slough to the south. At the intersection of West Rio Bonito Road and Second Street lies is a storm drain manhole and conduit system which terminates at a City-maintained ditch on the east side of Second Street and north of West Rio Bonito and eventually ties to the North Biggs Estates drainage system (currently at maximum capacity).

At present, only one main Reclamation Ditch exists (Hamilton Slough), located south of the Project Site beyond B Street. The Slough crosses B Street near the mid-point from First Street to Highway 99. Along B Street and south of the Project Site are shallow roadside ditches, and in some locations, there are no discernable ditches. It is assumed that in these areas, during storm events, the runoff infiltrates into the natural ground or ponds for short periods of time before flowing to the sloughs or roadside ditches. The roadside ditches east of the City Community Hall on B Street are in the County's jurisdiction. The ditches are more functional along West Rio Bonito Road, north of the Project Site. However, trees have grown in the flow lines and the ditches have all but vanished on the south side of West Rio Bonito Road. On the north side of West Rio Bonito Road is a well-maintained ditch that runs the length of the Project Site boundary, with culverts under the existing driveways for conveyance purposes (BEN|EN 2021).

4.18.1.4 *Solid Waste*

The City of Biggs regulates waste collection and recycling services in Biggs via an exclusive franchise agreement with Waste Management, Inc. The City is a member of the Butte Regional Waste Management

Authority (BRWMA). The function of the BRWMA is to provide planning and waste reporting services for its members. Solid waste generated in the City is primarily disposed of at the Neal Road Recycling and Waste Facility (operated and owned by Butte County). The facility is located on 229 acres at 1023 Neal Road, 1 mile east of State Route 99 in unincorporated Butte County and located 18 miles north of the City of Biggs. Table 4.20-1 shows yearly solid waste disposal totals for Butte County (including BRWMA, Chico, Oroville, and Paradise as these origin locations contribute to the total county-wide solid waste disposed at the Neal Road Recycling and Waste Facility), and the corresponding solid waste diversion rates county-wide.

Table 4.20-1. Yearly Solid Waste Disposal Totals for Butte County

Butte County Origin Location	Solid Waste Disposal (tons/year)			Solid Waste Diversion Rate for Residents (pounds/day)		
	2017	2018	2019	2017	2018	2019
Butte County Regional Waste Management Authority (including City of Biggs)	97,635	89,061	701,594	5.8	5.4	5.0
Chico	81,483	77,919	88,195	4.9	4.8	4.4
Oroville	22,413	24,040	23,035	6.8	7.3	5.8
Paradise	21,693	15,826	1,005,239	4.5	3.3	3.5
Butte County Total	**223,224**	**206,846**	**1,818,063[1]**	*	*	*
Neal Road Landfill Design Capacity (1,500 tons/day)	**547,500**	**547,500**	**547,500**	*	*	*

Source: CalRecycle 2020a, 2020b, and 2020c, Neal Road Landfill Solid Waste Facility Permit (Butte County 2016).
Note: [1] Solid waste disposal quantities for this period reflect waste generated during the Camp Fire event, and do not reflect typical waste generation amounts during a normal year.
* = Insufficient data available.

4.18.1.5 *Electricity/Natural Gas Services*

Refer to Section 4.6. Energy.

4.18.2 Utilities and Service Systems (XIX) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐

Less than significant impact.

Water

Development of the Project would increase the demand for water in the City due to human consumption and irrigation required for landscaping. As previously stated, the Project Site lies within the BWGWD for potable water services. The Proposed Project does not include residential or commercial construction components. However, it is acknowledged that there is a potential for future development within the Project Site. In order to provide water for future residents and irrigation management, two water service connections would be required to serve the Proposed Project, one to the north within West Rio Bonito Road and the other to the south within B Street. These connections would be tied together within the Project Site. The City network and new layout and line sizes would need to be analyzed and sized based on maximum demands. Water utility connections and on-site infrastructure would be subject to the City of Biggs Municipal Code, Chapter 10.10, Water System, as well as compliance with the following City General Plan policies and actions.

Policy PFS-1.1 (Development Impact Fees) – Maintain a development fee system that ensures infrastructure improvements necessary to serve new development are paid for by the new development.

Action PFS-1.1.1 (Impact Fee Program) – Periodically review the city's Development Impact Fee Program to ensure fees are equitable and appropriate to cover the costs of providing services.

Action PFS-1.1.5 (Oversizing of Infrastructure) – Development projects benefitting from oversized facilities shall be required to pay reimbursement fees consistent with their fair-share cost of improvements.

Action PFS-1.1.7 (Water System Capacity) – New developments shall provide or show that sufficient water supply capacity is available to serve the domestic and fire protection needs of the proposed use based on approved city standards.

Policy PFS-1.2 (Infrastructure Timing) – Ensure the development of quality infrastructure to meet community needs at the time they are needed.

Policy PFS-1.3 (Infrastructure Installation) – Construction of oversized or offsite facilities may be required of development projects to provide capacity for future development.

Policy PFS-1.4 (Infrastructure Demand) – Prior to approval of new development projects, applicants shall specify project-related demands for sewer, water, and electrical services. Project approval shall be granted only after capacity to provide required services is confirmed by 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.

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.

The Proposed Project does not include residential or commercial construction components. However, it is acknowledged that there is a potential for future development within the Project Site. Potential population growth for the Project Site, if developed at the maximum allowable levels based on current City and County land use designations, is projected to reach 1,235 additional residents to the City, with an additional 479 dwelling units (see Table 2.1-4 above). Water use data for the Proposed Project was obtained from rates provided by the USGS Water Resources, which provides water consumption information based on type of use by state. According to the USGS Water Resources database, the County domestic water consumption rate for the year 2015 was 88 gallons per day (USGS 2018). Based on the 2019 domestic usage per capita, and the projected 1,235 additional residents accompanying the potential future development of the Proposed Project, the Project is estimated to generate approximately 108,680 gallons per day, or 39.7 MG per year.

Additionally, as shown in Table 2.1-2 above, the Proposed Project contains approximately 2.8 acres of land designated as Commercial use. Using a 0.70 FAR, the total square footage of commercial space allotted would be 85,377 square feet. According to the U.S. Energy Information Administration (EIA), data collected in 2012 for large commercial buildings in the country (most accurate information provided for comparison purposes) showed an average of approximately 20 gallons per square foot. However, as stated, these data sets are for large commercial buildings, including inpatient healthcare which is the largest consumer of water for commercial/industrial uses. Large office buildings for example use roughly 15 gallons per square foot. Also, important to note is that these "large" buildings are 200,000 square feet or larger. As previously mentioned, the Proposed Project would supply approximately 85,377 square feet of commercial space.

Given the average usage of 20 gallons per square feet as a conservative estimate, the Proposed Project Site would require an additional 1,707,540 gallons per year. This equates to approximately 4,678 gallons per day, assuming 365 days per year (this number would most likely decrease as most businesses are not open 365 days per year due to holidays).

As previously mentioned, with the addition of the new well and tank, it is anticipated that only a supply network would be needed to serve the Proposed Project Annexation water network. Two water service connections would be required to serve the Site, one to the north at W. Rio Bonito Road and one to the south at B Street. These would be tied together within the Phase 1 area. The City network and new layout and line sizes would need to be analyzed and sized based on maximum demands. All studies and any upgrades and upsizing of the City existing water system, along with any new facilities, would be the responsibility of the developer and thus would impose minimal, if any, financial burden to the City (BEN|EN 2021).

While it cannot be unerringly predicted how much water will be needed to serve future uses in the Project area, the City determined that future development in the Project Site would not result in a need for new or expanded water treatment facilities beyond those existing, and including the new well, booster station, and storage tank. Additionally, all development projects within the confines of the City are subject to the aforementioned General Plan policies and actions including, but not limited to, Policy PFS-1.1 which imposes impact fees on developers to support any additional infrastructure needs associated with any future water demands accompanied by potential future residents to the Project Site. Therefore, the Proposed Project would have a less than significant impact to the City's water supply facilities.

Wastewater

As previously discussed, the City WWTP has a design capacity of 0.38 million gallons per day (mgd) of average dry weather flow, with a peak flow of 1.0 MGD. Past monitoring has indicated an average daily flow of 0.19 mgd from 2014-2018. According to the FMSR, the treatment plant operates at around 65 percent capacity (0.27 mgd) and can handle up to approximately 85 percent capacity (0.32 mgd) before the City will need to begin the process of planning for an expansion. The difference (0.32 mgd – 0.27 mgd) provides enough equivalent capacity to serve approximately 340 additional persons or 113 additional single-family homes (based on the 2014 average household size of 3.0 persons per household). The ultimate service capacity up to the permitted limit of 0.38 mgd allows the servicing of approximately 2,583 additional persons or an additional 248 single-family homes over the existing conditions (Butte LAFCO 2015).

According to the engineering report for the Proposed Project, the City has an I&I issue that plagues the current conveyance system. Once the I&I is addressed, the system would have additional capacity capable of handling the demand of up to 2,583 additional persons at its ultimate service capacities (BEN|EN 2021). Additionally, the Project would be subject to any impact fees as discussed in the General Plan Policy PFS-1.1 which would offset any additional burden that the Proposed Project would impose on the City's current wastewater capacities. Furthermore, implementing Action PFS-1.1.13 would support the City's program for inspecting, maintaining, and replacing deteriorated or deficient sewer lines, thus ensuring any additions to the current system would have adequate conveyance lines from the Project Site to the

WWTP. As such, the Proposed Project would have a less than significant impact to the City's wastewater treatment facilities.

Storm Drainage

The Proposed Project has the potential to increase the amount of impervious surfaces within the Project Site, resulting in greater stormwater runoff potential. Although the Project does not propose development within the Project Site, it is assumed that future development would occur, thus requiring development of a storm water drainage system. The following General Plan policies and actions address impacts related to storm water drainage within the Project Site:

Policy CR-5.3 (Best Management Practices) – Require the use of design techniques and best management practices to reduce storm water runoff levels, improve infiltration to replenish groundwater sources, and reduce pollutants close to their source.

Action CR-5.3.1 (Improvement Standards) – Revise improvement standards as necessary to encourage use of natural drainage systems and low impact development principles in order to reduce storm water infrastructure costs and improve water quality. Emphasize the dispersal of storm water by using swales, the use of landscaped infiltration basins along roadways and parking areas, and other best management practices, as appropriate.

Action CR-5.3.2 (Improvement Standards) – Establish standards and fee programs to require and/or incentivize methods to manage and filter storm water, such as reduced pavement, permeable pavement, and retention and filtration through vegetation.

Policy PFS-1.2 (Infrastructure Timing) – Ensure the development of quality infrastructure to meet community needs at the time that they are needed.

Policy PFS-1.3 (Infrastructure installation) – Construction of oversized or off-site facilities may be required of development projects to provide capacity for future development.

Action PFS-4.1.1 (Storm Drainage Discharge) – Adopt best management practices for the discharge of storm water that address water quality and water standards.

Action PFS-4.1.2 (Storm Drainage Retention) – Coordinate city policies and standards for the retention or detention of storm water with regional flood control providers.

Policy PFS-4.3 (Storm Drainage Standards) – Adopt storm drainage standards compatible with the ability of receiving waters to accommodate storm water drainage and consistent with recognized standards.

Action PFS-4.3.1 (Storm Drainage Consultation) – Consult with Reclamation District 833 to resolve drainage and flooding issues which result from storm drainage flows originating in the City.

Action PFS-4.3.2 (Storm Drainage Coordination) – Coordinate efforts for developing short-term and long-term flood protection strategies in consultation with Reclamation District 833.

Policy PFS-4.4 (Aquifer Protection) – Protect the quality of water runoff that enters receiving surface waters and drainage facilities.

Action PFS-4.4.1 (Storm Drainage Management) – Continue to require the development of Storm Water Management Plans (SWMP) to address storm water discharge quality issues.

Because the City of Biggs does not have a storm water drainage system for the entire City, storm water from the Project Site would need to drain to an existing ditch or irrigation canal. According to BEN|EN (charged with designing the water infrastructure plan for the Proposed Project), the Project Site would be required by the RD and City to have a no-net positive increase in post-development flows from the pre-development levels. The Project does not include any actual development of impervious surfaces that would increase the amount of stormwater runoff. Roadways and development would increase the amount of impervious surface within the Project Site however, all new development would be obligated to be consistent with the RD and City no-net positive increase in flows requirement.

Additionally, any future development within the Project Site, and associated developer(s), would be responsible for constructing the necessary infrastructure to comply with this RD requirement. Possible solutions to ensure a no-net positive increase to the existing drainage flows include a centralized detention basin that could function as a multi-use facility, or a series of smaller basins located at strategic points within the developed Project Site (BEN|EN 2021). Although development in the Project Site is not included in the Proposed Project, future development would be required to comply with the above General Plan policies and actions and mitigate accordingly in order to reduce impacts on the existing storm water drainage system. Thus, this impact is considered less than significant.

Electric Power

Refer to Section 4.6. Energy.

Natural Gas

Refer to Section 4.6. Energy.

Telecommunications

Telecommunication will be through existing company and personal cell phones. No new telecommunication facilities will be required to serve the Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐

Less than significant impact.

Refer to Item a) above. The Project will have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Less than significant impact.

Refer to Item a) above. The Project will have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐

Less than significant impact.

The Project proposes the annexation of land to incorporate into the City limits and does not include the construction of residences or businesses. However, it is assumed that future development in the Project Site would occur and therefore a discussion of solid waste generation for future development was considered in this study.

As described in the Project Description Section 2.1 above, the maximum number of residential units possible for the Project Site would be 441 within the LDR land use designation, and 38 units within the MDR land use designation. The Project Site would also accommodate 85,377 square feet of commercial

space use based on the General Plan land use designation of C. According to CalEEMod, a CARB-approved computer program designed to model emissions associated with land use development projects – including the above parameters for future maximum buildout within the Project Site – the developed Site would potentially generate an estimated 79.05 tons of solid waste from the estimated commercial land use area and 482.76 tons from residential units annually (see Attachment 4.6).

According to the Neal Road Recycling and Waste Facility *Solid Waste Permit* (Butte County 2016), the maximum tonnage allotted to the facility is 1,500 tons per day. The facility is open 7 days per week, thus allowing for a total of 547,500 tons of solid waste to be disposed annually. According to CalRecyle, Butte County averaged 190,313 tons of solid waste disposed between the years 2009-2018, with the BRWMA averaging 18,883 tons annually (CalRecycle 2020a). It is important to note that year 2019 (most recent year with solid waste disposal data) was not included in this study due to its outlying nature: being the year in which the majority of waste generated during the Camp Fire event was disposed of at the Neal Road Facility. Given the aforementioned data, the potential future development of the Project Site would have a 0.30 percent increase over the countywide average annual disposal of solid waste, and a 3.0 percent increase over the BRWMA. The estimated 561.81 annual tons of solid waste generated at the maximum buildout potential of the Project Site would represent 0.10 percent of the permitted annual maximum tonnage allotted to the Neal Road Recycling and Waste Facility and would not result in a determination of insufficient capacity. As such, this is a less than significant impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Comply with federal, state, and local statutes and management and reduction regulations related to solid waste?	☐	☐	☒	☐

Less than significant impact.

All future development of the Proposed Project would be required to comply with all state and federal statutes regarding solid waste. This impact is considered less than significant.

4.18.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.19 Wildfire

4.19.1 Environmental Setting

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (e.g., winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area-to-mass ratio

and require less heat to reach the ignition point, while fuels such as trees have a lower surface area-to-mass ratio and require more heat to reach the ignition point.

The Project Site is relatively flat and dominated by vacant undeveloped land. As discussed in Section 4.16, the area is not designated as a VHFHSZ (Cal-Fire 2008).

4.19.2 Wildfire (XX) Environmental Checklist and Discussion

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

No impact.

The Project Site is not in an area designated by Cal-Fire as a VHFHSZ. Furthermore, no Very High FHSZs are located nearby. Also, the Project Site is not located in a state responsibility area (SRA [Cal-Fire 2008]). The Project would have no impact in this area.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒

No impact.

Refer to Item a) above. The Project will have no impact in this area.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒

No impact.

Refer to Item a) above. The Project will have no impact in this area.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

The Project Site and the City of Biggs is surrounded by agricultural land on the valley floor and therefore has minimal to no sloping that could cause downslope or downstream complications associated with post-fire slope instability or drainage changes. Thus, the Project would have no impact in this area.

4.19.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.20 Mandatory Findings of Significance

Mandatory Findings of Significance (XXI) Environmental Checklist and Discussion

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐

Less than significant impact.

The Proposed Project only includes the annexation of 73-acres by the City of Biggs. No development or other construction is proposed with this annexation. The City's General Plan policies and development standards would assist in the reduction of possible future impacts to biological and cultural resources. All large future development projects would be required to undergo CEQA analysis on a project by project basis when that project is proposed. For those projects that may not be required to undergo CEQA analysis, the City's General Plan policies requiring biological resources analysis (Policies CR-3.1, CR-4.1 and

CR 4.2) and culture resources analysis (Policy CE 8.5 and Actions CE-8.5.1 and CE 8.5.2) would identify and reduce, through mitigation if necessary, the potential for impacts to these resources. The Project would have a less than significant impact in this area.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐

Less than significant impact.

While the Proposed Project would not include any development or construction, approval of the Proposed Project, would allow development at levels not currently allowed in the area. This, in conjunction with other approved or pending, or future projects in the region, has the potential to result in cumulatively considerable impacts to the physical environment. However, compliance with the City's General Plan policies and actions, as well as development standards required by the City would reduce these potential impacts to a level that is considered less than significant.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Less than significant impact.

Direct and indirect impacts to human beings would be less than significant. As explained under item a) above, the Proposed Project would not include any development or construction. All future projects would be required to comply with the General Plan policies and actions, as well as development standards required by the City. These requirements would reduce the potential for impacts from future development to a level that is considered less than significant. As such, the Project has a less than significant impact in this area.

THIS PAGE INTENTIONALLY LEFT BLANK

5.0 LIST OF PREPARERS

The City of Biggs
Lead Agency

Mark Sorensen, City Manager

Bob Summerville, City Planner

ECORP Consulting, Inc.
CEQA Documentation/Air Quality/ Greenhouse Gas/Noise

Scott Friend, AICP, Project Manager

Mike Martin, Senior Environmental Planner

Seth Myers, Air Quality/GHG & Noise Director

Collin Crawford-Martin, Assistant Environmental Planner

Laura Hesse, Technical Editor

THIS PAGE INTENTIONALLY LEFT BLANK

6.0 BIBLIOGRAPHY

ANSI. 2013. Standard 12.9-2013/Part 3: Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-Term Measurements with an Observer Present.

Bennett Engineering. 2021. DRAFT Engineers Report for the City of Biggs Annexation Phase 1. August 23, 2021.

_____. 2020. Quarterly Report to the State Water Resources Control Board for the City of Biggs WWTP Upgrades – Phase 2

Biggs, City of. 2021. Biggs Unified School District. Copyright 2019 – 2021. https://www.biggs.org/

_____. 2020. City of Biggs official website. Butte County Sheriff. Updated July 1, 2020. https://www.biggs-ca.gov/City-Services/Public-Safety/Butte-County-Sheriff/index.html_____. 2013. Biggs General Plan Draft Environmental Impact Report. October 2013. https://www.biggs-ca.gov/City-Services/Applications--Documents/index.html.

_____. 2019. City of Biggs. City Services – Parks. https://www.biggs-ca.gov/City-Services/Public-Works/Parks/index.html

_____. 2014. City of Biggs General Plan. Adopted April 8, 2104. https://www.biggs-ca.gov/City-Services/Applications--Documents/index.html.

_____. 2013. City of Biggs General Plan DRAFT Environmental Impact Report.

_____. 2010. *City of Biggs General Plan Existing Conditions Report*.

Butte County. 2021. Butte County Parcel Lookup Tool. https://www.buttecounty.net/dds/Planning/Documents/Parcel-Lookup-Tool.

_____. 2016. Neal Road Landfill Solid Waste Facility Permit.

_____. 2015. Williamson Act Parcels 2015/2016. Date Printed August 2015. https://www.buttecounty.net/Portals/10/Planning/SFS/CLCA_Map_2015.pdf.

_____. 2012 Butte County 2030 General Plan. Amended November 6, 2012. https://www.buttecounty.net/dds/Planning/General-Plan/Chapters.

Butte LAFCO. 2015. Butte Local Agency Formation Commission – Final Municipal Service Review Update and Sphere of Influence Plan for the City of Biggs. Adopted December 2015.

CAL FIRE. 2009. Very High Fire Hazard Severity Zones in LRA. https://osfm.fire.ca.gov/media/6001/Biggs.pdf.

CalRecycle. 2020a. Multi-year Countywide Origin Summary. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Origin/CountywideSummary.

_____. 2020b. SWIS Facility/Site Search. https://www2.calrecycle.ca.gov/SWFacilities/Directory/.

_____. 2020c. Jurisdiction Review Reports-Jurisdiction Per Capita Disposal Trends https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports.

_____. 2019. Jurisdiction Diversion/Disposal Rate Summary. https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006

Caltrans. 2021. Scenic Highway System Lists. May 2021. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

_____. 2020. Transportation- and Construction-Induced Vibration Guidance Manual. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf.

_____. 2002. California Airport Land Use Planning Handbook.

CARB. 2019. Maps of State and Federal Area Designations. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations

_____. 2017. EMFAC2017 Web Database Emissions Inventory. https://www.arb.ca.gov/emfac/2017/.

CDFW. 2021. Special Animals, List April 2021. file:///C:/Users/mmartin/Downloads/CNDDB_Special_Animals_List.pdf

CEC. 2019. California Energy Consumption Data Management System. Website: Electricity and Natural Gas Consumption by County. http://www.ecdms.energy.ca.gov/.

CGS. 2020. Liquefaction Zones. https://maps.conservation.ca.gov/DataViewer/index.html

_____. 2016. Earthquake Shaking Potential for California [map]. https://maps.conservation.ca.gov/geologichazards/#dataviewer.

_____. 2011. Regional Geologic Hazards and Mapping Program - Table 4 Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of January 2010. http://www.trpa.org/documents/rseis/3.7%20Geo%20soils/3.7_CGS%202010_Cities%20and%20Counties.pdf.

_____. 2002. California Geomorphic Provinces Note 36. http://www.americangeosciences.org/sites/default/files/earthcomm-edg-ca-c1a6q2r1.doc.

CVRWQCB. 2020. California Regional Water Quality Control Board – Central Valley Region. *Waste Discharge Requirements* Order R5-2020-0008. Certified 20 February 2020.

DOC. 2021. Division of Land Resource Protection . Important Farmland Finder. Available at: http://maps.conservation.ca.gov/ciff/ciff.html.

DOF. 2021. E-5 City/County Population and Housing Estimates, 1/1/2021. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/.

DMR. 2021. Mines Online. June 16, 2021. http://maps.conservation.ca.gov/mol/index.html.

DOSD. 2021. Dam Breach Inundation Map Web Publisher. https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2.

DTSC. 2021. Hazardous Waste and Substance Site List. https://www.envirostor.dtsc.ca.gov/public/.

DWR. 2021a. DWR Atlas, Hydrologic Regions. https://atlas-dwr.opendata.arcgis.com/datasets/2a572a181e094020bdaeb5203162de15_0/explore?location=35.740271%2C-119.618251%2C7.41

_____. 2021b. Daily Statewide Hydrologic Update. June 13, 2021. https://cdec.water.ca.gov/floodER/hydro/.

_____. 2021b. SGMA Data Viewer. https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels.

_____. 2021c. GSA Map Viewer. https://sgma.water.ca.gov/webgis/index.jsp?appid=gasmaster&rz=true.

_____. 2014. Northern Sacramento Valley Integrated Regional Water Management Plan. March 2014. http://www.buttecounty.net/wrcdocs/planning/IRWM/NSVIRWMPlan_2020_Update.pdf

_____. 2004a. California's Groundwater Bulletin 118: 2004. Sacramento Valley Groundwater Basin, East Butte Subbasin. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/5_021_59_EastButteSubbasin.pdf.

_____. 2004b. California's Groundwater Bulletin 118: 2004. Sacramento Valley Groundwater Basin, West Butte Subbasin. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/5_021_58_WestButteSubbasin.pdf

FEMA. 2011. FIRM Flood Insurance Rate Map. Map No. 06007C0975E. https://msc.fema.gov/portal/search?AddressQuery=Biggs%20ca#searchresultsanchor

FHWA. 2011. Effective Noise Control During Nighttime Construction. http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder_paper.htm.

_____. 2006. Roadway Construction Noise Model.

FTA. 2018. Transit Noise and Vibration Impact Assessment. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

HMMH. 2006. Transit Noise and Vibration Impact Assessment, Final Report.

Jennings, C.W., Strand, R.G., Rogers, T.H., Boylan, R.T., Moar, R.R., and Switzer, R.A., 1977. Geologic Map of California: California Division of Mines and Geology, Geologic Data Map 2, scale 1:750,000.

Kyle, Douglas. 2002. Historic Spots in California. Stanford University Press. Stanford, California.

Michael Baker. 2018. City of Biggs – Biggs Water Tank Project. CEQA-Plus Initial Study/Mitigated Negative Declaration. October 2018.

NOAA. 2021. Data Tools: 1981-2010 Climate Normals. Available Online: https://www.ncdc.noaa.gov/cdoweb/datatools/normals. Accessed January 2021.

NPS. 2021. National Register of Historic Places, Digital Archive on NPGallery https://npgallery.nps.gov/NRHP/BasicSearch/. Accessed January 12, 2021.

NRCS. 2021. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/.

OHP. 2021. Office of Historic Preservation California Historical Landmarks Website. http:// https://ohp.parks.ca.gov/?page_id=21391, accessed January 12, 2021.

_____. 1996. California Historical Landmarks. California Department of Parks and Recreation, Sacramento, California.

OPR. 2018. Office of Planning and Research. Technical Advisory on Evaluating Transportation Impacts in CEQA. https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf

PMC. 2013. City of Biggs – Biggs Waste-Water Treatment Plan Enhancement Project. Final Environmental Impact Report. December 2018.

SFEI. San Francisco Estuary Institute. 2017. "California Aquatic Resource Inventory (CARI) version 0.3." Accessed June 4, 2021. http://www.sfei.org/data/california-aquatic-resource-inventory-cari-vers...

SVAQEEP (Sacramento Valley Air Quality Engineering and Enforcement Professionals) 2015. *Northern Sacramento Valley Planning Area: 2015, Triennial Air Quality Attainment Plan*.

SWRCB. 2021. Geotracker. http://geotracker.waterboards.ca.gov.

UCMP. 2021. UCMP Locality Search. Available online at: https://ucmpdb.berkeley.edu/loc.html.

_____. 2016. State Water Resources Control Board – Division of Drinking Water. *Technical, Managerial, Financial Assessment Funding Application for the City of Biggs*. Water System # 0140001.

USGS. 2021a. Areas of Land Subsidence in California. Accessed June 9, 2021. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html.

_____. 2021b. Mineral Resource Data System. June 16, 2021. . https://mrdata.usgs.gov/mrds/map-graded.html#home.

_____. 2018. Water Use Data for California. https://waterdata.usgs.gov/ca/nwis/water_use?format=html_table&rdb_compression=file&wu_area=County&wu_year=2015&wu_county=007&wu_category=DO&wu_county_nms=Butte%2BCounty&wu_category_nms=DomesticWeather Atlas. 2021. Monthly weather forecast and climate. Biggs, CA. https://www.weather-us.com/en/california-usa/biggs-climate#temperature

WEAL. 2000. Sound Transmission Sound Test Laboratory Report No. TL 96-186.

7.0 ATTACHMENTS

Attachment 4.6 – Energy Consumption Outputs

Attachment 4.18 – DRAFT Engineers Report for the City of Biggs Annexation Phase 1, August 23, 2021

Attachment 4.6 – Energy Consumption Outputs

Biggs Annexation- Phase 1

Butte County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	85.00	1000sqft	2.80	85,000.00	0
Single Family Housing	469.00	Dwelling Unit	76.65	844,200.00	1341

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Biggs City Electric Utility is the sole provider of electric power to the City however is not included in CalEEMod. PG&E used are they provide gas to the City and electricity to many surrounding areas.

Land Use - Office park used to model commercial land uses. 479 dwelling units allowed for future development. 469 modeled to account for the 10 existing homes in the annexation area. Lot acreage updated to match info in the PD.

Construction Phase - No construcion. Model run being done to calculate operational energy consumption.

Off-road Equipment - Model run being done for operations only.

Trips and VMT - Model run being done for operations only

Woodstoves - No wood stoves or fireplaces being proposed.

Energy Use -

Biggs Annexation- Phase 1 - Butte County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	110.00	0.00
tblConstructionPhase	PhaseEndDate	6/5/2029	1/2/2029
tblFireplaces	FireplaceDayYear	150.00	0.00
tblFireplaces	FireplaceHourDay	3.67	0.00
tblFireplaces	FireplaceWoodMass	5,158.40	0.00
tblFireplaces	NumberGas	201.67	0.00
tblFireplaces	NumberNoFireplace	84.42	0.00
tblFireplaces	NumberWood	182.91	0.00
tblLandUse	LotAcreage	1.95	2.80
tblLandUse	LotAcreage	152.27	76.65
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	39.00	0.00
tblWoodstoves	NumberCatalytic	42.21	0.00
tblWoodstoves	NumberNoncatalytic	42.21	0.00
tblWoodstoves	WoodstoveDayYear	150.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1531	0.0402	3.4839	1.8000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	5.6899	5.6899	5.4700e-003	0.0000	5.8268
Energy	0.0766	0.6599	0.3202	4.1800e-003		0.0529	0.0529		0.0529	0.0529	0.0000	2,241.2973	2,241.2973	0.0816	0.0278	2,251.6130
Mobile	2.0578	15.0990	22.9664	0.0849	5.7510	0.0696	5.8206	1.5477	0.0654	1.6131	0.0000	7,855.1206	7,855.1206	0.5236	0.0000	7,868.2109
Waste						0.0000	0.0000		0.0000	0.0000	114.0424	0.0000	114.0424	6.7397	0.0000	282.5351
Water						0.0000	0.0000		0.0000	0.0000	14.4873	100.9242	115.4115	1.4926	0.0361	163.4766
Total	**7.2874**	**15.7991**	**26.7705**	**0.0893**	**5.7510**	**0.1418**	**5.8928**	**1.5477**	**0.1376**	**1.6853**	**128.5296**	**10,203.0319**	**10,331.5616**	**8.8430**	**0.0639**	**10,571.6624**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1531	0.0402	3.4839	1.8000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	5.6899	5.6899	5.4700e-003	0.0000	5.8268
Energy	0.0766	0.6599	0.3202	4.1800e-003		0.0529	0.0529		0.0529	0.0529	0.0000	2,241.2973	2,241.2973	0.0816	0.0278	2,251.6130
Mobile	2.0578	15.0990	22.9664	0.0849	5.7510	0.0696	5.8206	1.5477	0.0654	1.6131	0.0000	7,855.1206	7,855.1206	0.5236	0.0000	7,868.2109
Waste						0.0000	0.0000		0.0000	0.0000	114.0424	0.0000	114.0424	6.7397	0.0000	282.5351
Water						0.0000	0.0000		0.0000	0.0000	14.4873	100.9242	115.4115	1.4926	0.0361	163.4766
Total	**7.2874**	**15.7991**	**26.7705**	**0.0893**	**5.7510**	**0.1418**	**5.8928**	**1.5477**	**0.1376**	**1.6853**	**128.5296**	**10,203.0319**	**10,331.5616**	**8.8430**	**0.0639**	**10,571.6624**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/3/2029	1/2/2029	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,709,505; Residential Outdoor: 569,835; Non-Residential Indoor: 127,500; Non-Residential Outdoor: 42,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Architectural Coating - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.0578	15.0990	22.9664	0.0849	5.7510	0.0696	5.8206	1.5477	0.0654	1.6131	0.0000	7,855.1206	7,855.1206	0.5236	0.0000	7,868.2109
Unmitigated	2.0578	15.0990	22.9664	0.0849	5.7510	0.0696	5.8206	1.5477	0.0654	1.6131	0.0000	7,855.1206	7,855.1206	0.5236	0.0000	7,868.2109

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	970.70	139.40	64.60	2,373,195	2,373,195
Single Family Housing	4,464.88	4,647.79	4042.78	13,004,276	13,004,276
Total	5,435.58	4,787.19	4,107.38	15,377,472	15,377,472

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	10.52	10.52	10.52	33.00	48.00	19.00	82	15	3
Single Family Housing	12.54	7.22	7.22	35.00	17.00	48.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Office Park	0.536621	0.031900	0.176387	0.109893	0.028679	0.005751	0.018192	0.081833	0.001567	0.001354	0.005498	0.001215	0.001111
Single Family Housing	0.536621	0.031900	0.176387	0.109893	0.028679	0.005751	0.018192	0.081833	0.001567	0.001354	0.005498	0.001215	0.001111

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,483.6156	1,483.6156	0.0671	0.0139	1,489.4289
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,483.6156	1,483.6156	0.0671	0.0139	1,489.4289
NaturalGas Mitigated	0.0766	0.6599	0.3202	4.1800e-003		0.0529	0.0529		0.0529	0.0529	0.0000	757.6816	757.6816	0.0145	0.0139	762.1842
NaturalGas Unmitigated	0.0766	0.6599	0.3202	4.1800e-003		0.0529	0.0529		0.0529	0.0529	0.0000	757.6816	757.6816	0.0145	0.0139	762.1842

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Office Park	1.9363e+006	0.0104	0.0949	0.0797	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	103.3283	103.3283	1.9800e-003	1.8900e-003	103.9424
Single Family Housing	1.22621e+007	0.0661	0.5650	0.2404	3.6100e-003		0.0457	0.0457		0.0457	0.0457	0.0000	654.3533	654.3533	0.0125	0.0120	658.2418
Total		**0.0766**	**0.6599**	**0.3202**	**4.1800e-003**		**0.0529**	**0.0529**		**0.0529**	**0.0529**	**0.0000**	**757.6816**	**757.6816**	**0.0145**	**0.0139**	**762.1842**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Office Park	1.9363e+006	0.0104	0.0949	0.0797	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	103.3283	103.3283	1.9800e-003	1.8900e-003	103.9424
Single Family Housing	1.22621e+007	0.0661	0.5650	0.2404	3.6100e-003		0.0457	0.0457		0.0457	0.0457	0.0000	654.3533	654.3533	0.0125	0.0120	658.2418
Total		**0.0766**	**0.6599**	**0.3202**	**4.1800e-003**		**0.0529**	**0.0529**		**0.0529**	**0.0529**	**0.0000**	**757.6816**	**757.6816**	**0.0145**	**0.0139**	**762.1842**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	991100	288.3224	0.0130	2.7000e-003	289.4521
Single Family Housing	4.10879e+006	1,195.2933	0.0541	0.0112	1,199.9768
Total		**1,483.6156**	**0.0671**	**0.0139**	**1,489.4289**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	991100	288.3224	0.0130	2.7000e-003	289.4521
Single Family Housing	4.10879e+006	1,195.2933	0.0541	0.0112	1,199.9768
Total		**1,483.6156**	**0.0671**	**0.0139**	**1,489.4289**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.1531	0.0402	3.4839	1.8000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	5.6899	5.6899	5.4700e-003	0.0000	5.8268
Unmitigated	5.1531	0.0402	3.4839	1.8000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	5.6899	5.6899	5.4700e-003	0.0000	5.8268

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4191					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6290					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1050	0.0402	3.4839	1.8000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	5.6899	5.6899	5.4700e-003	0.0000	5.8268
Total	**5.1531**	**0.0402**	**3.4839**	**1.8000e-004**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**5.6899**	**5.6899**	**5.4700e-003**	**0.0000**	**5.8268**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4191					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6290					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1050	0.0402	3.4839	1.8000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	5.6899	5.6899	5.4700e-003	0.0000	5.8268
Total	**5.1531**	**0.0402**	**3.4839**	**1.8000e-004**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**5.6899**	**5.6899**	**5.4700e-003**	**0.0000**	**5.8268**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	115.4115	1.4926	0.0361	163.4766
Unmitigated	115.4115	1.4926	0.0361	163.4766

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	15.1074 / 9.25935	38.0015	0.4938	0.0119	53.9023
Single Family Housing	30.5572 / 19.2643	77.4100	0.9988	0.0241	109.5742
Total		**115.4115**	**1.4926**	**0.0361**	**163.4766**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	15.1074 / 9.25935	38.0015	0.4938	0.0119	53.9023
Single Family Housing	30.5572 / 19.2643	77.4100	0.9988	0.0241	109.5742
Total		**115.4115**	**1.4926**	**0.0361**	**163.4766**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	114.0424	6.7397	0.0000	282.5351
Unmitigated	114.0424	6.7397	0.0000	282.5351

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	79.05	16.0464	0.9483	0.0000	39.7544
Single Family Housing	482.76	97.9959	5.7914	0.0000	242.7807
Total		**114.0424**	**6.7397**	**0.0000**	**282.5351**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	79.05	16.0464	0.9483	0.0000	39.7544
Single Family Housing	482.76	97.9959	5.7914	0.0000	242.7807
Total		**114.0424**	**6.7397**	**0.0000**	**282.5351**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 4.18 – DRAFT Engineers Report for the City of Biggs Annexation Phase 1

DRAFT Engineers Report for the City of Biggs Annexation Phase 1

August 23, 2021

Purpose

This Engineers Report will describe the impacts to the City of Biggs infrastructure and the impacts the city would assume if Phase I was annexed into the city. This will be accomplished by looking at the existing infrastructure, upgrades to existing infrastructure and required new infrastructure surrounding and within the Phase 1 boundary. The infrastructure includes water, sewer, drainage, and transportation circulation.

There are two major sections to this report, the first being to Existing Infrastructure where we will look at the existing infrastructure and its condition which will assist in the determination of what will need to be upgraded or what will need to be constructed for the Phase I annexation. The second is Future Infrastructure, Upgrades, and Impacts. In this section we will look at how the Phase I annexation may function, and the infrastructure needed to sustain the annexation.

General

Currently the Phase 1 annexation does not have any infrastructure within its boundary. The area consists of agricultural land and rural ranch homes. These homes are on wells and septic systems and access to these homes is either from B Street to the south or W. Rio Bonito Road to the north.

The lands west of Phase I are primarily education facilities and a city park. To the east is agricultural lands like those within Phase 1. There are no roads that exist as a connection from B Street to W. Rio Bonito Road through the Phase 1 area.

Exhibits

At the end of this report, we have included existing utility exhibits for water, sewer, and storm drainage. There is not transportation exhibit since the annexation area is only bordered by W. Rio Bonito Road and B Street and is shown on all other exhibits.

There are also no future infrastructure exhibits since the layout and design will be developer driven.

Existing Infrastructure

Transportation and Circulation

Existing Roads

There are only two roads that border the project, W. Rio Bonito to the north and B Street to the south. The nearest cross connection between these two is Second Street west of the annexation and Highway 99 to the east.

Both W. Rio Bonito Road and B Street consist of two lanes and are striped with centerlines and edge lines. The speed limit on B Street is 35 miles per hour and is signed at the halfway point from Highway 99 to First Street. There are no existing intersections serving roads between First Street and Highway 99 along B Street.

W. Rio Bonito is signed 35 miles per hour at the easterly edge of the proposed Phase 1 annexation area. There are two roads that connect to W. Rio Bonito Road, and both are on the north side. One of these, Randall Avenue, is near the center of Phase 1 annexation area.

Water

General

The City of Biggs water system needs additional water supply and storage to meet the City's current demand. The city is in the process of upgrading their water system with a new well and tank to meet and enhance the current demand.

Wells

The City of Biggs is served by two functioning potable water wells, one west of the railroad track at the corner of B and Ninth Streets nicknamed Bertha and the other on Second Street nicknamed Henry. A third well located on C Street nicknamed Willard is a "stand-by" well as designated by the California Department of Public Health (CDPH) and exceeds the EPA's allowable levels of Manganese and Arsenic for potable water. Willard is not intended for use as a potable water source. Its primary use is intended for rare situations, typically caused by large fires, when the water demand has taxed the two other potable wells to their capacity.

Water Supply Network

Like most cities, Biggs has an extensive water network. The network consists mainly of 8" lines and some 6" lines near the south and east ends of the city. There are a few 4" lines that feed one or two parcels but these are not common. The system is pressurized by booster pumps located at the three wells.

The system is considered a looped system so that if one well is down for repairs the other can supply water to the entire city.

On the east side of town, on First Street, the system consists of 8" main lines serving the parcels on both sides of that street. On B street east of First Street there is an existing 6" line which ends at parcel 022-320-002 and is occupied by the Biggs Community Hall. Second Street has 8" mainlines that extend its entire length. There are no main lines in W. Rio Bonito Road east of Second Street.

Sewer

General

The city is served by a gravity sewer system which flows to the wastewater treatment facility on the SW end of the city and lying west of W Biggs Gridley Road. Recently the City has upgraded the treatment facility by adding additional aeration ponds. However, the City needs to address the infiltration and inflow (I&I) issue that plague the conveyance system. Once I&I is addressed the system will have additional capacity and the annexation of Phase 1 will not be a burden on the treatment facility capacity limits.

Sewer Network

The existing sewer network is comprised mainly of 6" and 8" gravity lines throughout the downtown and residential areas. The line size transitions to 10" and 12" the closer it gets to the treatment facility.

There is a 6" main line at the intersection of First and B Streets that runs west down B Street where it ties into an 8" line at Second Street. There is also 4" service line that extends to the Biggs Community Hall that terminates about 625 feet east of the intersection of First and B streets. This line is not sized for additional flows and is considered a commercial service line.

Sewer Lift Stations

Currently there is only one lift station and it's located in the NE portion of the city at J and Second Streets and mainly services the North Biggs Estates subdivision. Total capacity of this lift station is unknown at this time.

Drainage

General

The city has a minimal storm drainage conduit system and limited storm drain storage facilities. The city relies on gutter flow to transport storm drainage flows to inlets then conveys the flow through the minimal conduit system to existing Reclamation District or City owned ditches then out of the city to larger reclamation owned ditches.

Strom Drainage Conduit System

The conduit system is comprised of 12",15", 18" and 24" in diameter conduits on the east side of the city. The conduits are larger on the west side due to the natural slope of the City Streets and range from 24" to 36" in diameter. There are several smaller lines servicing individual parcels, but these are not part of the city main line drainage system.

At the intersection B and First Streets there is a 12" stub which extends 113' to the east and terminates on the south side of B Street at a drainage inlet. This eventually flows to the Hamilton Slough to the south.

At the intersection of W Rio Bonito Road and Second Street there is a storm drain manhole and conduit system which terminates at a city-maintained ditch on the east side of Second Street and north of W. Rio Bonito and eventually ties to the North Biggs Estates drainage system which is currently at maximum capacity.

City, County and Reclamation District Maintained Ditches

There is one main Reclamation Ditch to the south of Phase 1 Annexation area and south of B Street, the Hamilton Slough. The Slough crosses B Street near the mid-point from First Street to Highway 99.

Along B street south of Phase 1 there are shallow roadside ditches, and in some locations, there are no discernable ditches. It is assumed that in these areas, during storm events, the runoff infiltrates into the natural ground or ponds for short periods of time to a depth where it then flows to the sloughs or roadside ditches. The roadside ditches east of the City Community Hall on B Street are in the County's jurisdiction.

To the north of Phase 1 on W. Rio Bonito Road the ditches are more functional, although on the south side of W. Rio Bonito Road there are locations where trees have grown in the flow line and the ditches have all but vanished. On the north side of W. Rio Bonito Road there is a well-maintained ditch that runs the length of Phase 1 with culverts under the existing driveways to convey the flow.

Future Infrastructure, Upgrades, and Impacts

General

As mentioned in the existing infrastructure section there is little infrastructure within the boundary of the Phase 1 Annexation area. This section will discuss the needed infrastructure, upgrades to existing infrastructure and the impacts of those future and upgraded infrastructures.

Transportation and Circulation

City staff has raised question on how circulation would work with the Phase 1 being bordered on the north and south sides by existing roads. It is our opinion that the need for a cross connection is necessary to provide a reasonable circulation pattern thru the project area. The connection would be a collector class road with residential class road intersections spaced along its length. However, a concern is in creating a short cut for locals to cut thru circumventing longer or slower routes. To prevent or inhibit high speeds along this route, the city would require a round-a-bout centered within the Phase 1 annexation area. The round-a-bout would be a good method of slowing traffic and providing access to other portions of the project. The round-a-bout would be in lieu of standard stop-controlled intersections. Residential class roads would provide access to both the west and east portions divided by the collector road and accessed from the round-a-bout.

The Phase 1 annexation would need a traffic analysis to determine the round-a-bout configuration, the connection to W Rio Bonito Road to the north and B Street to the south. The study would be developer funded and would analyze the impacts and the potential need of signals, dedicated left and right-hand turn lanes out of and into the project areas.

All studies, roads, round-a-bouts, signals, and infrastructure appurtenances would be the responsibility of the developer and thus impose minimal if any financial burden to the city.

Water

With the addition of the new well and tank it is anticipated that only a supply network would be needed to serve the Phase 1 Annexation water network. Two water service connections would be required to serve the Phase 1 annexation area, one to the north at W. Rio Bonito Road and one to the south at B Street. These would be tied together within the Phase 1 area. The city network and new layout and line sizes would need to be analyzed and sized based on maximum demands.

All studies and any upgrades and upsizing of the city existing water system along with any new facilities would be the responsibility of the developer and thus impose minimal if any financial burden to the city.

Sewer

In 2019 the City calculated the available EDUs before the plant reaches its allowable capacity Average Daily Dry Weather Flows (ADDWF) of 0.38 mgd. The number of EDU's available was 414. As mentioned above the city has recently finished upgrading their treatment facility, however the capacity did not change, only the method of disposal was changed.

The city has an I&I issue which can produce Average Wet Weather Flows (AWWF) of approximately 1.1 mgd which is over the permitted AWWF's of 1.05 mgd.

The city is in the process of addressing the I&I problems but until those are solved there is no available capacity at the treatment plant. Once solved the city would have the 414 EDUs, identified in the 2019 memo, of capacity available.

Assuming the I&I was eliminated the Phase 1 annexation area would be allowed to connect to the city sewer system. This could also happen in small units as blocks of the city resolved the I&I issues.

Prior to allowing any development the city would require an analysis be performed to determine the ADDWF of the new development.

The sewer system could connect at either the north end at W. Rio Bonito Road and Second Street or the south end at B Street and First Street. We would expect the development to be split approximately in half with flow be equally divided between the north and south connection points. It is anticipated that sewer lift stations would need to be constructed at both ends since the existing connection points are not deep enough for gravity fed sewer main line connections.

All studies and any upgrades and upsizing of the city existing sewer system along with any new facilities would be the responsibility of the developer and thus impose minimal if any financial burden to the city.

Drainage

The Phase 1 annexation area would be required to install one or several detention ponds to mitigate the peak runoff of development to pre-development levels. The location of these ponds/basins would need to coincide with the layout of the development. All run-off from homes, interior roads and the new collector street mentioned in the Circulation section would need to be directed to these ponds.

There would also need to be a drainage network directing street run-off to the ponds. The ponds could act as multi-use basins, if large enough, and be used not only to mitigate the peak flows during storm events but also be used as recreation fields at other times of the year.

Hamilton Slough to the south is the preferred outfall channel due to its location and size. Even though there will be a “no net positive increase” requirement the infrastructure and maintenance costs makes this outfall the most reasonable choice.

A hydrology study would be required to determine the size of the ponds, network layout, outfall locations and the associated ancillary facilities.

All studies along with any new drainage facilities and appurtenances would be the responsibility of the developer and thus impose minimal if any financial burden to the city.

Summary

The Phase 1 Annexation will have little impact of the city’s existing infrastructure. Construction of all infrastructure within the annexation area will be the requirement of the developer to construct or upgrade. There will be ongoing maintenance for the infrastructure which will be off set by development fees and/or special districts set up for maintaining these facilities. It is anticipated that there will e a minimal financial impact to the city if Phase 1 is annexed.