

CITY OF BIGGS  
**BIGGS GENERAL PLAN**  
DRAFT ENVIRONMENTAL IMPACT REPORT

---

*Prepared for:*

CITY OF BIGGS  
465 C STREET  
BIGGS, CA 95917

*Prepared by:*

**PMC**<sup>®</sup>

140 INDEPENDENCE CIR, SUITE C  
CHICO, CA 95973

**OCTOBER 2013**



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# **ES EXECUTIVE SUMMARY**

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This section provides an overview of the proposed City of Biggs General Plan and its environmental analysis. For additional detail regarding specific issues, please consult the appropriate chapter of Sections 3.1 through 3.14 (Environmental Setting, Impacts, and Mitigation Measures) of this Draft Environmental Impact Report (Draft EIR).

### ES.1 PURPOSE AND SCOPE OF THE ENVIRONMENTAL IMPACT REPORT

This Environmental Impact Report (EIR) will provide, to the greatest extent possible, an analysis of the potential environmental effects associated with the implementation of the proposed General Plan Update, pursuant to the California Environmental Quality Act (CEQA).

This EIR analysis focuses on potential environmental impacts that could arise from implementation of the proposed General Plan through development of the land uses within the Biggs Planning Area, as regulated and guided by General Plan goals and policies. The EIR adopts this approach in order to provide a credible worst-case scenario of the impacts resulting from project implementation.

### ES.2 PROJECT CHARACTERISTICS

The proposed project is the adoption and implementation of an updated General Plan for the City of Biggs. The updated City of Biggs General Plan would replace the existing General Plan, which was originally adopted in 1998. The proposed General Plan builds off of the goals and vision developed through an extensive public outreach process for the proposed General Plan to understand the needs and desires of the community and to identify and discuss concerns and controversial issues throughout the General Plan process.

The proposed City of Biggs General Plan Update comprises a Land Use Map and policy document that contains 9 elements. Each of the elements identifies goals and associated policies and action items. State law requires that general plans address seven topics: land use, circulation, housing, conservation, open space, noise, and safety. The proposed General Plan covers all of these topics plus several additional issues, for a total of 9 elements. In keeping with the state-mandated schedule, the City's Housing Element was updated separately in 2010 with separate environmental review. Thus, while the Housing Element will be incorporated into the proposed General Plan upon its adoption, this environmental document does not cover that component of the project. A list of elements is provided below. For a brief description of each element please refer to Section 2.0, Project Description.

### ES.3 PROJECT ALTERNATIVES SUMMARY

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. Further, CEQA Guidelines Section 15126.6(e) requires that a "no project" alternative be evaluated in an EIR. The Draft EIR evaluates the following alternatives:

- **Alternative 1 – Existing General Plan Alternative (No Project Alternative).** Alternative 1 represents a continuation of the existing 1998 General Plan and associated development planned for within the existing Planning Area Boundary. This alternative is based upon the build-out of the existing General Plan Land Use Map that was established for the community in 1998.

- **Alternative 2 – Prevent Agricultural Land Conversion Alternative.** Under this alternative, the City would modify the proposed General Plan to prevent the conversion of land designated and zoned for agricultural use to urban uses. For purposes of this alternative it is also assumed that land designated for urban development but zoned for agricultural use would also remain in agriculture.
- **Alternative 3 – Reduced Western Expansion Alternative.** Under this alternative, the City would modify the proposed General Plan Land Use Map to preclude the inclusion of any additional lands west of the Union Pacific railroad tracks that traverse through Biggs between Seventh and Eighth Streets. This alternative would have the affect of omitting approximately 933 acres of land from the proposed General Plan Planning Area proposed for Heavy Industrial, Light Industrial, Low Density Residential, and Agricultural Industrial land use designations.

### ES.4 AREAS OF CONTROVERSY

The City of Biggs was identified as the lead agency for the proposed project. In accordance with Section 15082 of the CEQA Guidelines, the City of Biggs prepared and distributed a Notice of Preparation (NOP) for the City of Biggs General Plan project that was circulated for public review on July 13, 2012 (SCH2012072025). The NOP included a summary of probable effects on the environment from the implementation of the project. Written comments received in response to the NOP were considered in the preparation of the Draft EIR. The issues raised in the NOP response letters included transportation and traffic, planning and land use, public services, hazard, and noise. Section 1.0, Introduction, provides a summary of issues and areas of concern related to the proposed General Plan and the Draft EIR, as presented to the City by agencies and the public during the NOP review period. The complete text of the NOP and NOP comments are included as **Appendix 1.0-A** of this Draft EIR.

### ES.5 SUMMARY OF ENVIRONMENTAL IMPACTS

**Table ES-1** displays a summary of impacts for the proposed General Plan and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance is indicated both before and after the implementation of each mitigation measure.

For detailed discussions of all mitigation measures and of proposed General Plan goal and policies that would provide mitigation for each type of environmental impact addressed in this Draft EIR, refer to the appropriate environmental topic section (i.e., Sections 3.1 through 3.14).

Implementation of the proposed General Plan is anticipated to result in residential and nonresidential (retail, commercial, office, industrial, and other uses) development. By incorporating policies intended to avoid environmental impacts and seeking to create a mix of land uses, and “connectivity” to better link the city’s, the General Plan is largely self-mitigating. Rather than mitigating impacts from implementation of General Plan through mitigation measures in this EIR, the policies in General Plan are, to the extent feasible, intended to prevent the majority of environmental impacts altogether.

The implementation of the proposed General Plan has the potential to generate 20 significant and unavoidable impacts. CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. Throughout this EIR, the terms “project” or “proposed project,” are used to refer to the implementation of the proposed General Plan, which will

govern all development in the city over the life of the document. The term “cumulative” refers to General Plan as well as development that will happen in the surrounding region.

The General Plan specific significant and unavoidable impacts are in the following topic areas:

- Agricultural Resources (one significant and unavoidable impact).
- Air Quality (three significant and unavoidable impacts).
- Noise (two significant and unavoidable impacts).
- Population and Housing (one significant and unavoidable impact).
- Transportation and Circulation (four significant and unavoidable impacts).

The cumulatively considerable and significant and unavoidable impacts are in the following topic areas:

- Agricultural Resource (one significant and unavoidable impact).
- Air Quality (one significant and unavoidable impact).
- Biological Resources (one significant and unavoidable impact).
- Noise (one significant and unavoidable impact).
- Population and Housing (one significant and unavoidable impact).
- Transportation and Circulation (two significant and unavoidable impacts).
- Greenhouse Gases and Climate Change (two significant and unavoidable impacts).

The significant and unavoidable impact considered to result from both the project and cumulative development in the region is in the greenhouse gas emissions analysis in Section 3.14. This is because climate change is the result of cumulative global emissions. There is no single project, when taken in isolation that can “cause” climate change, as a single project’s emissions are insufficient to change the radiative balance of the atmosphere. Because climate change is the result of greenhouse gas emissions, and greenhouse gas emissions are emitted by innumerable sources worldwide, global climate change is a significant cumulative impact of human development and activity. The global increase in greenhouse gas emissions that has occurred and will occur in the future are the result of the actions and choices of individuals, businesses, local governments, states, and nations. Therefore, the analysis in Section 3.14 addresses both project and cumulative impacts in combination.

**TABLE ES-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<b><i>Aesthetics and Visual Resources</i></b>			
<b>Impact 3.1.1</b> Implementation of the proposed General Plan could have a substantial effect on a scenic vista. However, implementation of proposed General Plan policy provisions and continued implementation of the City's Municipal Code would ensure that no adverse impact to a scenic vista would occur.	LS	None required.	LS
<b>Impact 3.1.2</b> Implementation of the proposed General Plan would not damage any scenic resources within a state scenic highway.	NI	None required.	NI
<b>Impact 3.1.3</b> Implementation of the proposed General Plan would result in increased development that would alter the existing visual character of the Biggs Planning Area.	LS	None required.	LS
<b>Impact 3.1.4</b> Implementation of the proposed General Plan could result in an increase of daytime glare and/or nighttime lighting. This increase in daytime glare sources and nighttime lighting levels could have an adverse effect on adjacent areas and land uses.	LS	None required.	LS

S – Significant      CC - Cumulatively Considerable      LS – Less Than Significant      SU – Significant and Unavoidable      NI - No Impact  
 PS-Potentially Significant      LCC - Less than Cumulatively Considerable      CS – Cumulative Significant      SM - Significant but Mitigatable

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<p><b>Impact 3.1.5</b> Implementation of the proposed General Plan in combination with other reasonably foreseeable development projects in Butte County would contribute to the alteration of the visual character of the region, impacts to scenic vistas, and increased glare/lighting.</p>	LCC	None required.	LCC
<b>Agricultural Resources</b>			
<p><b>Impact 3.2.1</b> Implementation of the proposed General Plan would result in the conversion of important farmlands, as designated by the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.</p>	SU	None available.	SU
<p><b>Impact 3.2.2</b> Implementation of the proposed General Plan would involve land use changes for parcels currently under a Williamson Act contract. However, the only parcels currently under a Williamson Act contract have been in a state of nonrenewable since before the proposed General Plan.</p>	LS	None required.	LS
<p><b>Impact 3.2.3</b> Implementation of the proposed General Plan could result in changes in the existing environment which, due to their location or nature, could result in conversion of farmland and/or farmland-related businesses to nonagricultural use. However, policy provisions in the proposed General</p>	LS	None required.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Plan would ensure that agricultural operations are not adversely impacted.			
<b>Impact 3.2.4</b> Implementation of the proposed General Plan, along with regional and statewide growth, would result in a contribution to the conversion of important farmland.	CC/SU	None available.	CC/SU
<b>Air Quality</b>			
<b>Impact 3.3.1</b> Subsequent land use activities associated with implementation of the proposed General Plan would obstruct implementation of the Northern Sacramento Valley Planning Area 2009 Air Quality Attainment Plan.	SU	None available.	SU
<b>Impact 3.3.2</b> Subsequent land use activities associated with implementation of the proposed General Plan could result in long-term, operational emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter.	SU	None available.	SU
<b>Impact 3.3.3</b> Subsequent land use activities associated with implementation of the proposed General Plan could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter.	SU	None available.	SU

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<p><b>Impact 3.3.4</b> Implementation of the proposed General Plan could result in population and employment that would increase traffic volumes on area roadways. This could result in elevated carbon monoxide emissions from motor vehicle congestion that could expose sensitive receptors to elevated carbon monoxide concentrations. However, traffic volumes would not be large enough to generate excessive carbon monoxide emission levels.</p>	LS	None required	LS
<p><b>Impact 3.3.5</b> Subsequent land use activities associated with implementation of the proposed General Plan could result in projects that would include sources of toxic air contaminants which could affect surrounding land uses. Subsequent land use activities could also place sensitive land uses near existing sources of toxic air contaminants. These factors could result in the exposure of sensitive receptors to substantial pollutant concentrations such as toxic air contaminants. However, the Butte County Air Quality Management District and state regulations would address exposure to toxic air contaminants.</p>	LS	None required.	LS
<p><b>Impact 3.3.6</b> Subsequent land use activities associated with implementation of the proposed General Plan could include sources that could create objectionable odors affecting a substantial number of</p>	LS	None required	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
people or expose new residents to existing sources of odor. However, continued implementation of BCAQMD rules and regulations and proposed General Plan policy provisions would address this issue.			
<b>Impact 3.3.7</b> Implementation of the proposed General Plan, in combination with cumulative development in the Sacramento Valley Air Basin, would result in a cumulatively considerable net increase of ozone and of coarse and fine particulate matter.	CC/SU	None available	CC/SU
<b>Biological Resources</b>			
<b>Impact 3.4.1</b> Land uses and development consistent with the proposed General Plan could result in adverse effects, either directly or indirectly, on special-status plant and animal species and sensitive and critical habitats in the Biggs Planning Area. However, implementation of General Plan policy provisions would address this impact.	LS	None required.	LS
<b>Impact 3.4.2</b> Land uses and development consistent with the proposed General Plan could interfere with the movement of native resident or migratory fish or wildlife species as well as use of native wildlife nursery sites. These land uses could also restrict the range of special-status species in the Biggs Planning Area.	LS	None required.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<p><b>Impact 3.4.3</b> No habitat conservation plan (HCP), recovery plan, or natural community conservation plan has been adopted encompassing all or portions of Biggs. The General Plan would not conflict with Biggs Municipal Code Section 9.15.080 (Tree Preservation Regulations) that regulates the removal and preservation of trees on public rights-of-way within the city.</p>	<p>NI</p>	<p>None required.</p>	<p>NI</p>
<p><b>Impact 3.4.4</b> The proposed General Plan, in combination with other reasonably foreseeable projects, would result in direct and indirect mortality and loss of habitat for special-status species and sensitive and/or critical habitat.</p>	<p>CC/SU</p>	<p>None available.</p>	<p>CC/SU</p>
<p><b><i>Cultural and Paleontological Resources</i></b></p>			
<p><b>Impact 3.5.1</b> Subsequent activities under the proposed General Plan could potentially cause a direct substantial adverse change in the significance of a historical resource or structure. However, policy provisions in the proposed General Plan and continued implementation of the City's Municipal Code would ensure that historic resources are not adversely impacted.</p>	<p>LS</p>	<p>None required.</p>	<p>LS</p>

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<p><b>Impact 3.5.2</b> Subsequent activities under the proposed General Plan could result in the potential disturbance of cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features) and human remains. State policy in the form of the California Environmental Quality Act would ensure that archaeological resources are not adversely impacted by future development under the proposed General Plan.</p>	LS	None required	LS
<p><b>Impact 3.5.3</b> Adoption of the proposed General Plan could result in the potential disturbance of paleontological resources (i.e., fossils and fossil formations) within the Planning Area. However, State policy in the form of the California Environmental Quality Act would ensure that paleontological resources are not adversely impacted by future development under the proposed General Plan.</p>	LS	None required	LS
<p><b>Impact 3.5.4</b> Implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development in the region, could result in cumulative impacts to cultural resources in the region. However, proposed General Plan policy provisions and State policy in the form of the California Environmental Quality Act would ensure that historic</p>	LCC	None required	LCC

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
and prehistoric resources are not adversely impacted.			
<b>Impact 3.5.5</b> Implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development in the region, could result in cumulative impacts to paleontological resources in the region.	LCC	None required	LCC
<b>Geology and Soils</b>			
<b>Impact 3.6.1</b> Subsequent land use activities associated with implementation of the proposed General Plan could result in the exposure of more people, structures, and infrastructure to seismic hazards. However, policy provisions in the proposed General Plan would ensure that people, structures, and infrastructure are not adversely impacted by seismic hazards.	LS	None required.	LS
<b>Impact 3.6.2</b> Implementation of the proposed General Plan could result in construction and grading activities that could expose topsoil and increase soil erosion. However, policy provisions in the proposed General Plan would ensure that there are no adverse impacts from erosion and loss of topsoil.	LS	None required.	LS
<b>Impact 3.6.3</b> Implementation of the proposed General Plan could allow for development on a geologic unit or soil that is unstable, thus creating substantial	LS	None required.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
risks to life and property. However, policy provisions in the proposed General Plan would ensure that potential development is not adversely impacted by unstable soils.			
<b>Impact 3.6.4</b> Subsequent land use activities associated with implementation of the proposed General Plan would not allow for development in areas where sewers are not available for the disposal of wastewater. There would be no adverse impacts from soils incapable of supporting septic tanks.	LS	None required.	LS
<b>Impact 3.6.5</b> Subsequent land use activities associated with implementation of the proposed General Plan, in combination with other existing, planned, proposed, and reasonably foreseeable development in the region, may result in cumulative geologic and soil hazards. However, policy provisions in the proposed General Plan ensure that potential development is not adversely impacted by cumulative geologic and soil hazards.	LCC	None required.	LCC
<b><i>Hazards and Hazardous Materials</i></b>			
<b>Impact 3.7.1</b> Implementation of the proposed General Plan would allow for land uses that would involve the routine transportation, use, or disposal of hazardous materials in the Biggs Planning Area. Such activities would continue to be regulated in order to	LS	None required.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
protect public health and will not create a significant hazard to the public or the environment.			
<b>Impact 3.7.2</b> Implementation of the proposed General Plan could 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 or by locating development on a site included on a list of hazardous materials sites compiled by Government Code Section 65962.5. Such activities and circumstances would continue to be regulated in order to protect public health and will not create a significant hazard to the public or the environment.	LS	None required.	LS
<b>Impact 3.7.3</b> Implementation of the proposed General Plan would not result in significant emission of hazardous emissions or significant handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	None required.	LS
<b>Impact 3.7.4</b> Implementation of the proposed General Plan would not impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan.	LS	None required.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<b>Impact 3.7.5</b> Implementation of the General Plan would not cumulatively contribute to regional hazards.	LCC	None required.	LCC
<b>Hydrology and Water Quality</b>			
<b>Impact 3.8.1</b> Implementation of the proposed General Plan could result in a violation of water quality standards; substantial alteration of the existing drainage pattern, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, and/or environmental harm; polluted stormwater runoff; or otherwise degrade water quality. However, implementation of proposed General Plan policy provisions would ensure that water quality impacts are addressed.	LS	None required.	LS
<b>Impact 3.8.2</b> Implementation of the proposed General Plan could result in the degradation of groundwater quality and may violate water quality standards and/or degrade water quality resulting from future land uses. However, implementation of proposed General Plan policy provisions would ensure that groundwater quality is protected.	LS	None required.	LS
<b>Impact 3.8.3</b> Implementation of the proposed General Plan could result in a substantial alteration of an existing drainage pattern, including through the alteration of the course of a stream or	LS	None required.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<p>river, that may substantially increase the rate of amount of surface runoff in a manner which would result in flooding on- or off-site or could result in the creation or contribution of runoff water which would exceed the capacity of the existing or planned stormwater drainage system. However, implementation of proposed General Plan policy provisions and continued implementation of City standards would ensure that drainage is adequately addressed.</p>			
<p><b>Impact 3.8.4</b> The Biggs Planning Area is located within the dam failure inundation areas for the Oroville Dam. Failure of any of these dams or levees could result in inundation of portions of the project site.</p>	LS	None required.	LS
<p><b>Impact 3.8.5</b> Land uses and growth under the proposed General Plan, in combination with current land uses in the surrounding region, could introduce substantial grading, site preparation, and an increase in urbanized development.</p>	LCC	None required.	LCC
<p><b>Impact 3.8.6</b> Implementation of the proposed General Plan could increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions downstream.</p>	LCC	None required.	LCC

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ES EXECUTIVE SUMMARY

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<i>Land Use</i>			
<b>Impact 3.9.1</b> Implementation of the proposed General Plan would not result in the division of an existing community nor would it result in substantial land use compatibility issues.	NI	None required.	NI
<b>Impact 3.9.2</b> Implementation of the proposed General Plan could lead to inconsistency with other land use plans and ordinances, including the City's land use plans and regulations that address physical effects to the environment.	LS	None required.	LS
<b>Impact 3.9.3</b> The Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) has not yet been adopted. However, the proposed General Plan would support the plan effort.	LS	None required.	LS
<b>Impact 3.9.4</b> Implementation of the proposed General Plan, in addition to existing, proposed, approved, and reasonably foreseeable development in the City of Biggs and Butte County, would contribute to cumulative land use impacts associated with the division of an established community or conflicts with land use plans and regulations that provide environmental protection.	LCC	None required.	LCC

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<b>Noise</b>			
<b>Impact 3.10.1</b> The proposed General Plan could result in exposure of persons to or generation of noise levels in excess of City standards as well as a substantial permanent increase in ambient noise levels in the city. However, the proposed General Plan policy provisions would adequately address noise issues.	LS	None required.	LS
<b>Impact 3.10.2</b> Traffic conditions under the proposed General Plan could result in a substantial permanent increase in ambient noise levels that could adversely affect noise-sensitive land uses.	S	None available	SU
<b>Impact 3.10.3</b> Subsequent development under the proposed General Plan could result in exposure of persons to or generation of excessive groundborne vibration levels. However, substantial sources of groundborne vibration that would result in significant vibration impacts are not expected in the Planning Area.	LS	None required.	LS
<b>Impact 3.10.4</b> Construction and agricultural activities associated with subsequent activities under the proposed General Plan could result in a substantial temporary or periodic increase in ambient noise levels.	S	None available.	SU

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<b>Impact 3.10.5</b> Implementation of the proposed General Plan, in combination with other development in nearby unincorporated areas of the county, would increase transportation noise along area roadways and construction noise throughout the Planning Area.	CC/SU	None available.	CC/SU
<b>Population and Housing</b>			
<b>Impact 3.11.1</b> Subsequent land use activities associated with implementation of the proposed General Plan could potentially induce population growth by the year 2035 beyond that currently anticipated.	S	None available.	SU
<b>Impact 3.11.2</b> Subsequent land use activities associated with implementation of the proposed General Plan would not result in the displacement of substantial numbers of housing or persons.	LS	None required.	LS
<b>Impact 3.11.3</b> Subsequent land use activities associated with implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development, could result in a cumulative increase in population and housing growth in Biggs as well as in the surrounding Butte County region, along with associated environmental impacts. This cumulative increase in population and housing is beyond that projected by BCAG.	CC/SU	None available.	CC/SU

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<b>Public Services and Utilities</b>			
<b>Impact 3.12.1.1</b> Implementation of the proposed General Plan could result in the need for additional fire protection facilities in order to maintain acceptable service ratios and response times. The provision of these facilities could cause environmental impacts. However, future fire protection facilities would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency.	LS	None required.	LS
<b>Impact 3.12.1.2</b> Implementation of the proposed General Plan would result in additional need for water supply and infrastructure to provide adequate fire flows for fire protection. The provision of these facilities could cause environmental impacts. However, future improvements would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency.	LS	None required.	LS
<b>Impact 3.12.1.3</b> Implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in Butte County, would increase the demand for fire protection services and thus require additional staffing, equipment, and related facilities under cumulative conditions.	LCC	None required.	LCC

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The provision of these facilities could result in environmental impacts.			
<b>Impact 3.12.2.1</b> Implementation of the proposed General Plan would result in increased demand for law enforcement services and could result in the need for new or physically altered law enforcement facilities, the construction of which could cause significant environmental impacts. However, future improvements would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency.	LS	None required.	LS
<b>Impact 3.12.2.2</b> Implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the GBP service area, would increase the demand for law enforcement services and thus require additional staffing, equipment, and facilities, the construction of which could cause significant environmental impacts.	LCC	None required.	LCC
<b>Impact 3.12.3.1</b> Implementation of the proposed General Plan would increase population in the BUSD service area, which would subsequently increase student enrollment in CUSD schools. New or expanded school facilities may be necessary to serve the increased demand. Subsequent development under the proposed General Plan	LS	None required.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
would be subject to school facility fees to pay for additional school facility needs.			
<b>Impact 3.12.3.2</b> Population growth associated with implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, would result in a cumulative increase in student enrollment and require additional schools and related facilities to accommodate the growth.	LCC	None required.	LCC
<b>Impact 3.12.4.1</b> Implementation of the proposed General Plan would 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 increased demand.	LS	None required.	LS
<b>Impact 3.12.4.2</b> Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would increase the use of existing parks and would require additional park and recreation facilities within the cumulative setting, the provision of which could have an adverse physical effect on the environment.	LCC	None required.	LCC

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<p><b>Impact 3.12.5.1</b> Implementation of the proposed General Plan would increase demand for water supply and thus require increased groundwater production, which could result in significant effects on the physical environment. However, adequate groundwater supply sources exist, and proposed General Plan policy provisions would ensure adequate water service.</p>	LS	None required.	LS
<p><b>Impact 3.12.5.2</b> Implementation of the proposed General Plan would increase demand for water supply and thus require additional water supply infrastructure that could result in a physical impact to the environment.</p>	LS	None required.	LS
<p><b>Impact 3.12.5.3</b> Implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would increase the cumulative demand for water supplies and related infrastructure.</p>	LCC	None required.	LCC
<p><b>Impact 3.12.6.1</b> Implementation of the proposed General Plan would substantially increase wastewater flows and require additional infrastructure and may require additional treatment capacity to accommodate anticipated demands that would result in a physical effect on the environment. Additionally, the General Plan could result in wastewater discharge that would exceed</p>	LS	None required.	LS

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wastewater treatment requirements of the Central Valley Regional Water Quality Control Board.			
<b>Impact 3.12.6.2</b> Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting, would contribute to the cumulative demand for wastewater service. However, implementation of proposed General Plan policy provisions would ensure adequate wastewater facilities are provided.	LCC	None required.	LCC
<b>Impact 3.12.7.1</b> Implementation of the proposed General Plan would generate increased amounts of solid waste that would need to be disposed of in landfills or recycled.	LS	None required.	LS
<b>Impact 3.12.7.2</b> Implementation of the proposed General Plan would not be expected to result in conflicts with any federal, state, or local solid waste regulations.	LS	None required.	LS
<b>Impact 3.12.7.3</b> Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would result in increased demand for solid waste services.	LCC	None required.	LCC
<b>Impact 3.12.8.1</b> Implementation of the proposed General Plan would increased demand for electrical services, including	LS	None required.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
associated infrastructure that could result in a physical impact on the environment.			
<b>Impact 3.12.8.2</b> Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would contribute to the cumulative demand for electrical services and associated infrastructure that could result in a physical impact on the environment.	LCC	None required.	LCC
<b>Transportation and Circulation</b>			
<b>Impact 3.13.1</b> Implementation of proposed General Plan would increase traffic volume that would degrade operating conditions along local roadways.	S	None available.	SU
<b>Impact 3.13.2</b> Implementation of proposed General Plan would increase traffic volume that would degrade operating conditions along the state highway. The resulting LOS are within the levels adopted in applicable plans and policies. However, Implementation of improvements to the state highway system is uncertain since the City of Biggs has no control over Caltrans actions regarding SR 99.	S	None available	SU
<b>Impact 3.13.3</b> Implementation of proposed General Plan may increase aviation traffic however; this growth is consistent with applicable plans and policies.	LS	None required.	LS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<p><b>Impact 3.13.4</b> Implementation of the proposed General Plan will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). However, build-out of the proposed General Plan could result in increased travel on roadways that do not meet current design standards and present hazards in their current state.</p>	S	None available	SU
<p><b>Impact 3.13.5</b> Implementation of the proposed General Plan will result in inadequate emergency access unless improvements proposed in the document are implemented simultaneously with development.</p>	S	None available	SU
<p><b>Impact 3.13.6</b> Implementation of the proposed General Plan will increase the demand for public transit, bicycle and pedestrian facilities; however, the proposed General Plan will not conflict with adopted policies, plans, or programs regarding these modes or otherwise decrease the performance or safety of such facilities.</p>	LS	None required	LS
<p><b>Impact 3.13.7</b> When considered with existing, proposed, planned, and approved development in the region, build-out of the proposed General Plan would rely upon future roadway capacity expansion projects for which full funding is not ensured.</p>	CC/SU	None available	CC/SU

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
<p><b>Impact 3.13.8</b> When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed General Plan would contribute to cumulative traffic volumes on State Route 99 that result in significant impacts to level of service and operations.</p>	CC/SU	None available	CC/SU
<b>Greenhouse Gases and Climate Change</b>			
<p><b>Impact 3.14.1</b> Implementation of the proposed General Plan will result in greenhouse gas emissions that would further contribute to significant impacts on the environment.</p>	CC/SU	None available.	CC/SU
<p><b>Impact 3.14.2</b> Implementation of the proposed General Plan would not be consistent with the goals of AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, etc.) as thresholds would be surpassed.</p>	CC/SU	<p><b>MM 3.14.2</b> Add the following Policy to the Conservation and Recreation Element of the General Plan:</p> <p>“Policy CR-7.6: As funding permits the City will prepare a greenhouse gas inventory and climate action plan designed to reduce greenhouse gasses. The City may also participate in a regional climate action plan prepared by another jurisdiction. Until a climate action plan is adopted each project shall evaluate its impact on greenhouse gasses as part of the environmental process.”</p>	CC/SU

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# **1.0 INTRODUCTION**

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## 1.1 PURPOSE OF THE EIR

The City of Biggs (City), acting as the lead agency, has prepared this Draft Environmental Impact Report (Draft EIR; DEIR) to provide the public and responsible/trustee agencies with information about the potential environmental effects of adopting the proposed City of Biggs General Plan (proposed project or project). As described in the California Environmental Quality Act (CEQA) Guidelines Section 15121(a), an EIR is a public informational document that assesses potential environmental effects of the proposed project and identifies alternatives and mitigation measures to the proposed project that could reduce or avoid its adverse environmental impacts. Public agencies are charged with the duty to consider and minimize environmental impacts of proposed development where feasible and have an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

CEQA requires the preparation of an environmental impact report prior to approving any "project" that may have a significant effect on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action that has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). With respect to the proposed City of Biggs General Plan, the City has determined that the proposed General Plan is a project as defined by CEQA.

## 1.2 KNOWN TRUSTEE AND RESPONSIBLE AGENCIES

For the purpose of CEQA, the term "trustee agency" means a state agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California. The California Department of Fish and Wildlife is a trustee agency with regard to the fish and wildlife of the state and designated rare or endangered native plants.

In CEQA, the term "responsible agency" includes all public agencies other than the lead agency that may have discretionary actions associated with the implementation of the General Plan. The following agencies may have some role in implementing the City of Biggs General Plan and have been identified as potential responsible agencies:

- California Department of Conservation
- California Department of Forestry and Fire Protection (Cal-Fire)
- California Department of Parks and Recreation
- California Department of Water Resources
- California Department of Resources Recycling and Recovery (CalRecycle)
- California Public Utilities Commission
- California State Lands Commission
- California Transportation Commission
- California Department of Transportation (Caltrans) District 3, Environmental Planning and Engineering
- Biggs Unified School District (BUSD)

## 1.0 INTRODUCTION

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- Butte Local Agency Formation Commission (LAFCo)
- Central Valley Regional Water Quality Control Board
- Butte County Air Quality Management District
- US Army Corps of Engineers
- US Bureau of Land Management
- US Bureau of Reclamation
- US Environmental Protection Agency
- US Fish and Wildlife Service

### 1.3 TYPE OF DOCUMENT

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a program EIR pursuant to CEQA Guidelines Section 15168. According to Section 15168:

*A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:*

- 1) Geographically,*
- 2) As logical parts in the chain of contemplated actions,*
- 3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or*
- 4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.*

The program-level analysis in this EIR considers the broad environmental effects of the overall proposed General Plan. This EIR will be used to evaluate subsequent projects (public and private) under the proposed City of Biggs General Plan consistent with CEQA and the CEQA Guidelines. When individual projects or activities under the General Plan are proposed, the City will be required to examine the projects or activities to determine whether their effects were adequately analyzed in this EIR. If the projects or activities would have no effects beyond those analyzed in this EIR, no further environmental review would be required.

### 1.4 INTENDED USES OF THE EIR

This EIR is intended to evaluate the environmental impacts of adoption and implementation of the City of Biggs General Plan. The EIR will serve as a source of information in the review of subsequent planning and development proposals, including subsequent environmental review of specific plans, for infrastructure provision and individual development proposals, as well as for public facilities to serve new development. In addition, this EIR may be used by the City to support adoption of CEQA significance thresholds pursuant to CEQA Guidelines Section 15064.7(b).



## **1.5 ORGANIZATION AND SCOPE**

Sections 15122 through 15132 of the CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts.

The environmental issues addressed in the Draft EIR were established through review of the project, environmental documentation for nearby projects, and public and agency responses to the Notice of Preparation (NOP).

This Draft EIR is organized as follows:

### **ES – EXECUTIVE SUMMARY**

This section summarizes the characteristics of the proposed project, known areas of controversy, and issues to be resolved. It provides a concise summary matrix of the project's environmental impacts, proposed General Plan policies, possible mitigation measures, and identification of alternatives that reduce or avoid at least one environmental effect of the proposed General Plan.

### **SECTION 1.0 – INTRODUCTION**

Section 1.0 provides an introduction and overview describing the purpose, type, and intended use of the EIR, responsible agencies, organization and scope of the EIR, and the review and certification process.

### **SECTION 2.0 – PROJECT DESCRIPTION**

This section provides a detailed description of the proposed project, including the location, intended objectives, background information, the physical and technical characteristics including the decisions subject to CEQA, and a list of related environmental review and consultation requirements.

### **SECTION 3.0 – ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES**

Section 3.0 contains an analysis of environmental topic areas as identified below. Each subsection contains a description of the existing setting of the project area, identifies project-related impacts, and identifies mitigation measures for significant environmental effects.

This section also includes an introduction to the environmental analysis that describes the general assumptions used to evaluate project-specific and cumulative environmental impacts. However, specific analyses are provided in each environmental issue area section.

The following major environmental topics are addressed in this section:

- Aesthetics and Visual Resources
- Agricultural Resources
- Air Quality

## 1.0 INTRODUCTION

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- Biological Resources
- Cultural and Paleontological Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Utilities
- Transportation and Circulation
- Greenhouse Gases and Climate Change

### SECTION 4.0 – CUMULATIVE IMPACTS

This section summarizes all identified cumulative impacts associated with the proposed project. As required by CEQA Guidelines Section 15130, an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable.

### SECTION 5.0 – ALTERNATIVES

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen any significant environmental effects of the project. This alternatives analysis provides a comparative analysis between the merits of the project and the selected alternatives.

### SECTION 6.0 – LONG-TERM IMPLICATIONS

This section contains discussions and analysis of various topical issues mandated by CEQA. These include significant environmental effects that cannot be avoided if the project is implemented, significant irreversible environmental changes, and growth-inducing impacts.

### SECTION 7.0 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the EIR, by name, title, and company or agency affiliation.

### APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as all technical material prepared to support the analysis.

## 1.6 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR will involve the following general procedural steps:

### NOTICE OF PREPARATION

In accordance with Section 15082 of the CEQA Guidelines, the City prepared a Notice of Preparation (NOP) of an EIR for the project on July 13, 2012. The City was identified as the lead agency for the proposed project. This notice was circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project. A scoping meeting was held on August 14, 2012, to receive comments. Issues raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and responses by interested parties are presented in **Appendix 1.0-1**.

### DRAFT EIR AND PUBLIC NOTICE/PUBLIC REVIEW

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives. This Draft EIR, as well as the General Plan, is available at the City of Biggs (see address below).

All comments or questions regarding the Draft EIR should be addressed to:

Mark Sorensen  
City of Biggs  
P.O. Box 307  
465 C Street  
Biggs, CA 95917

### RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments made at any public hearing(s) as well as contain any minor edits made to the Draft EIR.

### CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

As the final decision-maker regarding the General Plan, the City Council will review and consider the Final EIR. If the City Council finds that the Final EIR is "adequate and complete," the Council will certify the Final EIR.

Following certification of the Final EIR, the City Council may take action to adopt, revise, or reject the General Plan. A decision to approve the project would be accompanied by written findings in accordance with CEQA Guidelines Section 15091 and Section 15093 and would explain the General Plan's relationship to alternatives considered in this EIR. A Mitigation Monitoring and Reporting Program (MMRP), as described below, would also be adopted for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. This MMRP will be designed to ensure that these measures are carried out during General Plan implementation.

## **1.0 INTRODUCTION**

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### MITIGATION MONITORING

Public Resources Code Section 21081.6(a) requires lead agencies to adopt a reporting and mitigation monitoring program to describe measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific reporting or monitoring program required by CEQA is not required to be included in the EIR; however, it will be presented to the City Council for adoption. Throughout the EIR, however, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a monitoring and reporting program.

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## **2.0 PROJECT DESCRIPTION**

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### 2.1 LOCAL AND REGIONAL SETTING

#### PROJECT LOCATION

Biggs is located in the fertile farmlands of the Sacramento Valley in the southwest portion of Butte County about 60 miles north of Sacramento. Known as the “heart of rice country,” Biggs is approximately 25 miles south of Chico and 25 miles north of Yuba City, just off State Route 99. Biggs is approximately 4 miles north of the City of Gridley.

The General Plan addresses a Planning Area that includes all land within the city limits, the city Sphere of Influence (SOI), and slightly beyond. The city limits encompass approximately 414 acres, or 0.65 square miles. There are currently 540.6 total acres or 0.84 square miles within the Biggs SOI. The Planning Area established by the proposed General Plan encompasses 4,370 acres, or 6.8 square miles (see **Figure 2.0-1**). The California Department of Finance estimated the 2013 population of the city at 1,692.

#### PROJECT SETTING

Biggs lies within the area between the Feather River to the east and the Sacramento River to the west and ranges in elevation from 89 to 106 feet above sea level. The city’s topography is characterized as predominantly flat, sloping to the southwest. The Biggs region is known for agriculture, which constitutes a significant component of the local economy. The majority of agricultural operations within the Biggs Planning Area 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’s 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 Biggs. Agriculture-related industries are prominent in and around the city, generally for rice, but also included are processing plants for nuts, citrus, and prunes. Several locations offer farm-fresh produce direct from the grower to the consumer.

The City of Biggs’s transportation system resembles that of a small, rural city. Although the roadway network primarily serves automobile traffic, it also serves a variety of other modes: trucks, buses, bicycles, and pedestrians. One of the main characteristics of the roadway network in Biggs is its low volumes. The city is also very flat, creating desirable conditions for alternative modes of travel. The main constraint to the circulation system is the lack of east–west connectivity as a result of the railroad tracks. Union Pacific Railroad (UPRR) has tracks that run north–south along the western portion of the city between Seventh and Eighth streets. Currently there are three at-grade crossings within the city limits: B Street, E Street, and F Street.

### 2.2 BACKGROUND AND HISTORY OF THE GENERAL PLAN PROCESS

Founded over 100 years ago, the city has largely escaped the growth pressures experienced by other California cities. However, increasing interest in the city and the greater north-state area have focused interest on the city due to the presence of large tracts of affordable land, the proximity to regional job-centers (Chico and Oroville), and the presence of affordable housing. These attributes have piqued the interest of landowners and development interests for development opportunities. As a result of the recent growth pressures and a desire on the part of City staff to make sure Biggs is strategically positioned to manage future growth and to capture positive growth opportunities, the City is seeking to update its General Plan. The city provides numerous advantages for those in the housing industry, as it is located on a major

## **2.0 PROJECT DESCRIPTION**

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transportation route, is located approximately one hour from the greater Sacramento region, has recently upgraded its waste disposal transmission and treatment capacity and water delivery system, and has an abundance of affordable, available, and accessible land in the surrounding areas.

The City of Biggs conducted an extensive public outreach process for the proposed General Plan to understand the needs and desires of the community and to identify and discuss concerns and controversial issues throughout the General Plan process. One such concern involves the fact that Biggs currently has limited infill and redevelopment opportunities within its existing city limits and SOI. As a case in point, the 2009–2014 City of Biggs General Plan Housing Element, published and adopted in 2010, listed a total of only 16 vacant residential parcels within the city boundary, totaling 10.2 acres. The results of this situation have led to significant interest and pressure for the City to facilitate development of land outside of the current city limits. The City Council, various landowners, and some of the city's residents have expressed interest in the possibility of extending the current SOI and Planning Area to take advantage of growth opportunities presented by the city's unique location, topography, and visual, scenic, and natural resources.

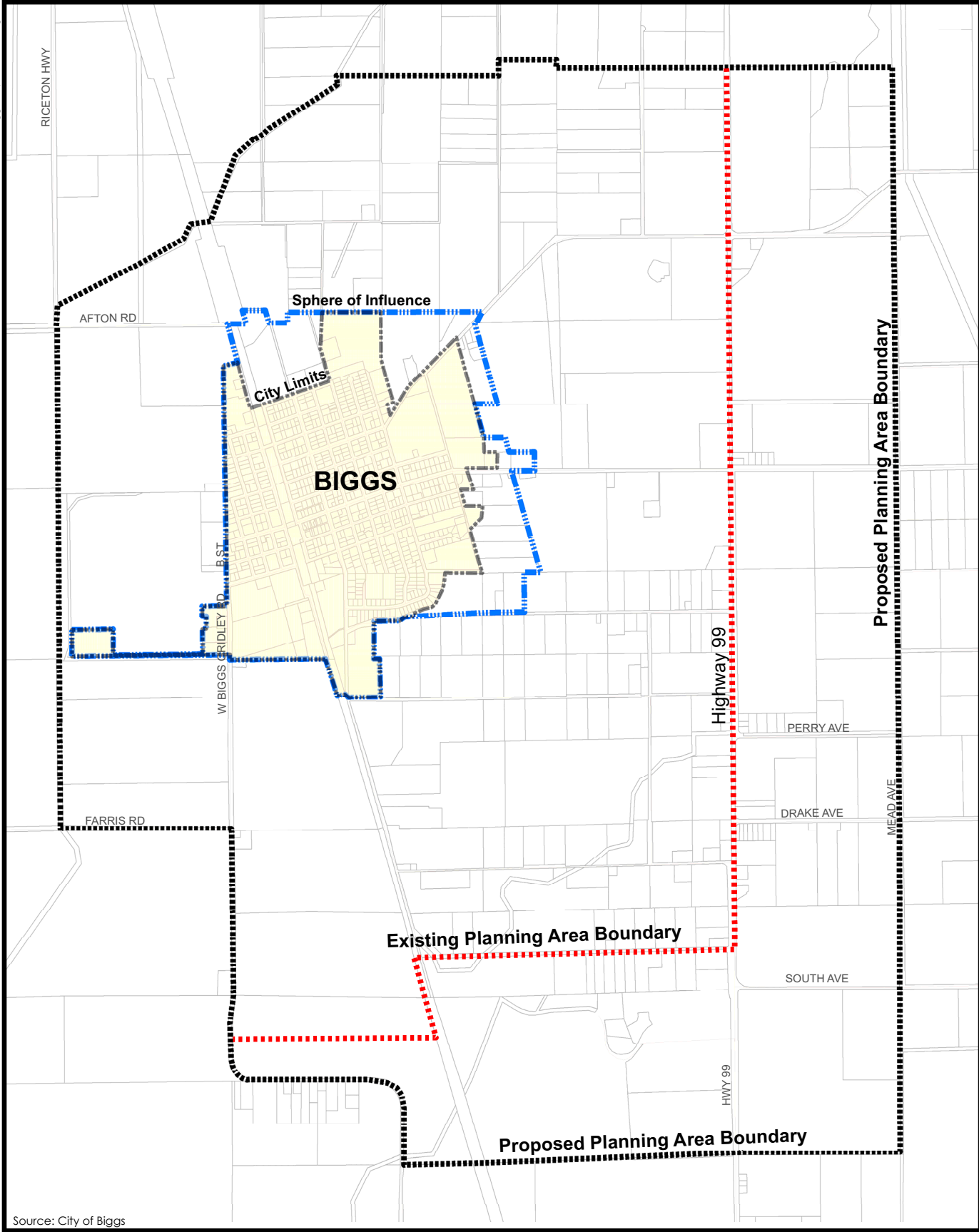
### **2.3 OBJECTIVES OF THE GENERAL PLAN**

#### **REQUIREMENT TO ADOPT A GENERAL PLAN**

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning. The general plan is required to address the following mandatory elements: land use, circulation, housing, conservation, open space, noise, and safety. A city or county may also adopt additional elements. A general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for each area addressed in the plan. The general plan is a long-range document that typically addresses the physical development of an area over a 20-year period. (The proposed Biggs General Plan addresses planning through the year 2035.) Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The City of Biggs recognizes and acknowledges the ability of planning to affect the quality of the lives of residents, the success of the local economy, the appearance of the community, and the ability of Biggs to respond to changing economic circumstances. The General Plan is also regularly referred to by individuals and businesses contemplating potential development activity within the community. The document explains what the community expects from new development and where development should occur. Goals in the General Plan also aid the City Council in seeking grants and other funding to address local issues and needs.





Source: City of Biggs

Not to Scale



**Figure 2.0-1**  
Proposed Planning Area





The General Plan has four main purposes:

- To enable the City Council to reach agreement on long-range development policies.
- To provide a basis for judging whether specific private development proposals and public projects are in harmony with City policies.
- To allow other public agencies and private developers to design projects which are consistent with City policies or to seek changes in those policies through the process of amending the General Plan.
- To provide an agreement between the City and outside agencies for development in unincorporated portions of the Planning Area.

### 2.4 GENERAL PLAN COMPONENTS AND CHARACTERISTICS

The proposed project consists of adoption of a new General Plan for the City of Biggs. The proposed General Plan consists of nine elements. Each General Plan element contains a brief discussion of the legal requirements; goals, policies, and actions to address required topics; and narrative text as necessary to provide understanding of the issues addressed. Goals state an ideal resolution of the issue under consideration. Policies are a specific statement in the form of text or a diagram that helps clarify and define the goal statement. Actions are specific measures that are readily quantifiable and help move toward attainment of the goal.

#### LAND USE ELEMENT

The Land Use Element provides guidance for the physical form of the community. The Land Use Diagram (see **Figure 2.0-2**) identifies the existing and proposed land uses within the city. The Land Use Diagram is supported by descriptions of allowed uses and development densities for each land use designation. Additionally, the Land Use Diagram identifies those areas where the City anticipates growth in the future, with the intent of avoiding incompatible land use changes by neighboring agencies and jurisdictions.

#### CIRCULATION ELEMENT

The Circulation Element provides a framework to guide transportation planning throughout the city and the Planning Area. The element is coordinated and consistent with portions of the Land Use, Community Enhancement, Public Facilities and Services, and Public Health and Safety elements addressing topics directly related to circulation and transportation. Discussion topics include the roadway network, road improvement standards guidelines, road maintenance, pedestrian and bicycle circulation, railroad, and public transit. The proposed Circulation Plan is shown in **Figure 2.0-3**.

#### HOUSING ELEMENT

The Housing Element establishes policies in an effort to ensure all segments of the community are provided an opportunity for decent and affordable housing. As housing elements must be updated every five years per state law, this element was prepared and adopted separately in May 2010. The next update of the housing element will occur in 2014.

## **2.0 PROJECT DESCRIPTION**

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### **OPEN SPACE AND RECREATION ELEMENT**

This element addresses managed resource production (agriculture and mineral extraction), biological resources, air quality, and water resources. A description of natural resources in the vicinity of the city is provided.

### **ECONOMIC DEVELOPMENT ELEMENT**

The Economic Development Element addresses efforts that the City will take to bring additional primary industries, jobs, and other types of industry to Biggs, as well as efforts the City will take to protect existing jobs in the community.

### **NOISE ELEMENT**

The primary purpose of the Noise Element is to clarify policies and standards by which the local government can limit the exposure of the community to excessive noise levels. Technical data relating to mobile and fixed sources is collected into a set of noise control policies and programs. The policies of the element are to be used as a basis for land use decisions.

### **PUBLIC HEALTH AND SAFETY ELEMENT**

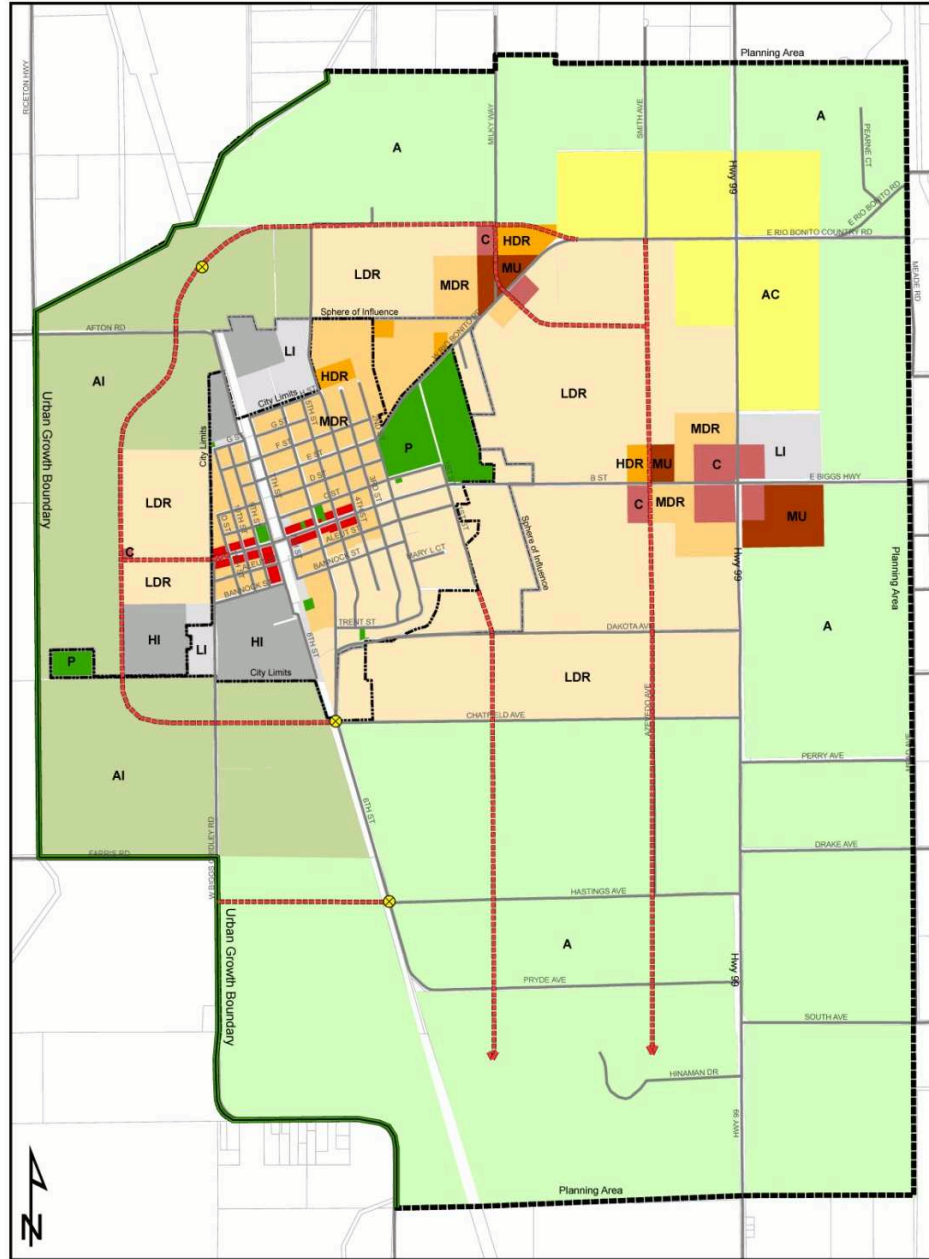
Issues discussed within the Public Health and Safety Element include emergency preparedness, flood hazard, fire and police protection, geologic hazards, hazardous materials and waste management, and rail service-related hazards.

### **PUBLIC FACILITIES AND SERVICES ELEMENT**

The Public Facilities and Services Element provides policies to address the community's need for infrastructure, sewer and wastewater systems, and other community services, as well as describing the status of public facilities and services within the Planning Area.

### **COMMUNITY ENHANCEMENT ELEMENT**

The Community Enhancement Element sets forth the City's vision on issues related to urban form and community design and establishes policies and programs to guide public improvements and private development. This element encourages and promotes those aspects of the city that are valued and desired by residents and which make Biggs a unique community with a positive memorable character.



**Preferred Land Use Alternative** 06-22-09

<ul style="list-style-type: none"> <li>--- City Limits</li> <li>--- SOI</li> <li>--- Planning Area</li> <li>--- Proposed Road</li> <li>--- Urban Growth Boundary</li> <li>⊙ Potential RR Crossing</li> </ul>	<ul style="list-style-type: none"> <li>A - Agriculture</li> <li>AC - Ag Commercial</li> <li>AI - Ag Industrial</li> <li>LI - Light Industrial</li> <li>HI - Heavy Industrial</li> <li>MU - Mixed Use</li> </ul>	<ul style="list-style-type: none"> <li>DMU - Downtown Mixed-Use</li> <li>C - Commercial</li> <li>HDR - High Density Residential</li> <li>MDR - Medium Density Residential</li> <li>LDR - Low Density Residential</li> <li>P - Public</li> </ul>
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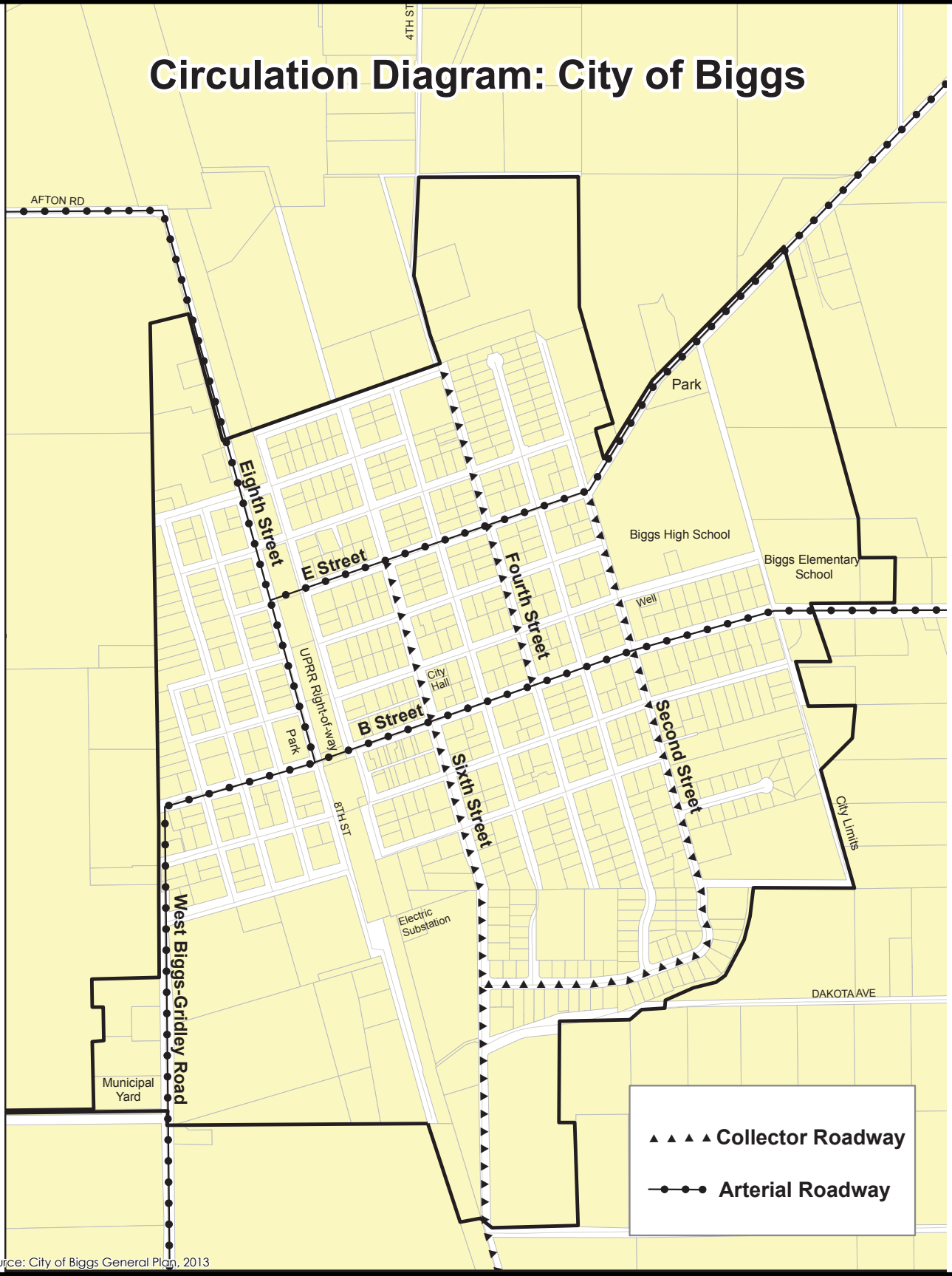
Source: City of Biggs

**Figure 2.0-2**  
Proposed Land Use Map





# Circulation Diagram: City of Biggs



Source: City of Biggs General Plan, 2013

Not to Scale



**Figure 2.0-3**  
Proposed Circulation Diagram







## **2.5 GENERAL PLAN LAND USE CONCEPT**

The Land Use Element describes both the existing and future pattern of the city and provides the foundation for how the city will grow and develop over time. While the cornerstone of the General Plan is the Land Use Diagram, which graphically depicts the desired land use pattern of the City, the goals, policies, and actions set the course and provide direction for how that vision is to be achieved.

In January 2011, the Butte County Association of Governments (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, which would result in the potential to double the current population size by the year 2035. It is noteworthy that the growth rates assumed within the BCAG projections are optimistic. Based on the city's historical growth rates and acknowledging the current market conditions, such growth rates may not be reflective of future growth trends. For instance, from 2000 to 2010, the city experienced a slow decrease in population from 1,793 to 1,707. A review of the population and growth figures from the California Department of Finance (DOF 2013) suggests that the population of Biggs continued to decrease from 1,707 in 2010 to 1,689 in 2012. As stated above, the 2013 population of the city is 1,692.

Unless regional conditions change significantly in coming years, an average growth rate of 0 percent to 1 percent annually is more likely. However, planning for a slightly higher rate of growth ensures that the General Plan will accommodate development should economic conditions in the region improve and helps to ensure the availability of land to accommodate future conditions. A 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. This growth rate projection is based on a variety of factors, including historic growth trends, local demographic and economic conditions, and community objectives and desires.

Expansion of commercial and industrial uses has been quite slow in recent years. The proposed General Plan assumes between 10 to 30 acres of new industrial development could occur between 2015 and 2020. Commercial development assumed under the proposed General Plan includes intensified uses along B Street and the need for 5 to 10 acres of new commercial development within the city limits to accommodate the projected increase in overall city population.

The land use concept in the General Plan has been developed to accommodate projected population increases and make sure Biggs is strategically positioned to manage future growth and to capture positive growth opportunities. The proposed Land Use Diagram and policy orientation of the proposed General Plan seek to accommodate both the need for a strong and vibrant downtown core and additional commercial service and employment-generating land use locations along major transportation routes. The General Plan provides for both of these options and utilizes a land use concept that focuses nonresidential land use at important transportation hub locations. Industrial land uses have been located to take advantage of existing municipal infrastructure as well as land use compatibilities with existing uses and the opportunities presented by the railroad tracks.

As previously described, Biggs currently has limited infill and redevelopment opportunities within its existing city limits and SOI (only 16 vacant residential parcels within the city boundary, totaling 10.2 acres). The results of this situation have led to significant interest and pressure for the City to

## 2.0 PROJECT DESCRIPTION

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facilitate development of land outside of the current city limits. General Plan Land Use Element Goal LU-5 and its associated policies proposes the active pursuit of annexing lands outside of the city limits to allow for coordinated, long-term planning, to reduce the potential for the approval of incompatible uses on unincorporated land adjacent to the city, and to take advantage of growth opportunities presented by the city's unique location, topography, and visual, scenic, and natural resources.

The General Plan establishes seven key land use goals in order to aid in addressing these issues:

- Goal LU-1:** Maintain and promote the qualities which make Biggs a desirable community.
- Goal LU-2:** Manage the growth of the city to promote a balance land use pattern throughout the city.
- Goal LU-3:** Provide for a full range of housing and lifestyle opportunities.
- Goal LU-4:** Promote community design elements and revitalization efforts that enhance and complement the city as a whole.
- Goal LU-5:** Actively engage in decision-making and public input opportunities on land use, transportation, and resource issues outside of the city limits that have an impact on the city.
- Goal LU-6:** Support efforts to redevelop and revitalize older and deteriorating portions of the city.
- Goal LU-7:** Preserve and protect the viability of agricultural areas surrounding the city and within the Planning Area while promoting planned and sustainable growth.

### LAND USE DIAGRAM

The proposed General Plan includes a Land Use Diagram, which depicts the location and distribution of land use designations in the Planning Area (see **Figure 2.0-2**). It is important to note that the proposed General Plan introduces several new mixed-use land use designations not provided in the 1998 General Plan. In addition, the Land Use Diagram identifies seven Special Planning Districts in Biggs, which have been defined to document the major planning issues of areas that may be developed during the term of the General Plan. Additionally, the general character and anticipated uses envisioned by the City are described in the proposed General Plan for each Special Planning District. The Special Planning Districts narratives of the proposed General Plan are envisioned as supplemental information intended to provide additional details about specific areas of the city and to provide an enhanced level of information for the areas described. The narrative descriptions are intended to portray uses the City would encourage within the given area. For purposes of development, the base General Plan designations depicted on **Figure 2.0-2** provide the applicable land use designation and the parcel-specific zoning designation describing the appropriate uses.

- **B Street Corridor Commercial District.** This district forms the downtown core of the community and includes virtually all the commercial businesses within the existing city limits of Biggs.
- **North Area Residential District.** The North Area Residential District is located north of H Street, east of Fourth Street, and northwest of Rio Bonito Road. This district is currently in primarily agricultural uses, interspersed with rural residential homesites.

- **Southeast Area Residential District.** The Southeast Area Residential District is located generally south and east of the existing city limits and outside of the developed area of the city. This area includes land east of First Street and south of B Street, and wraps around the southeast corner of Biggs to encompass properties adjacent to Dakota Avenue.
- **West Area Industrial/Residential District.** This district is located in the southwest portion of Biggs and is adjacent to the UPRR tracks on its eastern edge, wrapping around the southwest and western edges of the city. The developed properties in this area are currently utilized for primarily public facility, heavy industrial, and agricultural industrial purposes.
- **North Area Industrial District.** The North Area Industrial District, located north of H Street, east of the UPRR tracks, and west of Fourth Street, is dominated by the existing Red Top Rice Growers rice drying facility, which has been active for more than 50 years. Existing development within this district consists primarily of the Red Top facility, agricultural operations, and limited rural residential development within the unincorporated county area.
- **State Route 99/West Rio Bonito Special District.** This district is located to the north and south of West Rio Bonito Road and to the west of State Route 99. This land is in use for agricultural and agricultural commercial purposes, with limited rural residential development supporting the agricultural uses.
- **State Route 99/B Street Mixed-Use Core District.** Located between the Biggs city limits and State Route 99, existing land uses within this district consist primarily of agricultural tree-crop uses along with limited commercial and rural residential uses.

### GENERAL PLAN UPDATE THEORETICAL BUILDOUT CONDITIONS

The theoretical buildout scenario is included to provide the reader with the ability to understand the worst-case scenario of full, but theoretical development of the proposed General Plan. The theoretical buildout scenario demonstrates the maximum residential and nonresidential development levels that could theoretically be achieved under the proposed General Plan. **Table 2.0-1** summarizes the theoretical buildout projections of the General Plan Planning Area under the proposed General Plan Land Use Diagram. As further discussed in Section 3.0, Introduction to the Environmental Analysis, buildout under the proposed General Plan is not expected to occur within the 2035 time frame of the proposed General Plan.

Unlike a population forecast such as that produced by BCAG described above, the theoretical buildout scenario does not have a time horizon, such as 2035, nor does it include transportation, demographic, existing land use, or economic assumptions typically used by a forecast model to provide more realistic land use planning data. Therefore, due to regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely. For instance, the proposed General Plan designates 594 acres as Agricultural Industrial, which allows industrial uses to cover 40 percent of this land. However, the intent of this designation is to allow for the option of more intensive agricultural processing such as rice mills, hulling operations, dairies, and similar agricultural product processing that support agriculture operations. The principal land use remains agriculture; however, direct agricultural-supporting industrial uses may be permitted as an option for the agricultural operation. Therefore, it is not intent of the General Plan to develop 40 percent of these lands into industrial uses, but rather to provide agricultural operations with flexibility and minimal regulatory constraints to operate successfully.

## 2.0 PROJECT DESCRIPTION

Nonetheless this EIR includes an analysis of theoretical buildout because the General Plan land use categories provide the theoretical capacity for residential units and nonresidential building square feet to allow the buildout estimates presented in **Table 2.0-1**. (Theoretical buildout is also analyzed in order to be responsive to case law, as a 2003 court decision regarding the El Dorado County General Plan required that El Dorado County address theoretical buildout.) For purposes of the analysis in this EIR, it was assumed that theoretical buildout would occur by 2035.

**TABLE 2.0-1  
THEORETICAL BUILDOUT CONDITIONS FOR THE  
PROPOSED GENERAL PLAN PLANNING AREA**

Housing and Population Factor	Existing Condition (2013)	Future Growth Potential	Total Theoretical Buildout Condition
Residential Units	615 <sup>1</sup>	5,744	6,359
Population	1,692 <sup>1</sup>	15,922	17,614
Nonresidential Factor	Existing Condition (2013)	Future Growth Potential <sup>3</sup>	Total Theoretical Buildout Condition
Commercial Square Feet	179,902 <sup>2</sup>	909,855	1,089,757
Industrial Square Feet	561,150	5,560,424	6,121,574
Public Square Feet	627,897 <sup>4</sup>	298,298	926,195
<b>Total Square Footage</b>	<b>1,368,949</b>	<b>6,768,577</b>	<b>8,137,526</b>

Sources: <sup>1</sup>Data sourced from DOF 2013. <sup>2</sup>Data sourced from Biggs Economic Development & Market Analysis Data (Biggs 2007).

Notes:

<sup>3</sup> Twenty (20) acres of potential commercial omitted from calculation to account for agricultural buffer zone, and 86 acres of potential industrial omitted from calculation to account for western boundary buffer zone, wastewater treatment plant buffer zone, and residential buffer zones.

<sup>4</sup> Includes all public facility building space as well as entire wastewater treatment plant and all City parkland. Appendix 3.0-1 includes a description of the land use estimate methodology with a spreadsheet showing the assumed land use mix and distribution and site development considerations for each of the land use designations included in the proposed Land Use Diagram.

## 2.6 INTENDED USES OF THE EIR AND APPROVAL PROCESS

The Biggs General Plan will be presented to the City of Biggs Planning Commission for review, comment, and recommendations. The City Council, as the City's legislative body, is the approving authority for the General Plan. In order to approve the General Plan, the City Council would have to take the following actions:

- Certification of the City of Biggs General Plan EIR
- Adoption of required findings for the above actions, including required findings under the CEQA Guidelines, Sections 15090, 15091, and 15093
- Adoption of the City of Biggs General Plan
- Adoption of the update to the City of Biggs Zoning Code

## **2.7 OTHER PLANNING ACTIVITIES RELATED TO THE PROPOSED GENERAL PLAN**

### **URBAN GROWTH AND ANNEXATION**

Future growth opportunities in Biggs are constrained by the small size of the city and its SOI as well as the highly developed nature of the existing city. The analysis undertaken as part of the preparation of the City's Housing Element identified only a limited number of urban infill opportunities remaining within the existing city limits for new residential development and only one undeveloped infill site for new commercial development. As a result of the limited options remaining in the city for new development, the City will need to look beyond its existing developed core for new opportunities. The outward development of the city presents numerous challenges related to the installation of municipal services and infrastructure to support new development as well as procedural and policy issues related to updating municipal services plans and the City's SOI, the annexation of property, and the undertaking of the necessary environmental analysis documents. Undertaking the necessary efforts to achieve the vision of the proposed General Plan will take a focused commitment by the City.

However, along with the procedural and policy issues that result from the need to expand in an outward direction come the potential benefits to the city resulting from new commercial and employment-generating uses. As new development will need to be planned "from the ground up," the City is in a desirable position of being able to ensure that future projects advance the goals and objectives of the proposed General Plan and are designed in a way that enhances the overall city.

#### **Relationship to LAFCo Policy**

There is an additional agency that has influence on the City's ability to implement the proposed General Plan, in particular the proposed Land Use Diagram. The Butte Local Agency Formation Commission (LAFCo) reviews and evaluates all proposals for the formation of special districts, incorporation of cities, annexation to special districts or cities, and consolidation or merger of districts with cities.

As part of the general plan process, it is typical for cities to assess changes to the SOI to meet the community's vision for the future, as is the case with the proposed Biggs General Plan. However, the proposed General Plan itself is not a SOI amendment request or application. There are specific requirements and processes administered by Butte LAFCo for SOI amendment requests. The City would prepare supporting materials and pursue any SOI amendment request separately from the proposed General Plan and EIR process.

Implementation of the proposed General Plan, specifically approval of development outside of the City's current SOI, would require LAFCo approval of a SOI expansion and annexation of those areas into the city. This EIR is designed to programmatically and comprehensively analyze impacts associated with implementation of the proposed General Plan, including expansion of the City's SOI and future annexations consistent with the Land Use Diagram.

### **HABITAT CONSERVATION PLAN/NATURAL COMMUNITY CONSERVATION PLAN**

The City is a participant in the Butte Regional Conservation Plan/Natural Community Conservation Plan process which, as of the writing of this document, is being drafted by BCAG. The plan is a comprehensive and broad-based approach to biological resource preservation. This effort will identify the most important areas to preserve for permanent protection of plants, animals, and habitats, but also allow for compatible land development, urban growth, and

## 2.0 PROJECT DESCRIPTION

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other economic activities. The Butte Regional Conservation Plan/Natural Community Conservation Plan is a voluntary plan that provides comprehensive species, wetlands, and ecosystem conservation, contributes to recovery of endangered species, and establishes a more streamlined process for biological resource-related permitting. The plan area covers approximately two-thirds of Butte County (564,270 acres) and is evaluating coverage of 36 special-status species.

### OTHER GOVERNMENTAL AGENCY APPROVALS

Additional subsequent approvals and permits that may be required from local, regional, state, and federal agencies in the processing of subsequent development permits include, but are not limited to, the following:

- Butte County Air Quality Management District (monitors air quality and has permit authority over certain types of projects and facilities)
- Butte County Airport Land Use Commission (regulates land planning in the vicinity of Butte County airports in order to protect public health, safety, and welfare)
- Butte County Association of Governments (develops federal and state transportation plans and programs in order to secure transportation funding for the region's highways, transit, streets and roads, pedestrian and other transportation system improvements; policymaking agency for the region's public transit service)
- California Department of Transportation (Caltrans) approval of improvements and/or funding for future improvements associated with state highway facilities
- Extension of service and/or expansion of infrastructure facilities by the City or other providers
- California Department of Fish and Wildlife approval of potential future streambed alteration agreements, pursuant to the Fish and Game Code; approval of any future potential take of state-listed wildlife and plant species covered under the California Endangered Species Act
- Central Valley Regional Water Quality Control Board (water quality certification pursuant to Section 401 of the Clean Water Act; National Pollutant Discharge Elimination System permit)
- US Army Corps of Engineers (USACE) approval of any future wetland fill activities, pursuant to the federal Clean Water Act
- US Fish and Wildlife Service (USFWS) approvals involving any future potential take of federally listed wildlife and plant species and their habitats covered under the federal Endangered Species Act
- US Environmental Protection Agency (EPA) concurrence with Section 404 of the Clean Water Act permit

### REFERENCES

Biggs, City of. 2007. *Economic Development and Market Analysis Data*.

DOF (California Department of Finance). 2013. *Population and Housing Estimates for Cities, Counties, and the State 2010–2013*.





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## **3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS**

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## 3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

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### ANALYSIS ASSUMPTIONS USED TO EVALUATE THE IMPACTS OF THE CITY OF BIGGS GENERAL PLAN

#### BASELINE ENVIRONMENTAL CONDITIONS ASSUMED IN THE DRAFT EIR

The environmental setting of the City of Biggs is described in the individual technical sections of this Draft EIR (see Sections 3.1 through 3.14). In general, these sections describe the conditions of the City of Biggs as they existed when the Notice of Preparation (NOP) for the project was released on July 13, 2012. In addition, the Draft EIR also includes any setting information that may have been updated since the release of the NOP.

#### GENERAL PLAN GROWTH PROJECTIONS

In January 2011, the Butte County Association of Governments (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, which would result in the potential to double the current population size by the year 2035. Unless regional conditions change significantly in coming years, an average growth rate of 0 percent to 1 percent annually, based on historic growth trends, is more likely. However, planning for a slightly higher rate of growth ensures that the General Plan will accommodate development should economic conditions in the region improve and helps to ensure the availability of land to accommodate future conditions. A 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 for a total of 4,059 people living in Biggs in 2035.

The proposed General Plan assumes between 10 to 30 acres of new industrial development could occur between 2015 and 2020. Commercial development assumed under the proposed General Plan includes intensified uses along B Street and the need for 5 to 10 acres of new commercial development within the city limits to accommodate the projected increase in overall city population.

#### PROJECTED THEORETICAL BUILDOUT CONDITIONS ASSOCIATED WITH PROPOSED GENERAL PLAN

Future growth in Biggs is guided by the land uses identified in the proposed General Plan Land Use Diagram (see **Figure 2.0-2**). The proposed Planning Area boundary includes property currently in Butte County, but outside the City of Biggs jurisdictional limit. The proposed General Plan does not require these properties to annex to the city; however, for EIR analysis, these properties are assumed to be located within the City of Biggs at full General Plan implementation. In other words, the EIR essentially assumes that the future City of Biggs boundary and the Planning Area are contiguous. The Draft EIR impact analysis, including temporary (i.e., construction-related) and operational, direct and indirect environmental effects, is based on the development anticipated in the proposed Land Use Diagram and the transportation improvements identified in the proposed Circulation Plan (see **Figure 2.0-3**).

**Table 3.0-1** summarizes total housing and population for the proposed General Plan theoretical buildout conditions, which are a combination of development conditions in 2011 and future development projections. To estimate the theoretical buildout condition for the proposed Land Use Diagram, development assumptions were established in keeping with the land use designation and policies in the proposed General Plan. These assumptions were used to analyze the impacts associated with future development. The development assumptions are intended to provide an accurate estimate of future development by establishing average estimated assumptions, rather than overstating impacts by assuming maximum development potential.

### 3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

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**Appendix 3.0-1** includes a description of the land use estimate methodology with a spreadsheet showing the assumed land use mix and distribution as well as site development considerations for each of the land use designations included in the proposed Land Use Diagram.

As previously described in Section 2.0, the theoretical buildout scenario is included to provide the reader with the ability to understand the worst-case scenario of full, but theoretical development of the proposed General Plan. The theoretical buildout scenario demonstrates the maximum residential and nonresidential development levels that could theoretically be achieved under the proposed General Plan. Buildout under the proposed General Plan is not expected to occur within the 2035 time frame of the proposed General Plan. This is evidenced by the fact that between 1990 and 2000, the city's population experienced an average annual increase of just 1.3 percent. Furthermore, Biggs actually diminished in population between 2000 and 2012 by an estimated 97 people. Therefore, due to regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely.

**TABLE 3.0-1  
BUILDOUT CONDITIONS FOR THE PROPOSED GENERAL PLAN**

<b>Housing and Population Factor</b>	<b>Total Buildout Condition</b>
Residential Units	6,359
Population	17,614
<b>Nonresidential Factor</b>	<b>Total Buildout Condition</b>
Commercial Square Feet	1,089,757
Industrial Square Feet	6,121,574
Public Square Feet	926,195
<b>Total Maximum Square Footage</b>	<b>8,137,526</b>

#### STRUCTURE OF THE ENVIRONMENTAL IMPACT ANALYSIS

Sections 3.1 through 3.14 of this Draft EIR contain a detailed description of current setting conditions (including applicable regulatory setting), an evaluation of the direct and indirect environmental effects resulting from the implementation of the proposed General Plan, identification of proposed General Plan goals and policies, and City of Biggs Municipal Code sections that mitigate environmental effects. Furthermore, Sections 3.1 through 3.14 of this Draft EIR contain additional feasible mitigation measures and identify whether significant environmental effects of the project would remain after application of proposed goals, policies, and feasible mitigation measures. The individual technical sections of the Draft EIR include the following information:

#### **Existing Setting**

The existing setting is based on conditions as they existed when the NOP for the proposed General Plan was released on July 13, 2012.

#### **Regulatory Framework**

This subsection identifies applicable federal, state, regional, and local plans, policies, laws, and regulations that apply to the technical area of discussion.

#### Impacts and Mitigation Measures

The Impacts and Mitigation Measures subsection identifies direct and indirect environmental effects associated with implementation of the proposed General Plan. Standards of significance are identified and used to determine whether the environmental effects are considered "significant" and require the application of mitigation measures. Each environmental impact analysis is identified numerically (e.g., Impact 3.3.1 – Impacts to Applicable Air Quality Plan) and is supported by substantial evidence.

Mitigation measures for the proposed General Plan were developed through a review of the environmental effects of the proposed General Plan by consultants with technical expertise as well as by environmental professionals. The mitigation measures identified consist of "performance standards" that identify clear requirements which would avoid or minimize significant environmental effects (the use of performance standard mitigation is allowed under CEQA Guidelines Section 15126.4(a) and is supported by case law *Rio Vista Farm Bureau Center v. County of Solano* ([1st Dist. 1992] 5 Cal. App. 4th at pp. 371, 375–376 [7 Cal. Rptr. 2d 307])).

#### APPROACH TO THE CUMULATIVE IMPACT ANALYSIS

CEQA Guidelines Section 15130 requires that EIRs include an analysis of the cumulative impacts of a project when the project's effect is considered cumulatively considerable. Each technical section in the Draft EIR considers whether the project's effect on anticipated cumulative setting conditions is cumulatively considerable (i.e., a significant effect). "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (CEQA Guidelines Section 15065(a)(3)). The determination of whether the project's impact on cumulative conditions is considerable is based on a number of factors, including consideration of applicable public agency standards, consultation with public agencies, and expert opinion. The environmental effects of potential development within Biggs are incorporated in the cumulative impact analysis contained within each technical section. In addition, Section 4.0, Cumulative Impacts, provides a summary of the cumulative impacts associated with the General Plan.

#### Definition of Cumulative Setting

State CEQA Guidelines Section 15130 requires that EIRs include an analysis of the cumulative impacts of a project when the project's effect is considered cumulatively considerable. In general, the cumulative setting conditions considered in this Draft EIR are based on:

- **Local Adopted General Plans.** The existing land use plans in the Biggs region, including those of Butte County and the cities of Chico, Gridley, and Oroville.
- **Large-Scale Development Projects.** Consideration of large-scale proposed and approved development projects listed in **Table 3.0-2**. This list of projects is intended to describe large-scale proposed, approved, and reasonably foreseeable future development activities in the Biggs region that, when considered with the proposed General Plan, have the potential to have cumulatively considerable impacts. It is not intended to be an all-inclusive list of projects in the Biggs region.
- **Effect of Regional Conditions.** Consideration of background traffic volumes and patterns on highways (e.g., State Route 99), background air quality conditions, and other

### 3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

associated environmental conditions that occur in Butte County, both within and outside of the city.

- **Consideration of Existing Development Patterns.** Consideration of the current environmental conditions of existing development and past land use activities in the region.

Each technical section of the Draft EIR includes a description of the geographic extent of the cumulative setting based on the characteristics of the environmental issue under consideration as set forth in Section 15130(b) of the CEQA Guidelines.

**TABLE 3.0-2  
LARGE-SCALE DEVELOPMENT PROJECTS**

Project Name	Project Description	Project Location	Status of Project
Helena Chemical Company UP10-003, ZCA-0002, LLA 11-0001	This proposed project includes the development of approximately 10 acres of undeveloped land, and construction of a regional agricultural fertilizer and supply receiving and distribution center. With the development footprint, the applicant will construct an office, storage buildings for dry and liquid agricultural materials, a warehouse, and a storm water retention basin. The project will also include the creation of a railroad spur connection to the adjacent Union Pacific Railroad (UPRR) line for bulk delivery of agricultural fertilizer and a driveway on the southern parcel border.	The project site is located on the Midway near the unincorporated community of Nelson.	Proposed
Lake Oroville Area Public Utility District Sphere of Influence (SOI) Update	The Lake Oroville Area Public Utilities District proposes an update to their existing SOI to add 1,956 parcels totaling approximately 10,643 acres, which represents a doubling of the LOAPUD's current SOI.	The SOI addition areas are generally to the west, south, and east of the current LOAPUD SOI and include the proposed Rio D' Specific Plan area along SR 70 south of Oroville, the Power House Hill Road/Lone Tree Road area, the future South Ophir Specific Plan area, the unincorporated community of Palermo and surrounding area, the Miners Ranch Road area, and the Stringtown Mountain Specific Plan area.	Proposed
Biggs Wastewater Treatment Plant Enhancement Project	This project involves the improvement of the current municipal wastewater effluent disposal method employed at the Biggs Wastewater Treatment Plant in an effort to comply with the Central Valley Regional Water Quality Control Board's Waste Discharge Requirement. The project will change the waste discharge method from a direct discharge facility to a land discharge facility.	The project involves the analysis of two potential effluent land application locations located immediately adjacent to the City's existing wastewater treatment plant site.	Proposed

### 3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

Project Name	Project Description	Project Location	Status of Project
Gridley Farm Labor Rehabilitation Project	The project will rehabilitate the 53 existing cinderblock duplex buildings (106 existing units) and the on-site management office and will demolish the existing 24 single-family detached wood-frame dwellings primarily located on the western portion of the site. Planned rehabilitation work includes removal of interior partition walls, framing, additional insulation, roofing, stucco, doors, windows, flooring, cabinetry, appliances, HVAC units, and electrical upgrades. In addition to the rehabilitation, work also includes replacement of the aging on-site water system and improvements to the aging on-site sewer infrastructure.	The project is located within the south-central portion of Butte County approximately 2 miles east of Gridley in the unincorporated area of the Butte County. The project area is entirely within a 56-acre parcel owned by the Housing Authority of the County of Butte, accessed via East Gridley Road, and is immediately west of the Feather River.	Approved
Rio d'Oro Specific Plan	The project proposes implementation of the Rio d'Oro Specific Plan on a 685-acre site in unincorporated Butte County south of Oroville. As proposed, the project would include 2,700 residential units and two commercial centers comprising 248,000 square feet of space. Public facilities would include a school site and public safety office space. Approximately 65 acres are proposed for parks and open space; 246 acres would be placed in environmental conservation. The project would require adoption of the Rio d'Oro Specific Plan, amendment to the General Plan Map from "Specific Plan to be Developed" to "Rio d'Oro Specific Plan"; zoning would be revised be consistent with General Plan Map amendment.	The project site is located south Oroville at State Route 70 and Ophir Road.	Proposed

#### COMMON TERMINOLOGY USED IN THE DRAFT EIR

This Draft EIR uses the following terminology to describe the environmental effects of the proposed General Plan:

**Less Than Significant Impact:** A less than significant impact would cause no substantial change in the physical condition of the environment (no mitigation would be required for project effects found to be less than significant).

**Significant Impact and Potentially Significant Impact:** A significant impact would cause (or would potentially cause) a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects using specified standards of significance provided in each technical section of the DEIR. Identified significant impacts are those where the project would result in an impact that can be measured or quantified, while identified potentially significant impacts are those impacts where an exact measurement of the project's effects cannot be made but substantial evidence indicates that the impact would exceed standards of significance. A potentially significant impact may also be an impact that may or may not occur and where a definite determination cannot be foreseen. Mitigation measures and/or project alternatives are identified to avoid or reduce project effects to the environment to a less than significant level.

### 3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

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**Significant and Unavoidable Impact:** A significant and unavoidable impact would result in a substantial negative change in the environment that cannot be avoided or mitigated to a less than significant level if the project is implemented.

**Less Than Cumulatively Considerable Impact:** A less than cumulatively considerable impact would cause no substantial change in the physical condition of the environment under cumulative conditions.

**Cumulatively Considerable Impact:** A cumulatively considerable impact would result when the incremental effects of an individual project result in a significant adverse physical impact on the environment under cumulative conditions.

**Proposed General Plan:** The proposed General Plan is the proposed project and includes the policy document consisting of nine elements and the Land Use Diagram.

**Standards of Significance:** A set of significance criteria to determine at what level or “threshold” an impact would be considered significant. Significance criteria used in this EIR include the CEQA Guidelines; factual or scientific information; regulatory performance standards of local, state, and federal agencies; and City goals and policies. Specified significance criteria used by the City of Biggs are identified at the beginning of the impact analyses in each technical section of the DEIR.

**Subsequent Projects/Activities:** These are anticipated development projects (e.g., residential, commercial, industrial, or recreational projects) that could occur in the future as a result of the implementation of the proposed General Plan.

#### ENVIRONMENTAL IMPACT REPORTS USED IN THIS EIR

This Draft EIR utilizes technical information and analyses from the previously prepared and certified County of Butte General Plan EIR, which is supported by the CEQA Guidelines (see Sections 15148 [Citation] and 15150 [Incorporation by Reference]).



## **3.1 AESTHETICS AND VISUAL RESOURCES**



## 3.1 AESTHETICS AND VISUAL RESOURCES

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This section describes the existing visual resources of Biggs, summarizes its landscape characteristics, and discusses the impacts associated with implementation of the proposed General Plan. The analysis focuses on the anticipated alteration of the landscape characteristics and potential visual resource impacts in the city. Key issues addressed in this section include alteration of existing scenic resources (potential degradation of scenic resources or views of scenic resources), visual character, and urban lighting characteristics (increased nighttime light and daytime glare). Information for this section comes from City staff, field observations, and other public documents.

### 3.1.1 EXISTING SETTING

#### EXISTING CONDITIONS

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.

#### Overall Community Structure

The development of Biggs has been strongly influenced by major transportation corridors. Originally, the city's development was influenced by the railroad, adjacent to which the downtown area and city were formed. Later, the construction of Highway 99W approximately 1 mile to the east of the current city limits served to orient the city around B Street, the city's main connector to State Route 99.

The urban community is distinguished by the presence of both native and exotic species maintained in a relatively static composition within a downtown, residential, or suburban setting. Vegetation in these areas consists primarily of introduced ornamental trees and shrubs and manicured lawns as well as invasive weeds in disturbed areas. Urban areas constitute approximately 464 acres in the Biggs Planning Area, which includes the city and some commercially developed areas along the State Route 99 corridor. By far the largest land use in Biggs is residential. Most of the housing consists of detached single-family dwellings. Of the 615 total dwelling units, only 35 (6 percent) are multi-family housing. There are no mobile home parks in the city, but the California Department of Finance estimates that 17 mobile homes exist in Biggs.

Public uses include schools, utilities, and parks. Family Park is approximately 1 acre in size and is located just east of the downtown area. Rio Bonito Park is a 7.2-acre shared facility with the Biggs Unified School District located adjacent to the Biggs High School campus. Biggs High School and Elementary School occupy adjacent sites in northeastern Biggs, totaling approximately 40 acres. Public service facilities for city residents are concentrated in the downtown area, including City Hall, the Post Office, the Police Department office, the Fire Department, and the Biggs Branch of the Butte County Library.

The portion of B Street located between Fifth and Seventh streets have always formed the commercial core of the city, forming a traditional main street area. This area includes small markets, the Post Office, and several historically significant buildings that are locally listed; however, the structures are not listed in the National Register of Historic Places (NRHP) or the California Register of Historic Places (CRHR). Most prominent is the Colonia Hotel, once the centerpiece of social life in Biggs. Several other locally historically significant buildings are located on a few streets surrounding B Street. The Sacramento Valley Bank Building, Carnegie

### **3.1 AESTHETICS AND VISUAL RESOURCES**

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Library, Methodist Church, and various residences around the community are excellent reminders of the city's past. All of these structures have significant historic architectural features. Mixed with the remaining older homes built in the 1800s are generally more modest dwellings of more recent construction.

#### **Natural Visual Features**

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 Biggs planning area 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.

The essentially flat terrain of Biggs once formed the historic floodplain for the Feather and Sacramento rivers. As mapped, perennial and ephemeral drainages occur throughout the Biggs Planning Area and occupy approximately 15 acres. These drainages are constructed irrigation and drainage ditches built, maintained, and operated by Reclamation District 833 (RD 833), which surround the city and adjacent agricultural lands. Two drain laterals surround the city: Hamilton Slough on the east and south, and a bypass lateral known as Lateral K along the north and west. The bypass lateral flows into Hamilton Slough southwest of Biggs adjacent to the City's wastewater treatment plant. A large agricultural area east of the city drains through the Biggs Unified School District property and joins the bypass lateral at the intersection of Second Street and Rio Bonito Road. Lateral E drains an area in the far southern portion of the Planning Area. While most of the drainages in the Planning Area are ephemeral in nature due to fluctuating seasonal irrigation runoff, Hamilton Slough contains some amount of water year-round. Thin stringers of remnants of oak woodlands and riparian habitat exist along Hamilton Slough.

#### **Nighttime Lighting Conditions**

Lighting conditions of the developed (city) portion of the Biggs Planning Area 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 of the Biggs Planning Area surrounding the city.

Sources of daytime glare include direct beam sunlight and reflections from windows, architectural coatings, glass, and other shiny reflective surfaces. Nighttime light illumination and associated glare can be divided into stationary and mobile sources. Stationary sources of nighttime light include structure illumination, decorative landscape lighting, lighted signs, sports field lighting, and streetlights. The primary source of mobile nighttime light is the headlights of motor vehicles. During winter nighttime hours, the ambient light in Biggs can be accentuated during periods of low cloudiness or fog, which reflects light, resulting in intensification of the amount of light.

**3.1.2 REGULATORY FRAMEWORK**

## STATE

**State Scenic Highway Program**

In 1963, the California legislature created the Scenic Highway Program to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to state highways. The state regulations and guidance governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. A highway may be designated scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. A scenic corridor is the land generally adjacent to and visible from the highway and is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon.

There are no state scenic highways in the Planning Area. The status of a scenic highway changes from "eligible" to "officially designated" when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a scenic highway.

**Nighttime Sky – Title 24 Outdoor Lighting Standards**

The California Energy Commission (CEC) has adopted energy efficiency standards for outdoor lighting for both the public and private sectors with the purpose of improving the quality of outdoor lighting and to help reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set by classifying areas by lighting zone. Areas can be designated as LZ1 (dark), LZ2 (low), LZ3 (medium), or LZ4 (high).

## LOCAL

**City of Biggs Municipal Code Chapter 14.55**

Chapter 14.55 of the Municipal Code provides a design review process for development in the city intended to promote a visual environment of high aesthetic quality. The Biggs Planning Department and Planning Commission promote responsible architectural design that is consistent with Biggs's character by enforcing the design guidelines as set forth in Chapter 14.55 of the Biggs Municipal Code. The Planning Department and Planning Commission 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.

**City of Biggs Municipal Code Section 14.55.080**

Section 14.55.080 of the Municipal Code requires that all exterior lighting be functional, subtle, and architecturally integrated with the site and building design. All exterior lighting has to be directed onto the site and away from adjacent properties.

## 3.1 AESTHETICS AND VISUAL RESOURCES

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### City of Biggs Municipal Code Section 14.60.130

Section 14.60.130 of the Municipal Code 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 directed outside the boundaries of the site.

### 3.1.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

An aesthetic or visual resource impact is considered significant if implementation of the project would result in any of the following:

- 1) Have a substantial adverse effect on a scenic vista.
- 2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- 3) Substantially degrade the existing visual character or quality of the site and its surroundings including the scenic quality of the foothills.
- 4) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

#### METHODOLOGY

The visual resource analysis is based on field review of the Biggs Planning Area and review of topographic conditions, as well as anticipated changes within the Planning Area from implementation of the proposed Land Use Diagram and other anticipated development in the Planning Area.

The following proposed General Plan policies and actions address visual quality and urban design:

- |                        |  |
|------------------------|--|
| <i>Policy LU-1.2</i>   | <i>(Design Considerations) – Ensure that individual development projects conform to the community design vision of the General Plan and enhance and reinforce the positive attributes of the City.</i>                 |
| <i>Action LU-1.2.1</i> | <i>(Design Review) – Following the adoption of the General Plan, adopt a formal Design Review process including design standards and guidelines.</i>   |
| <i>Action LU-1.2.2</i> | <i>(Design Review-Interim Conditions) – Prior to the adoption of formal Design Review program, apply the Design Guidelines presented within the Community Enhancement Element when reviewing development projects.</i> |
| <i>Policy LU-1.3</i>   | <i>(Small Town Character) – Require new development to promote the small town character of Biggs through the use of site and building design elements.</i>   |

### 3.1 AESTHETICS AND VISUAL RESOURCES

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- Policy LU-1.4 (High-Quality Development) – Promote high-quality, efficient and cohesive land utilization that minimizes negative impacts and environmental hazards on adjacent neighborhoods and infrastructure and which preserves existing neighborhoods from encroachment by incompatible land uses.
- 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 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-2.2.1 (Land Use Mix) – As part of the City's Annual Report process, evaluate and review the mix of land uses in the City to assure that a balance of uses exists as the City grows and to ensure that the Land Use Diagram adequately accommodates changing market conditions and regulatory changes.
- Policy LU-4.1 (Project Design) – New development shall incorporate planning and design elements that enhance the community character and integrate new development with existing developed areas of the City.
- Action LU-4.1.1 (Traditional Neighborhood Design) – Utilize traditional neighborhood design elements in the design and layout of new residential developments.
- Policy LU-4.2 (Urban Forest) – Require the planting of native and locally appropriate trees in all new developments to provide shade and visual interest.
- Policy LU-4.4 (Revitalization) – Improve the character and quality of existing development through the revitalization of blighted and underutilized development.

### 3.1 AESTHETICS AND VISUAL RESOURCES

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- Policy LU-4.4.1 (Infrastructure) – Seek improvement to existing infrastructure within residential areas of the City that are aging or that are not consistent with the City's current standards.
- Policy LU-4.4.2 (Streetscape Enhancement) – Consider the implementation of a streetscape enhancement project on B Street to define the City's downtown core area and to enhance the aesthetic and functional elements of the downtown area.
- Policy LU-6.1 (Preservation and Restoration) – Encourage the preservation and restoration of historic structures and important community features.
- Action LU-6.1.1 (Preservation and Restoration Programming) – Enact programs for rehabilitation and repair of existing sound residential, commercial and industrial buildings and community landmark features.
- Action LU-6.1.2 (Blight Removal) – Develop a more active program to remove blight and seriously sub-standard buildings, including methods for more effective enforcement of City Ordinances.
- Policy LU-7.1 (Compact Growth) – Promote compact city growth and phased extension of urban services to discourage sprawl and encourage development that improves agriculture and important public places.
- 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 one-hundred (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-2.2.5 (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 the City of Biggs and West Biggs-Gridley Road south of the City.
- 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.
- Action CR-4.2.1 (Hamilton Slough) – Pursue the development of a linear parkway and recreation corridor along Hamilton Slough in the southwestern portion of the city and require new development adjacent to the Slough to



### 3.1 AESTHETICS AND VISUAL RESOURCES

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dedicate sufficient land for this intent. Include components of habitat preservation and public recreation, as well as maintaining functions of storm water and irrigation water transport.

- 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-1.4 (Compatibility) – Ensure that new development is compatible with existing development through the integration of site design elements, building attributes, and/or community design features and patterns.
- Action CE-1.4.1 Incorporate building and development compatibility guidelines into the Design Review program.
- Policy CE-1.5 (Landscape Design) – Encourage the use of landscape designs and plantings that will result in an abundant and full tree canopy and shaded walkways and which minimize potential impacts to infrastructure through root intrusion and foliage drop.
- Action CE-1.5.1 Continue the City's tree planting and maintenance program as fiscally possible.
- Policy CE-2.3 (Streetscape) – Ensure that new development incorporates building design and site design elements that contribute to the overall sense of character in the city.
- Action CE-2.3.1 Incorporate examples of appropriate building and site design elements into the updated and revised Design Guidelines program.
- Policy CE-2.4 (Building Scale) – Ensure appropriate transitions between residential and nonresidential building scales and types.
- Action CE-2.4.1 Incorporate guidelines for addressing building height differences in the City's Design Guidelines.
- Action CE-2.4.2 As necessary, update standards within the City's zoning ordinance to address building height issues.
- 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.
- Action CE-3.3.1 Discourage the use of walls and physical barriers as a primary means of buffering unless necessary to address other environmental or site planning issues.

### 3.1 AESTHETICS AND VISUAL RESOURCES

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- Action CE-3.3.2 *Incorporate guidelines for the use of physical space and vegetative screening in the City's Design Guidelines program.*
- 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.*
- 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.*
- Action CE-6.1.2 *Continue to incorporate planting strips into the City's street design standards.*
- Policy CE-6.3 *(Streetscape features) – Incorporate streetscape design elements into the design of roadways to identify gateways, special districts, and points of interest.*
- Policy CE-7.1 *(Downtown Restoration) – Actively work with the owners of downtown buildings to restore historically significant structures.*
- Policy CE-7.2 *(Downtown Visual Master Plan) – As feasible, continue to implement the recommendations of the Downtown Visual Master Plan document.*

- Policy CE-7.3 (Street Furniture/Streetscape) – Promote the installation and use of unique or themed street furniture and streetscape elements in the city's downtown core area.*
- Policy CE-8.1 (Historic Structures) – Identify, protect, and promote the restoration of historic structures and physical reminders of Biggs's past when financially and physically feasible.*
- Action CE-8.1.1 Continue to work closely with owners of historically significant structures to facilitate maintenance and enhancement activities that maintain the historical characteristics of those structures.*
- Action CE-8.2 (Public Assistance) – Provide assistance as appropriate to developers that promote historic features as a part of their development design.*
- Action CE-8.2.1 Provide assistance as appropriate and available to groups or individuals that undertake historic restoration or preservation.*
- Policy CE-8.4 (Preservation) – Promote the preservation and revitalization of all historic structures and areas in Biggs where financially and physical feasible.*
- Action CE-8.4.1 Include standards in the City's Design Guidelines program that promote the retention of historic features and work to maintain the integrity of existing historic structures and features.*

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant visual resource impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that protect visual resources effects and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

#### **Substantial Adverse Effect on a Scenic Vista (Standard of Significance 1)**

**Impact 3.1.1** Implementation of the proposed General Plan could have a substantial effect on a scenic vista. However, implementation of proposed General Plan policy provisions and continued implementation of the City's Municipal Code would ensure that no adverse impact to a scenic vista would occur. Therefore, this impact is considered to be **less than significant**.

The City of Biggs is characterized by scenic views that include orchards of almonds, walnuts, prunes, and citrus, and fields of corn, wheat, rice, and beans. As discussed in Section 2.0, Project Description, the city currently has limited infill and redevelopment opportunities within its existing city limits and Sphere of Influence (SOI) (only 16 vacant residential parcels within the city boundary, totaling 10.2 acres). The results of this situation have led to significant interest and pressure for the City to facilitate development of land outside of the current city limits. General Plan Land Use Element Goal LU-5 and its associated policies propose the active pursuit of annexing lands outside of the city limits to allow for coordinated, long-term planning, to reduce the potential for the approval of incompatible uses on unincorporated land adjacent to the city, and to take advantage of growth opportunities presented by the city's unique location.

### 3.1 AESTHETICS AND VISUAL RESOURCES

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As discussed in the Existing Setting subsection above, scenic resources in the Biggs Planning Area, and thus scenic vistas that could be adversely affected by implementation of the General Plan, predominantly include views of the agricultural landscape and perennial and ephemeral drainages. In addition, views of the city's neighborhoods could be adversely affected.

**Table 2.0-1** in Section 2.0, Project Description, summarizes the theoretical buildout projections of the General Plan Planning Area under the proposed General Plan Land Use Diagram. While the realization of the intent of General Plan Land Use Element has the potential to increase development within the Planning Area and therefore impact existing scenic vistas, due to regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely. For instance, the proposed General Plan designates 594 acres as Agricultural Industrial, which allows industrial uses to cover 40 percent of this land. However, the intent of this designation is to allow for the option of more intensive agricultural processing such as rice mills, hulling operations, and similar agricultural product processing that support agriculture operations. The principal land use remains agriculture; however, direct agricultural-supporting industrial uses may be permitted as an option for the agricultural operation. Therefore, it is not intent of the General Plan to develop 40 percent of these lands into industrial uses, but rather to provide agricultural operations with flexibility and minimal regulatory constraints to operate successfully.

Furthermore, subsequent development would be subject to proposed General Plan policies, as well as existing City development and design standards set forth in the City's Municipal Code. Both the General Plan Land Use Element and the Community Enhancement Element facilitate a compact urban form through the efficient use of land and the phased extension of urban services in order to discourage sprawl and encourage development that improves agriculture (Policy LU-2.2, Policy LU-7.1, Action CR-2.2.5, and CE-1.1). As such, future development in the city would reduce the extent of outward city growth into agricultural areas, thus preserving the aesthetic quality and character of these resources. In addition, the Conservation and Recreation Element proposes the requirement of 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-2.2.1), as well as the allowance of vegetative screening and site design and grading options as methods of providing additional and scenic buffering of agricultural land uses from new development (Action CR-2.2.3). In addition, future development projects would be subject to Chapter 14.55 of the City's Municipal Code, 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 and Planning Commission promote responsible architectural design that is consistent with the city's character by enforcing the design guidelines as set forth in Chapter 14.55 of the Biggs Municipal Code. The Planning Department and Planning Commission 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 Biggs Planning 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). The Conservation and Recreation Element requires that the City pursue the development of a linear parkway and recreation corridor along Hamilton Slough in the southwestern portion of Biggs. This would be done in large part by requiring new development proposed adjacent to the slough to dedicate sufficient land for this intent.

Biggs retains a distinct identity because of its relative distance from other urban areas. Traveling into Biggs from any direction highlights the contrast of the city and its surrounding landscape. In addition, the city entrances provide a sense of structure and orientation to the urban environment. The General Plan Land Use Element requires that the City maintain the long-term boundaries between urban and agricultural uses in the west, thus ensuring that views displaying the contrast of the city and its surrounding landscape will be retained (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). Furthermore, as discussed above, the compact urban form facilitated by the General Plan would prohibit sprawl from adversely affecting transitional views between landscapes.

Biggs exhibits a strong grid pattern with well-defined limits, landscaped streets, a mix and diversity of lot sizes and housing types, and a clear neighborhood identity. The city is a distinct and unique community with a well-defined urban form, the most notable of which can be seen in the architecture and urban form of the downtown. The city's downtown business area is in the center of the community and, with the exception of the local schools, serves as the primary focal point for community activity. Currently the downtown includes small markets, the Post Office, and several historically significant buildings that are locally listed; however, the structures are not listed in the NRHP or the CRHR. Most prominent is the Colonia Hotel, once the centerpiece of social life in Biggs. Several other locally historically significant buildings are located on a few streets surrounding B Street. The Sacramento Valley Bank Building, Carnegie Library, Methodist Church, and various residences around the community are excellent reminders of the city's past. All of these structures have significant historic architectural features.

The city's original layout located the commercial and governmental functions of the community in its geographic center and adjacent to the primary transportation features in the area at the time—B Street and the newly installed railroad lines. Through the years, the city's downtown core has evolved from a thriving regionally significant hub of transportation and commerce containing hotels, restaurants, saloons, and basic services, to a bucolic "small-town America" downtown providing basic retail goods and services to city and local area residents, to a struggling commercial center grappling with changes in the regional economy, the elimination of proximity to regionally significant transportation features, and a declining local population base. However, whether through forced change as a result of catastrophic fires or elected change as a result of a modification in necessary services, the downtown area has remained the core of the city.

The proposed General Plan contains several provisions to improve the aesthetic character of the downtown. For instance, Community Enhancement Element Policy CE-4.4 requires the City to expand programs to strengthen the downtown area, and Policy CE-7.1 requires the City to actively work with the owners of downtown historically significant structures to restore them. The Community Enhancement Element also proposes to promote the installation and use of unique or themed street furniture, public art, and streetscape elements in the downtown (Policy CE-7.3 and Policy CE-4.3). As a result of these policies, the proposed General Plan would actively seek to improve the downtown as opposed to simply waiting on market forces.

New neighborhoods resulting from implementation of the General Plan will be designed and developed to ensure that new development is compatible with existing development through the integration of site design elements, building attributes, and/or community design features and patterns (Policy CE-1.4). Furthermore, the proposed General Plan contains provisions intended to create a sense of place through a mix of housing types, community gathering places, conveniently located facilities and services (Policies LU-2.2 and LU-3.1), walkability, interconnected street systems (Policies and Actions CIRC-1.4, CIRC-4.3, CIRC-4.3.3, and

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CE-6.2.1), and extensive tree canopy and attractive landscaping (Policies and Actions LU-4.2, LU-4.2.2, and CE-1.5). As such, implementation of the General Plan would not be expected to adversely affect views or the sense of place created by the city's neighborhoods.

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**.

#### **Substantially Damage Scenic Resources within a State Scenic Highway (Standard of Significance 2)**

**Impact 3.1.2** Implementation of the proposed General Plan would not damage any scenic resources within a state scenic highway. Therefore, there is **no impact**.

There are no state scenic highways in Biggs or in the Planning Area. Therefore, impacts associated with damage to scenic resources within a state scenic highway are considered to have **no impact**.

#### **Substantially Degrade the Existing Visual Character (Standard of Significance 3)**

**Impact 3.1.3** Implementation of the proposed General Plan would result in increased development that would alter the existing visual character of the Biggs Planning Area. This impact is considered **less than significant**.

Implementation of the proposed General Plan would result in increased development in the Planning Area that would change its visual character. The proposed General Plan envisions compact urban form through the efficient use of land and the phased extension of urban services in order to discourage sprawl. This approach to the accommodation of future development in the city would reduce the extent of outward growth and the conversion of open land to urban development. As described under Impact 3.1.1, implementation of existing City development and design standards under the Municipal Code, as well as proposed General Plan and policies and actions, would ensure visual compatibility with existing development and the preservation of unique natural features and scenic resources.

However, the proposed General Plan identifies the active goal of annexing lands outside of the city limits to allow for coordinated, long-term planning, to reduce the potential for the approval of incompatible uses on unincorporated land adjacent to the city, and to take advantage of growth opportunities presented by the city's unique location. The pursuit of annexing lands would extend the current urban/development footprint of the city, and the increased development and intensification of development would alter visual character by introducing urban uses into previously vacant and/or agricultural areas. Additional development results in alteration of the visual character of the Biggs Planning Area to more dense land uses.

As described above, future development projects would be subject to Chapter 14.55 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. The Biggs Planning Department and City Council promote responsible architectural design that is consistent with the city's character by enforcing the design guidelines as set forth in Chapter 14.55 of the Biggs Municipal Code. The Planning Department reviews 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. Environmental and discretionary

review of future development projects would analyze project-level compliance with these regulations and would require site-specific mitigation to reduce or eliminate visual impacts.

Also, a key goal of proposed 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. In addition, the proposed General Plan policy provisions and Land Use Map direct the City to maintain clear urban 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 proposed General Plan seeks to avoid the growth effects of sprawl development patterns, such as the substantial degradation of the existing visual character.

The City's proposed and existing policy and regulatory framework would be effective in reducing the visual prominence and aesthetic impact of new development, as discussed above. The City's approach to protecting and maintaining the scenic qualities of the surrounding agricultural areas is comprehensive, and this impact is considered **less than significant**.

#### **Create a New Source of Substantial Light or Glare (Standard of Significance 4)**

**Impact 3.1.4** Implementation of the proposed General Plan could result in an increase of daytime glare and/or nighttime lighting. This increase in daytime glare sources and nighttime lighting levels could have an adverse effect on adjacent areas and land uses. This is considered a **less than significant** impact.

Implementation of the proposed General Plan may introduce 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 General Plan would include residential, commercial, and office 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

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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.

Subsequent development would be subject to existing City development and design standards set forth in the City's Municipal Code. For instance, Section 14.55.080 of the Municipal Code requires that all exterior lighting be functional, subtle, and architecturally integrated with the site and building design. In addition, Section 14.55.080 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, Section 14.60.130 of the Municipal Code 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 14.55.080 and 14.60.130 identified above 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 is considered **less than significant**.

#### 3.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

##### CUMULATIVE SETTING

The cumulative setting condition includes the unincorporated rural communities surrounding Biggs, as well as the larger Butte County region, including Chico, Gridley, Oroville, Paradise, and the County of Butte. The cumulative setting also includes the proposed and approved large-scale development projects listed in **Table 3.0-2**. Development in the Biggs Planning Area as well as in Butte County would alter the scenic resources and visual character of the region.

The cumulative impact analysis herein focuses on whether the project's contribution to regional visual resource impacts would result in a cumulatively considerable environmental impact. The project's impact would be cumulatively considerable if, when considered with other existing, approved, proposed, and reasonably foreseeable development in the region, it would result in substantial alteration of the visual character of the region, significant impacts to scenic vistas, or substantial increases in daytime glare and nighttime lighting.

##### CUMULATIVE IMPACTS AND MITIGATION MEASURES

#### Cumulative Impacts to Scenic Vista, Scenic Resources, Existing Visual Character, and Light and Glare

**Impact 3.1.5** Implementation of the proposed General Plan in combination with other reasonably foreseeable development projects in Butte County would contribute to the alteration of the visual character of the region, impacts to scenic vistas, and increased glare/lighting. This is considered a **less than cumulatively considerable** impact.

The Butte County region is anticipated to experience growth in association with new development, which would result in cumulatively considerable changes in the visual character and scenic views of the region, as well as increases in the amount of light and glare in the region. As undeveloped areas transition from a rural to an urban character, existing viewsheds



within the county and incorporated cities would be affected, existing views of rural uses and open spaces would be changed to urban uses, and views of agricultural fields and orchards may be altered and/or obstructed. Important visual resources such as mature trees, rock outcroppings, and rural structures would be lost. Development under the proposed General Plan would contribute to this trend in alteration of the visual character of the area by converting open space and rural uses to urban development. This would also contribute to changes in nighttime lighting and illumination levels in the region.

As discussed under Impacts 3.2.1 through 3.1.4, the City's proposed and existing policy and regulatory framework (General Plan and Municipal Code) provides a comprehensive approach to reducing the visual prominence of new development, adverse impacts to existing scenic vistas, and substantial increases in light and glare in the Biggs Planning Area. Incorporation of smart growth principles (compact urban form) and other measures would substantially reduce any contribution to significant cumulative impacts associated with alteration of the visual character of the region, impacts to scenic vistas, and increased glare/lighting in the region. Therefore, this impact is considered **less than cumulatively considerable**.

### 3.1 AESTHETICS AND VISUAL RESOURCES

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#### REFERENCES

Biggs, City of. 2008. *City of Biggs Municipal Code*. Revised August 2008.

Caltrans (California Department of Transportation). 2007.

DOF (California Department of Finance). 2013. *Population and Housing Estimates for Cities, Counties, and the State 2010–2013*.

## **3.2 AGRICULTURAL RESOURCES**



This section addresses agricultural lands and the potential impacts of the proposed General Plan on these lands. Key issues addressed in this section include conflicts/incompatibilities between urban land uses and agricultural operations and loss of agricultural land.

### 3.2.1 EXISTING SETTING

#### EXISTING LAND USE AND AGRICULTURAL OPERATIONS

Biggs is surrounded by agricultural uses, which constitute a significant component of the local economy. The majority of agricultural operations in the Biggs Planning Area are a mixture of orchard crops, predominantly to the east, and rice operations to the west. Biggs is in an agricultural transition area, with field and row crops located to the west of the city and grazing land and tree crops located to the east. The primary agriculture-related industries and land uses in and around the city are rice, nuts, citrus, and prunes. Agriculture has shaped the landscape and culture of Biggs more than any other land use or industry. Totalling approximately 3,870 acres, agricultural uses are the largest use of land within the Planning Area and continue to be a major component of the local and regional economy. Agriculture and agricultural resources within and around the city extend beyond the growing of crops and are inclusive of commercial and industrial operations supporting the use, as well as the processing, manufacturing, and shipping of agricultural goods.

As an agricultural community, there are several existing aspects of living in Biggs that can be perceived as inconveniences or discomforts due to the prevalence of agricultural operations. Such issues include, but are not limited to: noises, odors, light, fumes, dust, smoke, insects, chemicals, operation of machinery (including aircraft) during any 24 hour period, storage and disposal of manure, and the application by spraying or otherwise of chemical fertilizers, soil amendments, herbicides and pesticides. Throughout Biggs' history, residents have accepted such existing issues as a normal and necessary aspect of living in a community with an active agricultural sector.

#### Agriculture Supporting Industry

While few agricultural growing operations are located within the city limits, numerous operations exist nearby and adjacent to the city limits and within the Planning Area. The largest active agricultural land use within the city's urban area is SunWest Rice Mill located on Bannock Street at the western edge of Biggs. The existing Red Top Rice Growers rice drying facility, which has been active for more than 50 years, is located north of H Street, east of the UPRR tracks, and west of Fourth Street. Also located within Biggs, Comet Rice has recently leased the mill located near Bannock and Eighth streets and operates the facility as a secondary mill when demand exceeds the capacity of their primary mill in Maxwell.

#### EXISTING BUTTE COUNTY AGRICULTURAL OPERATIONS

Agricultural operations are a significant feature in the economy of Butte County. According to the County's 2010 Agricultural Crop Report, the estimated gross value of agricultural production in Butte County for 2010 was approximately \$630 million. This is a \$50 million increase over the 2008 gross value of approximately \$580 million (Butte County Department of Agriculture 2010). **Table 3.2-1** lists the ten leading farm commodities in Butte County.

## 3.2 AGRICULTURAL RESOURCES

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**TABLE 3.2-1  
BUTTE COUNTY LEADING FARM COMMODITIES, 2010**

Commodity	Value
Rice	\$182 million
Walnuts	\$173 million
Almonds	\$114 million
Dried Plums	\$43 million
Nursery Stock	\$24 million
Cattle/Calves	\$12 million
Rice Seed	\$11 million
Peaches – Clingstone	\$10 million
Kiwis	\$8 million

*Source: Butte County Department of Agriculture 2010*

For the period between 2006 and 2010, the total plant crop acreage in the county increased from 464,308 to 466,989, an increase of almost 3,000 acres in field, seed, vegetable, and fruit and nut crops. The largest percentage gain in acreage was in fruit and nut crops (Butte County Department of Agriculture 2010).

### **Biggs Planning Area**

Agricultural land accounts for approximately 3,870 acres, the largest use of land within the Planning Area. **Table 3.2-4** later in this section lists the important farmlands in the Biggs Planning Area.

### **FARMLAND CLASSIFICATIONS AND RATING SYSTEM**

Two classification programs are generally used to determine a soil's potential agricultural productivity.

- The USDA Soil and Conservation Service (USDA-SCS) Land Capability Classification System takes into consideration soil limitations, the risk of damage when the soils are used, and the way in which soils respond to treatment.
- The Storie Index Rating system ranks soils based on their suitability for agriculture.

The Farmland Mapping and Monitoring Program (FMMP) administered by the California Department of Conservation maps agricultural areas based on soil quality and land use, with categories such as Prime Farmland, Farmland of Statewide Importance, and Grazing Lands. More information about each of these classification systems is provided below.

### **Land Capability Classification System**

The Land Capability Classification System designed by the US Department of Agriculture includes eight classes of land designated by Roman numerals I through VIII. The classes are arable land—suitable for cropland—in which the limitations on their use and necessity of conservation measures and careful management increase from I through IV. The criteria for

placing a given area in a particular class involve the landscape location, slope of the field, and depth and texture of the soil. The remaining four classes, V through VIII, are not to be used for cropland but may have uses for pasture, range, woodland, grazing, wildlife, recreation, and aesthetic purposes. Within the broad classes are subclasses that signify special limitations such as erosion, excess wetness, problems in the rooting zone, and climatic limitations. A general description of soil classification, used by the National Resource Conservation Service (NRCS), is provided in **Table 3.2-2**.

**TABLE 3.2-2  
SOIL CAPABILITY CLASSIFICATION**

Class	Definition
I	Soils have few limitations that restrict their use.
II	Soils have moderate limitations that reduce the choice of plants or that require special conservation practices.
III	Soils have severe limitations that reduce the choice of plants, require conservation practices, or both.
IV	Soils have very severe limitations that reduce the choice of plants, require very careful management, or both.
V	Soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
VIII	Soils and landforms have limitations that preclude their use for commercial plant production and restrict their use to recreation, wildlife habitat, or water supply, or to aesthetic purposes.

Source: USDA-NRCS 2010a

**Storie Index Rating System**

The Storie Index Rating System ranks soil characteristics according to their suitability for agriculture. Ratings range from Grade 1 soils (80 to 100 rating), which have few or no limitations for agricultural production, to Grade 6 soils (less than 10), which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. The six grades, ranges in index rating, and definition of grades defined by the NRCS are provided in **Table 3.2-3**.

**TABLE 3.2-3  
STORIE INDEX RATING SYSTEM**

Grade	Index Rating	Definition
1 – Excellent	80–100	Soils are well suited to intensive use for growing irrigated crops that are climatically suited to the region.
2 – Good	60–79	Soils are good agricultural soils, although they may not be so desirable as Grade 1 because of moderately coarse, coarse, or gravelly surface soil texture; somewhat less permeable subsoil; lower plant available water holding capacity, fair fertility; less well drained conditions, or slight to moderate flood hazards, all acting separately or in combination.

### 3.2 AGRICULTURAL RESOURCES

Grade	Index Rating	Definition
3 – Fair	40–59	Soils are only fairly well suited to general agricultural use and are limited in their use because of moderate slopes; moderate soil depths; less permeable subsoil; fine, moderately fine or gravelly surface soil textures; poor drainage; moderate flood hazards; or fair to poor fertility levels, all acting alone or in combination.
4 – Poor	20–39	Soils are poorly suited. They are severely limited in their agricultural potential because of shallow soil depths; less permeable subsoil; steeper slope; or more clayey or gravelly surface soil textures than Grade 3 soils, as well as poor drainage; greater flood hazards; hummocky micro-relief; salinity; or fair to poor fertility levels, all acting alone or in combination.
5 – Very Poor	10–19	Soils are very poorly suited for agriculture, are seldom cultivated and are more commonly used for range, pasture, or woodland.
6 – Nonagricultural	Less than 10	Soils are not suited for agriculture at all due to very severe to extreme physical limitations, or because of urbanization.

Source: USDA-NRCS 2010b

The “prime” soil classifications of both systems indicate the absence of soil limitations which, if present, would require the application of management techniques (e.g., drainage, leveling, special fertilizing practices) in order to enhance production.

#### Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program was established in 1982 to continue the important farmland mapping efforts begun in 1975 by the US Department of Agriculture (USDA) Natural Resource Conservation Service. The USDA’s intent was to produce agricultural resource maps based on soil quality and land use across the nation. As part of the nationwide agricultural land use mapping effort, the USDA developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified land’s suitability for agricultural production. Suitability included both the physical and chemical characteristics of soils and the actual land use. Important Farmland Maps are derived from the USDA soil survey maps using the LIM criteria.

Since 1980, the State of California has assisted the USDA with completing its mapping in the state. The FMMP was created within the California Department of Conservation (DOC) to carry on the mapping activity on a continuing basis and with a greater level of detail. The DOC applied a greater level of detail by modifying the LIM criteria for use in California. The LIM criteria in California utilize the NRCS Soil Capability and Storie Index rating systems described above but also consider physical conditions such as a dependable water supply for agricultural production, soil temperature range, depth of the groundwater table, flooding potential, rock fragment content, and rooting depth.

Important Farmland Maps for California are compiled using the modified LIM criteria. The minimum mapping unit is 10 acres unless otherwise specified. Units of land smaller than 10 acres are incorporated into the surrounding classification. The Important Farmland Maps identify five agriculture-related categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. Each is summarized below, based on *A Guide to the Farmland Mapping and Monitoring Program* (1994) prepared by the Department of Conservation.



Prime Farmland

Prime Farmland is land with the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. These lands have the soil quality, growing season, and moisture supply needed to produce sustained high yields. Lands defined as Prime Farmland must have been used for production of irrigated crops at some time during the four years prior to the Important Farmland Map date.

Farmland of Statewide Importance

Farmland of Statewide Importance is land similar to Prime Farmland but with minor shortcomings such as greater slopes or with less ability to hold and store moisture. The land must have been used for the production of irrigated crops at some time during the four years prior to the Important Farmland Map date.

Unique Farmland

Unique Farmland is land of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include nonirrigated orchards or vineyards, as found in some climatic zones in California. The land must have been cultivated at some time during the four years prior to the Important Farmland Map date.

Farmland of Local Importance

Farmland of Local Importance is land of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee. Farmland of Local Importance has not been determined in Butte County and therefore is not included on the Important Farmland Map.

Grazing Land

Grazing Land is land on which the existing vegetation, whether grown naturally or through management, is suited to the grazing of livestock. The minimum mapping unit for this category is 40 acres.

IMPORTANT FARMLAND MAP

**Table 3.2-4** provides a breakdown of farmland acreage based on the FMMP categories. The entire Planning Area includes approximately 2,030 acres of Prime Farmland, along with approximately 1,556 acres of Farmland of Statewide Importance. These categories account for approximately 82 percent of the total number of acres in the Planning Area.

**TABLE 3.2-4  
FARMLAND IN BIGGS PLANNING AREA**

Designation	Acreage
Prime Farmland	2,030
Farmland of Statewide Importance	1,556
Grazing Land	280
Urban/Developed	465

Source: DOC 2011a

Note: The total acreage in this table does not match the total acres for the Planning Area. This is due to rounding and to slight differences in the information bases used to calculate the tables.

## 3.2 AGRICULTURAL RESOURCES

### FARMLAND CONVERSION

The conversion of lands suitable for agricultural to urban development and other uses is an issue of concern in California. Farmland conversion of Prime Farmland is of particular concern. **Table 3.2-5** summarizes the conversion of agricultural lands that occurred between 2004 and 2010 in Butte County. For the six-year comparison of Prime Farmlands between 2004 and 2010, there was a decrease equating to an average loss of approximately 711 acres of Prime Farmland annually.

**TABLE 3.2-5  
ACRES OF IMPORTANT FARMLANDS AND GRAZING LANDS – BUTTE COUNTY (2004–2010)**

Year	Important Farmland Acres				Total Important Farmlands	Grazing Land	Total Agricultural Lands
	Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance			
2004	197,557	22,323	24,947	0	244,837	406,401	651,238
2006	196,219	21,604	24,235	0	242,058	407,678	649,736
2008	194,690	22,794	23,077	0	240,561	401,859	642,420
2010	193,290	21,792	22,190	0	237,272	403,078	640,350
Net Acreage Changes between 2004 and 2010	-4,267	-531	-2,757	0	-7,565	-3,323	-10,888
Annual Average Difference	-711	-89	-460	0	-1,261	-554	-1,815

Source: DOC 2011b

Note that **Table 3.2-5** provides data related to farmland conversion countywide and is not limited to property within the Biggs Planning Area.

### AGRICULTURAL LAND CONSERVATION

#### Williamson Act Contract Lands

Butte County participates in the Williamson Act program (described further below). Owners of agricultural lands have an opportunity to take advantage of the property tax advantages offered by the Williamson Act (California Land Conservation Act), which reduces the tax burden on qualifying agricultural land in exchange for a commitment from the landowner to not develop the land with uses other than those compatible with and supportive of agriculture. As of 2007, there were 215,882 acres of land in Butte County under Williamson Act contracts (DOC 2009). An extension of the Williamson Act, called the Farmland Security Zone (FSZ) Program, permits farmers and ranchers to garner an additional 35 percent property tax reduction by keeping their land in agriculture for a minimal initial term of 20 years; however, the FSZ program has not been adopted by Butte County.

There are no Williamson Act contracts within the existing city limits of Biggs. However, one parcel is under Williamson Act contract currently (2012) in the Biggs Planning Area. The approximately 120-acre parcel is located west of and adjacent to the existing city limits, north of the City

wastewater treatment plant and south of Afton Road, and has been in a state of nonrenewal for approximately five years at the time of writing of this EIR. Typically, a property is required to wait ten years after nonrenewal before further development can occur.

The amount of land currently under Williamson Act contract in Butte County has decreased since 1991, the earliest year for which statistics are available. A total of 226,065 acres were under Williamson Act contract in 1991. This means 10,183 fewer net acres are under Williamson Act contracts than in 1991, a 4.5 percent decrease. Most of this decrease has occurred through the nonrenewal of Williamson Act contracts. The number of acres in nonrenewal increased between 2004 and 2005. In 2004, a total of 367 acres were put into nonrenewal status. This number increased to 928 acres the following year (DOC 2009).

### 3.2.2 REGULATORY FRAMEWORK

#### FEDERAL

##### **Farmland Protection Policy Act**

The Natural Resources Conservation Service, a federal agency within the US Department of Agriculture, is the agency primarily responsible for implementation of the Farmland Protection Policy Act. The purpose of the act is to minimize federal programs' contribution to the conversion of farmland to nonagricultural uses by ensuring that federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. The NRCS provides technical assistance to federal agencies, state and local governments, tribes, or nonprofit organizations that desire to develop farmland protection programs and policies.

The NRCS summarizes act implementation in an annual report to Congress. The act also established the Farmland Protection Program and the Land Evaluation and Site Assessment (LESA), which are discussed below.

##### **Farmland Protection Program**

The NRCS administers the Farmland Protection Program, a voluntary program aimed at keeping productive farmland in agricultural uses. Under the program, the NRCS provides matching funds to state, local, or tribal government entities and nonprofit organizations with existing farmland protection programs to purchase conservation easements. The goal of the program is to protect between 170,000 and 340,000 acres of farmland per year (USDA-NRCS 2010a). Participating landowners agree not to convert the land to nonagricultural use and retain all rights to use the property for agriculture. A minimum of 30 years is required for conservation easements and priority is given to applications with perpetual easements. The NRCS provides up to 50 percent of the fair market value of the easement being conserved (USDA-NRCS 2010a).

To qualify for a conservation easement, farmland must meet several criteria. The land must be:

- Prime, Unique, or other productive soil, as defined by the NRCS based on factors such as water moisture regimes, available water capacity, developed irrigation water supply, soil temperature range, acid-alkali balance, water table, soil sodium content, potential for flooding, erodibility, permeability rate, rock fragment content, and soil rooting depth;
- Included in a pending offer to be managed by a nonprofit organization, state, tribal, or local farmland protection program;

## 3.2 AGRICULTURAL RESOURCES

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- Privately owned;
- Placed under a conservation plan;
- Large enough to sustain agricultural production;
- Accessible to markets for the crop that the land produces; and
- Surrounded by parcels of land that can support long-term agricultural production.

In Butte County, the Farmland Protection Program is supplemented by the California Department of Conservation's Important Farmland Inventory System and Farmland Mapping and Monitoring Program, which are discussed in further detail under state regulatory programs below.

### STATE

#### **California Department of Conservation**

The Department of Conservation administers and supports a number of programs, including the Williamson Act, the California Farmland Conservancy Program, the Williamson Act Easement Exchange Program, and the Farmland Mapping and Monitoring Program. These programs are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use. The Department of Conservation is responsible for approving Williamson Act Easement Exchange Program agreements.

#### **Important Farmland Inventory System and Farmland Mapping and Monitoring Program**

As discussed above, the Important Farmland Inventory System initiated in 1975 by the US Soil Conservation Service (now the NRCS) classifies land based on ten soil and climatic characteristics. The Department of Conservation started a similar system of mapping and monitoring for California in 1980, known as the FMMP.

Under the California Environmental Quality Act (CEQA), the lead agency is required to evaluate agricultural resources in environmental assessments at least in part based on the FMMP. The state's system was designed to document how much agricultural land in California was being converted to nonagricultural land or transferred into Williamson Act contracts. The definitions of important farmland types are provided in the Farmland Mapping and Monitoring Program discussion in the Existing Setting subsection above.

#### **California Land Evaluation and Site Assessment Model**

The California LESA model was developed in 1997 based on the federal LESA system. It can be used to rank the relative importance of farmland and the potential significance of its conversion on a site-by-site basis. The California LESA model considers the following factors: land capability, Storie Index, water availability (drought and non-drought conditions), land uses within one-quarter mile, and "protected resource lands" (e.g., Williamson Act lands) surrounding the property. A score can be derived and used to determine if the conversion of a property would be significant under CEQA.

### **Williamson Act**

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is a nonmandated state program, administered by counties and cities to preserve agricultural land and discourage the premature conversion of agricultural land to urban uses. The act authorizes local governments and property owners to (voluntarily) enter into contracts to commit agricultural land to specified uses for ten or more years. Once restricted, the land is valued for taxation based on its agricultural income rather than unrestricted market value, resulting in a lower tax rate for owners. In return, the owners guarantee that these properties remain under agricultural production for an initial ten-year period. The contract is renewed automatically unless the owner files a notice of nonrenewal, thereby maintaining a constant ten-year contract. Currently, approximately 70 percent of the state's prime agricultural land is protected under this act. Prime Farmland under the Williamson Act includes land that qualifies as Class I and II in the NRCS classification of land or that qualifies for rating 80 to 100 in the Storie Index rating. Participation is on a voluntary basis by both landowners and local governments and is implemented through the establishment of agricultural preserves and the execution of Williamson Act contracts.

Termination of a Williamson Act contract through the nonrenewal process is the preferred method to remove the enforceable restriction of the contract. Cancellation is not appropriate when objectives served by cancellation could be served by nonrenewal. Cancellation is reserved for unusual, "emergency" situations. In order to approve tentative cancellation, a board or council must make specific findings based on substantial evidence that a cancellation is consistent with the purposes of the act or in the public interest. Contracts can specify that both findings must be made in order to approve tentative cancellation.

### LOCAL

#### **Butte County Right to Farm Ordinance**

Butte County recognizes agriculture as an important economic activity in the region and accommodates those agricultural owners who wish to continue their operations in the future through implementation of the Butte County Right to Farm Ordinance. Right to Farm Ordinances have been adopted by several California counties to protect farmers in established farming areas from legal action that new residents in nearby urban settings may take against nuisances associated with normal, day-to-day farming activities, such as odor, noise, and dust. The ordinance states that no agricultural operation conducted or maintained on agricultural land in a manner consistent with proper and accepted customs and standards shall be or become a nuisance if it was not a nuisance when it began, provided that such operation complies with the requirements of all applicable federal, state, and county statutes, ordinances, rules, regulations, approvals and permits.

#### **Butte Local Agency Formation Commission**

The Butte Local Agency Formation Commission (Butte LAFCo) is a state mandated local agency that oversees boundary changes to cities and special districts, the formation of new agencies including incorporation of new cities, and the consolidation of existing agencies. The broad goals of the agency are to ensure the orderly formation of local government agencies, to preserve agricultural and open space lands, and to discourage urban sprawl. Butte LAFCo defines "Prime agricultural land" as an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:

## 3.2 AGRICULTURAL RESOURCES

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- 1) Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
- 2) Land that qualifies for rating 80 through 100 Storie Index Rating.
- 3) Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
- 4) Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars (\$400) per acre.
- 5) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars (\$400) per acre for three of the previous five calendar years.

### 3.2.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, agricultural resource impacts are considered to be significant if the following could result from the implementation of the proposed General Plan:

- 1) Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.
- 2) Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- 3) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).
- 4) Result in the loss of forestland or conversion of forestland to non-forest use.
- 5) Involved other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forestland to non-forest use.

Biggs is located in a setting with no forested land that could be classified as timberland, and no land within the city limits is zoned for timberland and timber production uses. Adoption and implementation of the proposed General Plan will not result in the conversion of any forestland or conflict with land zoned as forestland or timberland. Therefore, Standards of Significance 3 and 4 will not be further analyzed in this EIR.

### METHODOLOGY

Evaluation of potential agricultural impacts of the proposed City of Biggs General Plan was based on review of the current and proposed Butte County General Plan and Zoning Code and a field review of the Planning Area to better understand the current agricultural/land use interface. The agricultural analysis is based on information gathered from the Butte County General Plan Update, the California Department of Conservation Farmland Conversion Reports, and the California Department of Conservation Important Farmlands Map. This analysis addresses direct impacts and losses of farmland as well as indirect impacts on agricultural uses (e.g., growth pressure to convert farmlands, conflicts between agricultural operations and urban land uses) as a result of the development of land use designations proposed under the Biggs General Plan as well as any roadway improvements and implementation of policy provisions.

The following proposed General Plan policies and actions address agricultural resources:

- 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 LU-7.1 (Compact Growth) – Promote compact city growth and phased extension of urban services to discourage sprawl and encourage development that improves agriculture and important public places.*
- Policy CR-2.1 (Land Use Compatibility) – Direct urban development to vacant lands within the city or to undeveloped land directly adjacent to urban development.*
- 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.*

## 3.2 AGRICULTURAL RESOURCES

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- Action CR-2.2.2 (Agricultural Buffers) – Require the incorporation of a minimum one-hundred (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 the City of Biggs and West Biggs-Gridley Road south of the City.
- Policy CR-2.1 (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-2.2 (Regional Dialogue) – Continue to engage in meaningful dialogue with the Butte County Farm Bureau and other local and regional agricultural organizations on issues related to agricultural operations and land use compatibility.
- 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 CR-2.7 (Low-Impact Agriculture) – Encourage and support small-scale and low-impact local agricultural production within the city.
- 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-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 impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant agricultural resource impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that protect agricultural resources and avoid or minimize significant impacts.

### IMPACTS AND MITIGATION MEASURES

#### **Loss of and Conversion of Agricultural Land (Standard of Significance 1)**

**Impact 3.2.1** Implementation of the proposed General Plan would result in the conversion of important farmlands, as designated by the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use. This is considered a **significant** impact.

According to the California Department of Conservation Important Farmland Map (2011) as indicated in **Table 3.2-4**, the Planning Area contains approximately 2,030 acres of Prime Farmland, 1,556 acres of Farmland of Statewide Importance, and 280 acres of Grazing Lands (defined hereafter as "important farmlands"). Unique Farmland is also considered "important farmland" yet no lands have been designated as such within the Planning Area. Most of the Prime Farmland within the Planning Area is located west of the city limits and implementation of the proposed General Plan would not impact these lands as proposed 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.

Nonetheless, the proposed General Plan Land Use Diagram (see **Figure 2.0-2** in Section 2.0, Project Description) designates residential and mixed-use land uses within important farmland areas. These areas include a total conversion of 455.34 acres of Prime Farmland and 229.41 acres of Farmland of Statewide Importance to urban uses, yet no amount of Unique Farmland. Grazing lands and agricultural acreage defined by Butte LAFCo as "Prime agricultural land" would also be potentially affected. The proposed 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, CR-2.2.3, and CR-2.2.5), 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. These policy provisions of the proposed General Plan demonstrate a commitment to continued agricultural activities adjacent to these locations.

Both the General Plan Land Use Element and Community Enhancement Element facilitate a compact urban form through the efficient use of land (i.e., increased density) and phased extension of urban services in order to discourage urban sprawl (Policy LU-2.2, Policy LU-7.1, Action CR-2.2.5, and CE-1.1). As such, future development in the city would reduce the extent of outward city growth into agricultural areas.

## 3.2 AGRICULTURAL RESOURCES

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The City recognizes the importance of agricultural lands and is committed to protecting this resource as supported by its commitment to an urban growth boundary west of the city (Action CR-2.2.5). Implementation of the proposed General Plan Land Use Diagram, however, would result in the potential conversion of important farmland acreage. This loss of important farmland is considered a **significant** impact.

Key themes of the proposed General Plan include buffering of agricultural resources and keeping an urban growth limit at the western boundary of the proposed Planning Area. These themes reflect the City's desire to retain a compact urban form as well as new neighborhoods contiguous to existing urban areas. However, because the City is surrounded by agricultural land, any annexation and development consistent with the General Plan would convert areas currently in agricultural production to urban uses. This conversion would not include any amount of Unique Farmland yet would include Prime Farmland, Farmland of Statewide Importance, Grazing Lands, and agricultural acreage defined by Butte LAFCo as "Prime agricultural land". The proposed General Plan policies and actions described above do not completely offset the loss of important farmland, and no feasible mitigation measures are available to avoid this impact. Therefore, this impact is considered **significant and unavoidable**.

### **Agriculturally Zoned Lands and Williamson Act Contracts (Standard of Significance 2)**

**Impact 3.2.2** Implementation of the proposed General Plan would involve land use changes for parcels currently under a Williamson Act contract. However, the only parcels currently under a Williamson Act contract have been in a state of nonrenewable since before the proposed General Plan. This is considered a **less than significant** impact.

As previously discussed, there are no Williamson Act contracts within the existing city limits of Biggs. However, one parcel under Williamson Act contract currently (2013) is within the Biggs Planning Area. The approximately 120-acre parcel is located east of and adjacent to the existing city limits, north of the City wastewater treatment plant and south of Afton Road, and has been in a state of nonrenewal for approximately seven years at the time of writing of this EIR. Typically, a property is required to wait ten years after nonrenewal before further development can occur.

While future annexation of current zoned agricultural lands to the city would involve the rezoning of these lands to a nonagricultural use in order to be consistent with the General Plan, the nonrenewal of the Williamson Act contract associated with this parcel was instigated prior to the proposal of the General Plan. Therefore, the lands under a Williamson Act contract are scheduled to be removed from contract with or without the proposed General Plan. Thus, this impact would be **less than significant**.

### **Agricultural/Urban Interface Conflicts (Standard of Significance 3)**

**Impact 3.2.3** Implementation of the proposed General Plan could result in changes in the existing environment which, due to their location or nature, could result in conversion of farmland and/or farmland-related businesses to nonagricultural use. However, policy provisions in the proposed General Plan would ensure that agricultural operations are not adversely impacted. This is considered a **less than significant** impact.

Implementation of the proposed General Plan Land Use Diagram would place urbanized land uses adjacent to agricultural uses and would replace existing agricultural uses. It is anticipated that as the city builds out, new agriculture/urban interface conflicts could occur. The following types of agricultural and urban land use conflicts, inconveniences, or discomforts associated with normal agricultural operations related primarily to the growing of crops are expected to occur:

- Inconveniences or discomforts associated with dust, noise, and odor from agricultural operations.
- Restrictions on agricultural operations (such as pesticide application) along interfaces with urban uses.
- Conflicts with farm equipment and vehicles using roadways.
- Trespassing and vandalism on active farmlands.
- The proximity of farmland to urban areas can create growth pressure to convert land to urban uses as a result of the above-mentioned conflicts and increases in property value.

As previously described, proposed Policy CR-2.6 supports right-to-farm policies. Right-to-farm provisions require subdividers to disclose a property's proximity to farmland to prospective buyers and limit the definition of a "nuisance" to exclude established farms operated according to commonly accepted farming practices. In addition to these requirements, development projects in the city would have included in their design and/or be required to address buffers from agricultural uses. The proposed General Plan contains a policy requiring 100-foot buffers between agricultural and urban uses (Policy LU-1.5). In addition, Policy LU-1.5 contains a provision to incorporate vegetation within these buffer areas in order to provide a visual, noise, and air quality buffer, as do General Plan Actions CR-2.2.3 and CE-3.4.1.

General Plan policies call for the establishment of agricultural buffers and discourage urban encroachment onto agricultural lands. Specifically, it is expected that future development would design buffers that would consist of setbacks and if necessary, landscaping to address site-specific conflicts. Furthermore, as an agricultural community, there are several existing aspects of living in Biggs that can be perceived as inconveniences or discomforts due to the prevalence of agricultural operations. Such issues include, but are not limited to: noises, odors, light, fumes, dust, smoke, insects, chemicals, operation of machinery (including aircraft) during any 24 hour period, storage and disposal of manure, and the application by spraying or otherwise of chemical fertilizers, soil amendments, herbicides and pesticides. Throughout Biggs' history, residents have accepted such existing issues as a normal and necessary aspect of living in a community with an active agricultural sector.

This impact is considered **less than significant**.

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### 3.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

Biggs and the Planning Area are located in Butte County. As previously described, urban development in Butte County (including the unincorporated areas and Chico, Oroville, Gridley, and Paradise) has resulted in the loss of important farmland (see **Table 3.2-5**) between 2004 and 2010. The existing and projected future urban development throughout the state is expected to further contribute to the loss of important farmlands.

The cumulative setting for agricultural resources impacts takes into account existing land use conditions, as well as planned and proposed development anticipated in the Planning Area under buildout conditions, including consideration of land uses under the proposed Butte County General Plan (see Section 3.0 for a further description of cumulative growth conditions). The geographic context for the analysis of cumulative agriculture resources impacts varies by threshold. The cumulative context for the analysis of the conversion of agricultural uses to other uses is Butte County. Any net loss of agricultural resources in Butte County is considered to be a cumulatively considerable impact. While the focus of the cumulative impact analysis is Butte County, it is acknowledged that cumulative important farmland conversion contributions by the proposed General Plan are of a statewide concern.

Because potential conflicts with Williamson Act contracts and agriculturally zoned land are site-specific and not cumulative in nature for the proposed General Plan, they are not addressed as cumulative impacts.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Impacts to Agricultural Resources

**Impact 3.2.4** Implementation of the proposed General Plan, along with regional and statewide growth, would result in a contribution to the conversion of important farmland. This is a **cumulatively considerable** and **significant and unavoidable** impact.

As demonstrated by **Figure 2.0-2**, the proposed General Plan would avoid substantial loss of important farmlands west of the city limits with implementation of an urban growth boundary at the western boundary of the proposed Planning Area. However, implementation of the proposed General Plan Land Use Diagram would result in the conversion of important farmland areas in other areas of the proposed Planning Area. While this loss of important farmland would be limited to the west, it would still contribute to the loss of important farmland in the county as well as in the state. Since no cumulative threshold of acceptable important farmland loss has been established by the State of California or Butte County, any contribution is determined cumulatively considerable in this Draft EIR. As described under Impact 3.2.1, the proposed General Plan contains several policies and actions that would minimize agricultural land conversion. However, the cumulative impacts to agricultural resources from implementation of the General Plan would still be considerable.

The proposed General Plan policies and actions described above do not offset the loss of important farmland at the statewide level. Thus, the contribution to cumulative impacts on agricultural resources is considered to be a **cumulatively considerable** and **significant and unavoidable** impact.

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## **3.3 AIR QUALITY**





This section examines the air quality in Biggs, includes a summary of applicable air quality regulations, and analyzes potential air quality impacts associated with the proposed General Plan.

### 3.3.1 EXISTING SETTING

#### AIR BASIN CHARACTERISTICS

##### Sacramento Valley Air Basin

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The City of Biggs is located in the 11-county Sacramento Valley Air Basin (SVAB), which includes all of Sacramento, Yolo, Yuba, Sutter, Colusa, Glenn, Butte, Tehama, and Shasta counties and parts of Solano and Placer counties. The SVAB climate is characterized by hot, dry summers and cool, wet winters. Biggs's annual average maximum temperature is 74 degrees Fahrenheit and the annual average minimum temperature is 47 degrees Fahrenheit. Rainfall in Biggs averages about 20 inches per year (WRCC 2012). Prevailing winds are moderate in strength and vary from dry land flows from the north to moist ocean breezes from the south. The mountains surrounding the SVAB create a barrier to airflow which, under certain meteorological conditions, trap pollutants in the valley.

##### Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), most particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), lead, and fugitive dust are primary air pollutants. Of these, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are criteria pollutants. ROG and NO<sub>x</sub> are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants. Presented below is a description of each of the primary and secondary criteria air pollutants and their known health effects.

Other pollutants, such as carbon dioxide, a natural byproduct of animal respiration that is also produced in the combustion process, have been linked to such phenomena as climate change. While there are no adopted thresholds for their release, Assembly Bill 32 (AB 32) requires the state to reduce emissions to 1990 levels by 2020, which is discussed further in Section 3.14, Greenhouse Gases and Climate Change.

**Carbon Monoxide** (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.

**Reactive Organic Gases** (ROG) are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of ROG include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROG, but rather by reactions of ROG to form secondary pollutants such as ozone.

### 3.3 AIR QUALITY

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**Nitrogen Oxides** (NO<sub>x</sub>) serve as integral participants in the process of photochemical smog production. The two major forms of NO<sub>x</sub> are nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO<sub>2</sub> is a reddish-brown irritating gas formed by the combination of nitric oxide and oxygen. NO<sub>x</sub> acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

**Nitrogen Dioxide** (NO<sub>2</sub>) is a byproduct of fuel combustion. The principal form of NO<sub>2</sub> produced by combustion is NO, but NO reacts with oxygen to form NO<sub>2</sub>, creating the mixture of NO and NO<sub>2</sub> commonly called NO<sub>x</sub>. NO<sub>2</sub> acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO<sub>2</sub> is only potentially irritating. There is some indication of a relationship between NO<sub>2</sub> and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm). NO<sub>2</sub> absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO<sub>2</sub> also contributes to the formation of PM<sub>10</sub> (particulates having an aerodynamic diameter of 10 microns—or 0.0004 inch—or less in diameter) and ozone.

**Sulfur Dioxide** (SO<sub>2</sub>) belongs to the family of sulfur oxide gases (SO<sub>x</sub>). SO<sub>2</sub> is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. Fuel combustion is the primary source of SO<sub>2</sub>. At sufficiently high concentrations, SO<sub>2</sub> may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO<sub>2</sub> may do greater harm by injuring lung tissue. A primary source of SO<sub>2</sub> emissions is high sulfur content coal. Gasoline and natural gas have very low sulfur content and hence do not release significant quantities of SO<sub>2</sub>. SO<sub>2</sub> is a precursor to sulfate (SO<sub>4</sub>), which is a component of particulate matter. In addition SO<sub>2</sub> and NO<sub>2</sub> can react with other substances in the air to form acids, which fall to the earth as rain, fog, snow, or dry particles.

**Particulate Matter** (PM) is a mixture of pollutants in liquid and solid forms. Particulate matter may be classified as primary or secondary. Primary particulates are emitted directly by emission sources, whereas secondary particulates are formed through atmospheric reaction of gases. Particulates are usually classified according to size. The particle diameter can vary from approximately 0.005 micron to 100 microns. Particulate matter less than 10 microns in diameter is referred to as PM<sub>10</sub> (coarse particulates) and less than 2.5 microns is referred to as PM<sub>2.5</sub> (fine particulates).

Studies have found a statistical association between adverse health effects and PM<sub>10</sub>. The US Environmental Protection Agency (EPA) has estimated that airborne particles cause over 15,000 premature deaths in the United States per year. Recent studies using PM<sub>2.5</sub> data have shown an even stronger association between health effects and particles in this size range. Evidence that smaller particles are more harmful is further supported by advanced research (World Bank 2003). Size determines how and where different particles are deposited in the respiratory tract. Ultrafine particles behave similar to gases and travel to lower regions of the lungs, whereas larger particles are deposited in the upper or middle region of the respiratory tract. Particles larger than 10 microns in diameter are deposited almost exclusively in the nose and throat. Combustion processes contribute the majority of fine particulate matter whereas non-combustion processes contribute the majority of the larger PM fraction (World Bank 2003). Both PM<sub>10</sub> and PM<sub>2.5</sub> may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems.

**Ozone** (O<sub>3</sub>), or smog, is one of a number of substances called photochemical oxidants that are formed when ROG and NO<sub>x</sub> (both byproducts of the internal combustion engine) react with sunlight. O<sub>3</sub> is present in relatively high concentrations in the SVAB, and the damaging effects of photochemical smog are generally related to the concentrations of ozone. O<sub>3</sub> poses a health threat, especially to those who already suffer from respiratory diseases. Additionally, O<sub>3</sub> has been tied to crop damage, typically in the form of stunted growth and premature death. O<sub>3</sub> can also act as a corrosive, resulting in property damage such as the degradation of rubber products.

#### AMBIENT AIR QUALITY

Ambient air quality in the City of Biggs can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections in the vicinity of Biggs are documented by measurements made by the Butte County Air Quality Management District (BCAQMD), which is the air pollution regulatory agency for the portion of the SVAB within Butte County that maintains air quality monitoring stations that process ambient air quality measurements.

The Yuba City – Almond Street air quality monitoring station and Paradise – 4405 Airport Road air quality monitoring station are the closest stations to Biggs at approximately 19 miles to the south and 19 miles to the north, respectively. Ozone and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) are pollutants of particular concern in the SVAB. The Paradise – 4405 Airport Road air quality monitoring station monitors ambient concentrations of ozone and the Yuba City – Almond Street air quality monitoring station monitor ambient concentrations of PM<sub>10</sub> and PM<sub>2.5</sub>. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered “generally” representative of ambient concentrations within Biggs.

**Table 3.3-1** summarizes the published data since 2010 from the Yuba City – Almond Street and Paradise – 4405 Airport Road air quality monitoring stations for each year that the monitoring data is provided.

**TABLE 3.3-1  
SUMMARY OF AMBIENT AIR QUALITY DATA**

Pollutant Standards	2010	2011	2012
<b>Yuba City – Almond Street Monitoring Station</b>			
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>			
Max 24-hour concentration (µg/m <sup>3</sup> ) (state/federal)	43.3 / 43.1	57.8 / 54.6	63.0 / 60.8
Number of days above state/federal standard	0 / 0	13.1 / 0	6.1 / 0
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>			
Max 24-hour concentration (µg/m <sup>3</sup> ) (state/federal)	92.3 / 72.2	57.0 / 57.0	50.2 / 41.0
Number of days above state/federal standard	– / 1.1	– / 8.6	– / 1.0
<b>Paradise – 4405 Airport Road Monitoring Station</b>			
<b>Ozone</b>			
Max 1-hour concentration (ppm)	0.085	0.094	0.088
Max 8-hour concentration (ppm) (state/federal)	0.078 / 0.078	0.081 / 0.081	0.081 / 0.080
Number of days above state 1-hr standard	0	0	0
Number of days above state/federal 8-hour standard	14 / 4	16 / 6	25 / 5

### 3.3 AIR QUALITY

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$\mu\text{g}/\text{m}^3$  = micrograms per cubic meter; ppm – parts per million  
– Insufficient or no data currently available to determine the value  
Source: CARB 2013

#### **Toxic Air Contaminants**

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

To date, CARB has designated nearly 200 compounds as toxic air contaminants. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds, one of the most important being particulate matter from diesel-fueled engines. In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a toxic air contaminant. Previously, the individual chemical compounds in the diesel exhaust were considered as TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

In 2008, the South Coast Air Quality Management District updated a study on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, accounting for 84 percent of the air toxics risk (SCAQMD 2008).

#### **Sensitive Receptors**

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation.

### 3.3.2 REGULATORY FRAMEWORK

Subsequent development allowed with implementation of the proposed General Plan has the ability to release gaseous emissions of criteria pollutants and dust into the ambient air. Therefore, future development activities under the proposed General Plan fall under the ambient air quality standards promulgated on the local, state, and federal levels. The federal Clean Air Act of 1971 and the Clean Air Act Amendments (1977) established the national ambient air quality standards (NAAQS), which are promulgated by the EPA. The State of California has also adopted its own California ambient air quality standards (CAAQS), which are promulgated by CARB. The proposed General Plan would occur in the Butte County portion of the SVAB, which is under the air quality regulatory jurisdiction of the BCAQMD and is subject to the rules and regulations adopted by the BCAQMD to achieve attainment with the NAAQS and CAAQS. Federal, state, regional, and local laws, regulations, plans, and guidelines are summarized below.

#### AMBIENT AIR QUALITY STANDARDS

The Clean Air Act Amendment of 1971 established NAAQS, with states retaining the option to adopt more stringent standards or to include other pollution species. These standards are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both the State of California and the federal government have established health-based ambient air quality standards for six air pollutants. As shown in **Table 3.3-2**, these pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM<sub>10</sub>, and lead. PM<sub>2.5</sub> has recently been added to this listing. In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

**TABLE 3.3-2  
AIR QUALITY STANDARDS**

Pollutant	Averaging Time	California Standards	National Standards
Ozone	8 Hour	0.070 ppm (137 $\mu\text{g}/\text{m}^3$ )	0.075 ppm
	1 Hour	0.09 ppm (180 $\mu\text{g}/\text{m}^3$ )	–
Carbon Monoxide	8 Hour	9.0 ppm (10 $\text{mg}/\text{m}^3$ )	9 ppm (10 $\text{mg}/\text{m}^3$ )
	1 Hour	20 ppm (23 $\text{mg}/\text{m}^3$ )	35 ppm (40 $\text{mg}/\text{m}^3$ )
Nitrogen Dioxide	1 Hour	0.18 ppm (339 $\mu\text{g}/\text{m}^3$ )	100 ppb
	Annual Arithmetic Mean	0.030 ppm (57 $\mu\text{g}/\text{m}^3$ )	53 ppb (100 $\mu\text{g}/\text{m}^3$ )
Sulfur Dioxide	24 Hour	0.04 ppm (105 $\mu\text{g}/\text{m}^3$ )	N/A
	3 Hour	–	N/A
	1 Hour	0.25 ppm (665 $\mu\text{g}/\text{m}^3$ )	75 ppb
Particulate Matter (PM <sub>10</sub> )	Annual Arithmetic Mean	20 $\mu\text{g}/\text{m}^3$	N/A
	24 Hour	50 $\mu\text{g}/\text{m}^3$	150 $\mu\text{g}/\text{m}^3$
Particulate Matter – Fine (PM <sub>2.5</sub> )	Annual Arithmetic Mean	12 $\mu\text{g}/\text{m}^3$	15 $\mu\text{g}/\text{m}^3$

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Pollutant	Averaging Time	California Standards	National Standards
	24 Hour	N/A	35 $\mu\text{g}/\text{m}^3$
Sulfates	24 Hour	25 $\mu\text{g}/\text{m}^3$	N/A
Lead	Calendar Quarter	N/A	1.5 $\mu\text{g}/\text{m}^3$
	30 Day Average	1.5 $\mu\text{g}/\text{m}^3$	N/A
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu\text{g}/\text{m}^3$ )	N/A
Vinyl Chloride (chloroethene)	24 Hour	0.01 ppm (26 $\mu\text{g}/\text{m}^3$ )	N/A
Visibility-Reducing Particles	8 Hour (10:00 to 18:00 PST)	-	N/A

Source: CARB 2012a

Notes:  $\text{mg}/\text{m}^3$  = milligrams per cubic meter; ppm = parts per million; ppb = parts per billion;  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

#### AIR QUALITY MANAGEMENT PLAN

In 1994, the air districts within the Northern Sacramento Valley Planning Area (NSVPA), a subsection of the greater Sacramento Valley Air Basin that includes the BCAQMD jurisdiction, prepared an Air Quality Attainment Plan for  $\text{O}_3$ . This plan was updated in 1997, 2000, 2003, 2006, and again in 2009. Like the preceding plans, the 2009 plan focuses on the adoption and implementation of control measures for stationary sources, area-wide sources, indirect sources, and public information and education programs. The 2009 plan also addresses the effect that pollutant transport has on the NSVPA's ability to meet and attain the state standards.

The Air Quality Attainment Plan provides local guidance for the State Implementation Plan (SIP), which provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards. 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. Severity classifications for ozone nonattainment range in magnitude: marginal, moderate, serious, severe, and extreme. The attainment status for the Butte County portion of the SVAB is included in **Table 3.3-3**.

**TABLE 3.3-3  
ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN BUTTE COUNTY**

Pollutant	State Designation	Federal Designation
$\text{O}_3$	Nonattainment	Nonattainment
$\text{PM}_{10}$	Nonattainment	Unclassified
$\text{PM}_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassified/Attainment
$\text{NO}_2$	Attainment	Unclassified/Attainment
$\text{SO}_2$	Attainment	Unclassified
Lead	Attainment	Unclassified/Attainment

Source: CARB 2012b

As shown in **Table 3.3-3**, the Butte County portion of the SVAB is designated as a nonattainment area for  $\text{O}_3$ ,  $\text{PM}_{10}$ , and  $\text{PM}_{2.5}$  for state standards and  $\text{O}_3$  and  $\text{PM}_{2.5}$  for federal standards.

#### **Butte County Air Quality Management District**

In Butte County, the air quality regulating authority is the BCAQMD, which adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs. The BCAQMD also regulates agricultural burning. Other responsibilities include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality.

All projects in Butte County and in Biggs are subject to applicable BCAQMD rules and regulations in effect at the time of construction. Descriptions of specific rules applicable to future construction resulting from implementation of the proposed General Plan 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.
- 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.

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#### TOXIC AIR CONTAMINANT REGULATIONS

In 1983, the California legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The Health and Safety Code defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal Clean Air Act (42 USC Section 7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a toxic air contaminant is identified, CARB adopts an “airborne toxics control measure” for sources that emit designated TACs. If there is a safe threshold for a substance (a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. CARB has, to date, established formal control measures for eleven TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics “Hot Spot” Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

Since the last update to the TAC list in December 1999, CARB has designated 244 compounds as toxic air contaminants (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

#### 3.3.3 IMPACTS AND MITIGATION MEASURES

##### STANDARDS OF SIGNIFICANCE

Per Appendix G of the California Environmental Quality Act (CEQA) Guidelines and BCAQMD recommendations, air quality impacts are considered significant if implementation of the proposed project would:

- 1) Conflict with or obstruct implementation of an applicable air quality plan.
- 2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- 3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality



standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

- 4) Expose sensitive receptors to substantial pollutant concentrations.
- 5) Create objectionable odors affecting a substantial number of people.

METHODOLOGY

Air quality impacts were assessed in accordance with methodologies recommended by CARB and the BCAQMD. Where quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

The following proposed General Plan policies address air quality-related impacts:

- Policy LU-7.1 (Compact Growth) – Promote compact city growth and phased extension of urban services to discourage sprawl and encourage development that improves agriculture and important public places.*
- Policy CIRC-1.4 (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.*
- 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-4.1.3 (Bicycle Transportation Plan) – Update the City's Bicycle Transportation Plan every five (5) years to maintain eligibility for grant funding from Caltrans' Bicycle Transportation Account.*
- 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.*

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- Action CIRC-4.3.2 (Sidewalk Design) – Discourage the use of curvilinear sidewalks on local 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.
- Action CIRC-4.4.2 (Pedestrian Impediment Survey) – Periodically update the City existing pedestrian impediment survey to identify the types and location of pedestrian mobility constraints and to assist in prioritizing safety and mobility improvements.
- Policy CIRC-4.5 (Prioritization of Improvements) – Pedestrian and bicycle improvements shall be prioritized in the following order.
- 1) Projects which increase safety for children traveling to and from school.
  - 2) Projects which remove barriers to handicapped individuals.
  - 3) Projects which increase overall convenience and safety for pedestrians and bicyclists.
- Action CIRC-5.1.1 (Engagement and 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.
- 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 Butte County Air Quality Management District Air Quality Handbook and the regional Sustainable Communities Strategy (SCS) Plan.

- Policy CR-7.3 Cooperate with the Butte County Air Quality Management District in efforts to maintain air quality standards and to minimize air quality impacts associated with new development.*
- Policy CR-7.4 Avoid siting 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-7.5 Through the project review process, minimize adverse effects on the community of odor and emissions generated by new industrial uses.*
- 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-6.2.3 Continue to pursue grant funding opportunities to enhance the pedestrian and bicycle amenities in the city.*
- 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.*

The impact analysis provided below utilizes these proposed policies to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies as well as other regulations and standards provide enforceable requirements and/or performance standards that protect air quality and avoid or minimize significant impacts.

IMPACTS AND MITIGATION MEASURES

**Conflict with the NSVPA 2009 Air Quality Attainment Plan (Standard of Significance 1)**

**Impact 3.3.1** Subsequent land use activities associated with implementation of the proposed General Plan would obstruct implementation of the Northern Sacramento Valley Planning Area 2009 Air Quality Attainment Plan. This impact is considered to be **significant**.

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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.

The NSVPA 2009 Air Quality Attainment Plan is the most recent air quality planning document for Butte County and constitutes the region's SIP. State Implementation 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 national ambient air quality standards (NAAQS) for pollutants of concern. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts prepare SIP elements and submit them to CARB for review and approval. The NSVPA 2009 Air Quality Attainment Plan includes forecast ROG and NO<sub>x</sub> emissions (ozone precursors) for the entire NSVPA region through the year 2020. These emissions are not appropriated by county or municipality.

According to the BCAQMD, the consistency of the proposed General Plan with the NSVPA 2009 Air Quality Attainment Plan, which is also the SIP for the air basin, should be determined by both (a) the General Plan's consistency with population and vehicle use projections utilized by the Air Quality Attainment Plan and (b) the extent to which the General Plan implements Air Quality Attainment Plan transportation control measures (BCAQMD 2008).

Implementation of the proposed General Plan could increase population and vehicle miles traveled, which could conflict with BCAQMD air quality planning efforts. However, the NSVPA 2009 Air Quality Attainment Plan does not cite vehicle miles traveled or population numbers as the basis for its air quality planning efforts. The Air Quality Attainment Plan does cite projected O<sub>3</sub> precursor emissions (ROG and NO<sub>x</sub>) through the year 2020. For the purposes of this analysis, the resulting emissions of the draft General Plan's projected population growth of 3.3 percent annually (more than triple the historic growth rate average yet consistent with BCAG's lowest growth scenario) and nonresidential growth rate of 10 acres of new commercial development and 30 acres of new industrial development was quantified and compared with the NSVPA 2009 Air Quality Attainment Plan 2020 ozone precursor emission projections.

The NSVPA 2009 Air Quality Attainment Plan includes control strategies necessary to attain the California ozone standard at the earliest practicable date as well as developed emissions inventories and associated emissions projections for the NSVPA showing a downtrend for both ROG and NO<sub>x</sub>. Implementation of the proposed General Plan will result in long-term emissions from area and mobile emission sources associated with future growth. As illustrated in **Table 3.3-4**, the O<sub>3</sub> precursor emission ROG is anticipated to increase with 2035 conditions versus existing conditions (2013) by 70 percent while the O<sub>3</sub> precursor emission NO<sub>x</sub> would actually decrease by 45 percent. (Despite the increased population growth projected for 2035, emissions of NO<sub>x</sub> and CO would decrease as these pollutants are sourced primarily from vehicle emissions and vehicle emission technology is anticipated to be greatly improved in the year 2035.)

While the projected decrease in NO<sub>x</sub> emissions is reflective of the NSVPA 2009 Air Quality Attainment Plan, which identifies a 22.2 percent reduction in NO<sub>x</sub> emissions from area and mobile sources within the NSVPA by the year 2020, the upward trend in the O<sub>3</sub> precursor emission, ROG is not reflective of the projected O<sub>3</sub> emissions reductions documented in the NSVPA 2009 Air Quality

Attainment Plan, which projects a 5.6 percent reduction in ROG emissions from area and mobile sources by the year 2020 (the latest year projected in the NSVPA 2009 Air Quality Attainment Plan).

**TABLE 3.3-4**  
**CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (2013 AND 2035)**  
**(TONS PER YEAR)**

Source	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Biggs Existing 2013 Conditions (Annual) – Tons per Year</b>						
Area Sources	82.99	1.03	93.54	0.03	12.47	12.47
Energy Sources	0.18	1.61	0.93	0.01	0.13	0.13
Mobile Sources	38.57	104.54	350.01	0.27	26.61	4.02
Total	121.74	107.18	444.48	0.31	39.21	16.62
<b>Biggs General Plan Projected 2035 Conditions (Annual) – Tons per Year</b>						
Area Sources	192.46	2.40	217.70	0.08	29.11	29.11
Energy Sources	0.41	3.61	2.05	0.02	0.29	0.29
Mobile Sources	14.60	52.92	110.21	0.42	38.44	2.33
Total	207.47	58.93	329.96	0.52	67.84	31.73
<b>Net Difference (Projected 2035 Conditions – 2013 Existing Conditions)</b>						
Net Difference	+85.73	-48.25	-114.52	+0.21	+28.63	+15.11

Source: CalEEMod 2011 (see Appendix 3.3-1).

Implementation of BCAQMD rules and regulations and proposed General Plan policies and actions and would prevent, reduce, and minimize potential air quality impacts. The BCAQMD monitors air quality, prepares clean air plans, and responds to citizen complaints concerning air quality. All projects in Butte County and in Biggs are subject to applicable BCAQMD rules and regulations in effect at the time of construction. For instance, 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. The proposed General Plan contains Policy CR-7.2, which requires new development projects to incorporate measures to reduce impacts to air quality as outlined by the BCAQMD CEQA Air Quality Handbook and the regional Sustainable Communities Strategy (SCS) Plan. The BCAQMD's CEQA Air Quality Handbook (2008) identifies a list of best available mitigation strategies tailored to the type of project being proposed.

However, since it is the intent of the NSVPA 2009 Air Quality Attainment Plan to achieve ozone attainment status, and the O<sub>3</sub> 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 is **significant and unavoidable**.

### **Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Long-Term, Operational Emissions (Standards of Significance 2 and 3)**

**Impact 3.3.2** Subsequent land use activities associated with implementation of the proposed General Plan could result in long-term, operational emissions that could violate or substantially contribute to a violation of federal and state

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standards for ozone and coarse and fine particulate matter. This impact is considered to be **significant**.

#### Area Source and Mobile Source Emissions

Implementation of the proposed General Plan will result in long-term emissions from operation and use of subsequent development. According to the BCAQMD, the evaluation of the General Plan's air quality impacts should focus on an analysis of the plan's consistency with the most recently adopted Air Quality Attainment Plan/SIP. **Table 3.3-4** summarizes the emissions associated with 2035 projected growth conditions with implementation of the proposed General Plan. As shown in the table, the proposed General Plan would result in an increase of criteria air pollutants and precursors for which the air basin is in nonattainment (ROG, PM<sub>10</sub>, and PM<sub>2.5</sub>), which is not consistent with the reduction of precursor pollutants projected in the NSVPA 2009 Air Quality Attainment Plan by the year 2020. As a result, this impact is considered significant.

#### Stationary Source Emissions

Implementation of the proposed General Plan could include stationary sources of pollutants that would be required to obtain permits to operate in compliance with BCAQMD rules. These sources include, but are not limited to, gasoline stations, dry cleaners, internal combustion engines, and surface coating operations. The permit process ensures that these sources would be equipped with the required emission controls and that, individually, these sources would result in a less than significant impact. However, the emissions from these sources would be additive to the area source and mobile source emissions noted above.

The proposed General Plan includes a number of policies and actions that would reduce the potential impacts associated with long-term operational emissions. Policy CIRC-4.1 seeks to develop an integrated, multimodal circulation system that provides opportunities to reduce air pollution, such as the development of non-polluting bicycle facilities. The General Plan Circulation Element contains more than 15 provisions instigating the improvement/expansion of bicycle and pedestrian facilities in the city. For example, Policy CIRC-4.2 will require that new development projects under the General Plan provide connections and facilities for bicycles, while Policy CIRC-1.4 ensures that all new streets in Biggs are constructed with curb, gutter, and sidewalks to support pedestrian travel.

The BCAQMD recommends general strategies for all projects and standard mitigation measures for residential, commercial, or industrial projects to reduce operational emissions (BCAQMD 2008). **Table 3.3-5** summarizes the level of compliance of the proposed General Plan with these recommended emissions reduction strategies and standard mitigation measures, including the reference to the relevant proposed General Plan policies and actions.

**TABLE 3.3-5  
COMPLIANCE OF GENERAL PLAN WITH  
BCAQMD-RECOMMENDED OPERATION EMISSION REDUCTION STRATEGIES**

BCAQMD-Recommended General Strategy/ Standard Mitigation Measure	Compliance
<b>Land Use</b>	
Build compact communities to limit urban sprawl.	Compliant See Policy LU-2.2; Action LU-2.2.1; Policy LU-4.3; Action LU-4.3.1; Policy LU-7.1; Policy CE-1.1; Policy CE-3.1
Mix complementary land uses, such as commercial services and employment located within and/or adjacent to medium or higher density housing.	Compliant See Policy LU-2.2; Action LU-2.2.1; Action LU-2.3.1; Policy LU-3.1; Action LU-3.1.1
Develop core commercial areas within 1/4 to 1/2 mile of residential housing areas.	Compliant See Policy LU-2.2; Action LU-2.2.1; Action LU-2.3.1
Increase residential and commercial densities along transit corridors.	Compliant See Policy CIRC-5.1; Action CIRC-5.1.1
Prioritize in-fill projects that provide development within the urban core and urban reserve boundaries.	Compliant See Policy LU-2.2; Action LU-2.2.1; Policy LU-4.3; Action LU-4.3.1; Policy LU-7.1
Neighborhood park(s) or other recreational options such as trails within the development to minimize vehicle travel to off-site recreational uses and/or commercial areas.	Compliant See Policy CIRC-4.1; Action CIRC-4.1.2; Action CIRC-4.1.3; Policy CIRC-4.2
Orient buildings toward streets with automobile parking in the rear to promote a pedestrian-friendly environment and to provide convenient pedestrian and transit access.	Compliant See Policy CIRC-4.2; Policy CIRC-4.3; Action CIRC-4.3.1; Policy CE 1.3; Policy CE 1.4
<b>Energy Efficiency</b>	
Orient building structures to maximize the potential for natural heating and cooling and passive solar design principles (this may include the use of appropriate landscaping).	Compliant See Policy LU-4.2; Action LU-4.2.1; Policy CE-1.5; Action CE-1.5.1; Action CE-1.5.2; Policy CE-3.2; Action CE-3.2.1
<b>Transit</b>	
Develop residential housing areas within 1/4 mile of transit centers and transit corridors.	Compliant See Policy CIRC-5.1; Action CIRC-5.1.1
Provide abundant and safe access for pedestrians, bicyclists, and transit users.	Compliant See Policy CIRC-1.4; Action CIRC-4.1.5; Policy CIRC-4.3; Policy CIRC-4.4; Action CIRC-4.4.1; Action CIRC-4.4.2
Arterial and collector streets planned as transit routes to allow the efficient operation of public transit.	Compliant See Policy CIRC-1.4; Action CIRC-1.4.1; Policy CIRC-5.1; Action CIRC-5.1.1

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BCAQMD-Recommended General Strategy/ Standard Mitigation Measure	Compliance
<b>Pedestrian</b>	
Provide a pedestrian-friendly and interconnected streetscape to make walking more convenient, comfortable and safe.	Compliant See Policy CIRC-4.3; Action CIRC-4.3.1; Action CIRC-4.3.3; Policy CIRC-4.4; Action CIRC-4.4.1; Action CIRC-4.4.2; Policy CR-7.1; Action CR-7.1.1; Policy CE-6.2; Action CE-6.2.1; Action CE-6.2.2; Action CE-6.2.3; Action CE-6.2.4; Policy CE-6.4; Action CE-6.4.1; Action CE-6.4.2
<b>Services</b>	
Provide a balance of job opportunities and housing within communities.	Compliant See Policy LU-2.4; Action LU-2.4.1
<b>Standard Mitigation Measure</b>	
Link or minimize cul-de-sacs and dead-end streets to encourage pedestrian and bicycle travel.	Compliant See Policy CE-1.1; Action CE-1.1.1; Policy CE-1.2; Policy CE-1.3
Traffic calming modifications to project roads, such as narrower streets, speed platforms, bulb-outs and intersection modifications designed to reduce vehicle speeds, thus encouraging pedestrian and bicycle travel.	Compliant See Action CIRC-4.1.5; Policy CIRC-4.3; Action CIRC-4.3.1; Action CIRC-4.3.3; Action CIRC-6.2.2; Action CIRC-6.4.1
Synchronize traffic signals along streets impacted by project development.	Compliant See Action CIRC-1.2.1; Action CIRC-1.6.1
Provide continuous sidewalks separated from the roadway by landscaping and on-street parking.	Compliant See Policy CIRC-1.4; Policy CIRC-4.3; Action CIRC-4.4.1; Action CE-6.2.4; Action CE-6.4.1; Action CE-6.4.2
Provide adequate lighting for sidewalk, along with crosswalks at intersections.	Compliant See Policy CIRC-4.4; Action CIRC-4.3.3; Action CE-6.2.4
Improvement of thermal efficiency of commercial and industrial structures as appropriate by reducing thermal load with automated and timed temperature controls, or occupancy load limits.	Compliant Improvement of thermal efficiency is also mandated in California Energy Code Sections 114, 124, and 160
Incorporate shade trees, adequate in number and proportional to the project size, throughout the project site to reduce building heating and cooling requirements.	Compliant See Policy LU-4.2; Action LU-4.2.1; Policy CE-1.5

Proposed General Plan policies and actions direct maintaining consistency with BCAQMD standards and requirements (Policy CR-7.2 and Policy CR-7.3) and would reduce potential long-term operational air quality impacts. As previously mentioned, the BCAQMD's *CEQA Air Quality Handbook* identifies a list of best available mitigation strategies tailored to the type of project being proposed. For instance, mitigation measures to be implemented for a hypothetical future commercial development could include a provision for the minimum parking required in order to discourage vehicle trips and/or an increase in parking lot shading by 20 percent over the minimum requirement. However, these actions would not fully offset air pollutant emissions resulting from long-term operations consequential to the projected growth under the proposed General Plan. The region is nonattainment for federal O<sub>3</sub> and PM<sub>2.5</sub> standards and nonattainment for state O<sub>3</sub> and PM<sub>10</sub> and PM<sub>2.5</sub> standards. Even with implementation of relevant



policies and actions from the proposed General Plan, the long-term, operational emissions resulting from the projected growth allowed under the proposed General Plan could violate or substantially contribute to a violation in O<sub>3</sub>, PM<sub>10</sub>, and/or PM<sub>2.5</sub> federal and state standards (the O<sub>3</sub> precursor emission ROG as well as PM<sub>10</sub> and PM<sub>2.5</sub> are expected to increase as compared to existing conditions in 2035 as shown in **Table 3.3-4**).

According to the BCAQMD, the evaluation of the General Plan's air quality impacts should focus on an analysis of the plan's consistency with the most recently adopted Air Quality Attainment Plan/SIP. As shown in **Table 3.3-4**, the proposed General Plan would result in an increase of criteria air pollutants and precursors for which the air basin is in nonattainment, which is not consistent with the reduction of precursor pollutants projected in the NSVPA 2009 Air Quality Attainment Plan by the year 2020. As a result and as described under Impact 3.3.1, the proposed General Plan would not be consistent with the NSVPA 2009 Air Quality Attainment Plan. Therefore, impacts associated with long-term emissions from operation and use of subsequent development are **significant and unavoidable**.

### **Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Short-Term, Construction Emissions (Standards of Significance 2 and 3)**

**Impact 3.3.3** Subsequent land use activities associated with implementation of the proposed General Plan could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter. This impact is considered **significant**.

Implementation of the proposed General Plan would result in short-term emissions from construction activities associated with subsequent development, including site grading, asphalt paving, building construction, and architectural coatings. Emissions commonly associated with construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. During construction, fugitive dust, the dominant source of PM<sub>10</sub> and PM<sub>2.5</sub> emissions, is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. Demolition and renovation of buildings can also generate PM<sub>10</sub> and PM<sub>2.5</sub> emissions. Off-road construction equipment is often diesel-powered and can be a substantial source of NO<sub>x</sub> emissions, in addition to PM<sub>10</sub> and PM<sub>2.5</sub> emissions. Worker commute trips, asphalt application, and architectural coatings are dominant sources of ROG emissions. According to the BCAQMD, a construction-related air quality impact is considered significant if the proposed project would expose receptors to substantial pollutant concentrations (25 pounds per day of ROG, 25 pounds per day of NO<sub>x</sub>, or 80 pounds per day of PM<sub>10</sub>).

The quantification of air quality emissions from future short-term, temporary construction activities in Biggs under the proposed General Plan is not possible due to project-level variability and uncertainties related to future individual projects. However, all construction projects can produce nuisance dust emissions. All future development projects under the proposed General Plan would be subject to BCAQMD rules and regulations in effect at the time of construction. The BCAQMD monitors air quality, prepares clean air plans, and responds to citizen complaints concerning air quality. All projects in Butte County and in Biggs are subject to applicable BCAQMD rules and regulations in effect at the time of construction. For instance, all stationary construction equipment, other than internal combustion engines less than 50 horsepower, require an Authority to Construct (ATC) and Permit to Operate (PTO) from the district, emissions must be prevented from creating a nuisance to surrounding properties as regulated under BCAQMD Rule 200,

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Nuisance, and 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. The proposed General Plan contains Policy CR-7.2 and Policy CR-7.3, which mandate that during project and environmental review, the City will evaluate air quality impacts and incorporate applicable mitigations to reduce impacts consistent with BCAQMD requirements. The BCAQMD's *CEQA Air Quality Handbook* (2008) identifies a list of best available mitigation strategies tailored to the type of project being proposed.

However, these actions might not fully offset air pollutant emissions resulting from construction activities or even guarantee that BCAQMD construction-related thresholds are not surpassed by a future development project under the General Plan. Potential growth under the General Plan (see **Table 2.0-1** in Section 2.0, Project Description) could add a significant amount of development and supporting infrastructure in Biggs. Construction of these projects could result in construction emission in excess of BCAQMD significance threshold levels, established by the district to determine the significance of and appropriate mitigation level for short-term, construction-related emissions from a project. Thus, this impact is considered **significant and unavoidable**.

#### **Expose Sensitive Receptors to Substantial Carbon Monoxide Pollutant Concentrations (Standard of Significance 4)**

**Impact 3.3.4** Implementation of the proposed General Plan could result in population and employment that would increase traffic volumes on area roadways. This could result in elevated carbon monoxide emissions from motor vehicle congestion that could expose sensitive receptors to elevated carbon monoxide concentrations. However, traffic volumes would not be large enough to generate excessive carbon monoxide emission levels. This impact is considered to be **less than significant**.

Localized CO concentrations near roadways and/or intersections are a function of traffic volume, speed, and delay (toxic air contaminants are discussed under Impact 3.3.5). Transport of CO is extremely limited because carbon monoxide disperses rapidly with distance from the source under normal meteorological conditions. Under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels with respect to sensitive receptors, often referred to as a "CO hotspot."

The proposed General Plan could have a significant impact on localized CO concentrations if a traffic study indicates that the peak-hour level of service (LOS) on one or more streets or at one or more intersections will be reduced to LOS E or F. If either of these criteria can be associated with any road segment or intersection affected by the proposed General Plan, additional CO analysis would be needed to determine significance.

The traffic modeling conducted for this Draft EIR projected that no traffic facilities within Biggs would be reduced to LOS E or F as a result of the General Plan. Therefore, this impact meets the screening criteria listed above and no additional CO analysis is needed. The proposed General Plan would not be anticipated to result in or contribute to local CO concentrations that exceed the state 1-hour or 8-hour ambient air quality standards of 20 ppm or 9 ppm, respectively. This impact is considered to be **less than significant**.

#### Expose Sensitive Receptors to Substantial Toxic Air Contaminant Concentrations (Standard of Significance 4)

**Impact 3.3.5** Subsequent land use activities associated with implementation of the proposed General Plan could result in projects that would include sources of toxic air contaminants which could affect surrounding land uses. Subsequent land use activities could also place sensitive land uses near existing sources of toxic air contaminants. These factors could result in the exposure of sensitive receptors to substantial pollutant concentrations such as toxic air contaminants. However, the Butte County Air Quality Management District and state regulations would address exposure to toxic air contaminants. This is considered a **less than significant** impact.

Subsequent land use activities associated with implementation of the proposed General Plan could potentially include short-term construction sources of TACs and long-term operational sources of TACs, including stationary and mobile sources.

#### Short-Term Construction Sources

Implementation of the proposed General Plan would result in the potential construction of a variety of projects. This construction would result in short-term emissions of diesel PM, which was identified as a toxic air contaminant by CARB in 1998. Construction would result in the generation of diesel PM emissions from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction activities. 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 (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust 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. For these reasons, diesel PM generated by construction activities, in and of itself, would not be expected to create conditions where the probability of contracting cancer is greater than 10 in 1 million for nearby receptors. Long-term health risks associated with short-term construction activities would therefore be considered less than significant. It should also be noted the diesel construction emissions are regulated by BCAQMD Rule 201, Visible Emissions.

#### Long-Term Operational Sources

##### Stationary Sources

The issuance of BCAQMD air quality permits and compliance with all BCAQMD, state, and federal regulations regarding stationary TACs reduce potential stationary sources of TAC emissions such that sensitive receptors would not be exposed to substantial pollutant concentrations. The BCAQMD limits public exposure to TACs through a number of programs. The BCAQMD reviews the potential for TAC emissions from new and modified stationary sources through the BCAQMD permitting process for stationary sources. TAC emissions from existing stationary sources are limited by:

- 1) BCAQMD adoption and enforcement of rules aimed at specific types of sources known to emit high levels of TACs.

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- 2) Implementation of the Air Toxics “Hot Spots” (AB 2588) Program as described under the Regulatory Framework subsection above.
- 3) Implementation of the federal Title III Toxics program (BCAQMD 2008).

Facilities and equipment that require permits from the BCAQMD are screened from risks from toxic emissions and are required to install Toxic Best Available Control Technology (T-BACT) to reduce the risks to below significant. If a significant impact remains after T-BACT is implemented, an air permit may not be issued unless it meets the discretionary approval criteria of the BCAQMD's Risk Management Policy for Permitting New and Modified Sources (BCAQMD 2008). T-BACTs are the most up-to-date methods, systems, techniques, and production processes available to achieve the greatest feasible emission reductions for TACs. Therefore, the proposed General Plan's potential stationary TAC impacts are considered less than significant.

#### Mobile Sources

Mobile sources of TAC emissions in the city are primarily associated with traffic associated with State Route 99, operation of school buses and diesel-powered delivery trucks associated with roadways, and commercial, retail, and industrial uses.

#### *Railroad Operations*

CARB considers major service and maintenance rail yards as potential sources of TACs. However, operation of rail lines outside of rail yards has not been identified as a potential source of TACs that pose a significant risk to sensitive receptors. The Union Pacific JR Davis Rail Yard in Roseville (over 50 miles to the south of Biggs) is the nearest major rail yard. Therefore, exposure of sensitive receptors to substantial TAC pollutant concentrations from rail operations would be considered less than significant.

#### *On-Road Operations*

Approximately 60 percent of California's diesel exhaust is emitted on roadways by heavy-duty trucks, buses, and light-duty passenger vehicles. People living and/or working near busy roadways, such as State Route 99, are exposed to higher than average concentrations of diesel exhaust (CARB 2005).

Emissions from school buses can vary depending on various factors, including bus type, age, and maintenance, and the amount of time spent idling. Health impacts from exhaust exposure include eye and respiratory irritation, enhanced respiratory allergic reactions, asthma exacerbation, increased cancer risk, and immune system degradation. Generally, children are more vulnerable to air pollutants because of their higher inhalation rates, narrower airways, and less mature immune systems.

In response to the above issue, CARB adopted an Airborne Toxics Control Measure (ATCM) as part of the Particulate Matter Risk Reduction Plan to specifically deal with diesel emissions from school buses. This measure became effective July 16, 2003. The school bus-idling ATCM includes the following requirements:

- The driver of a school bus or vehicle, transit bus, or heavy-duty vehicle (other than a bus) shall manually turn off the bus or vehicle upon arriving at a school and shall restart no more than 30 seconds before departing. A driver of a school bus or vehicle shall be subject to the same requirement when operating within 100 feet of a school and shall be

prohibited from idling more than 5 minutes at each stop beyond schools, such as parking or maintenance facilities, school bus stops, or school activity destinations. A driver of a transit bus or heavy-duty vehicle (other than a bus) shall be prohibited from idling more than 5 minutes at each stop within 100 feet of a school. Idling necessary for health, safety, or operational concerns shall be exempt from these restrictions.

- The motor carrier of the affected bus or vehicle shall ensure that drivers are informed of the idling requirements, track complaints and enforcement actions, and keep track of driver education and tracking activities.

According to CARB, implementation of the above requirements would eliminate unnecessary idling for school buses and other heavy-duty vehicles, thus reducing localized exposure to TAC emissions and other harmful air pollution emissions at and near schools and protecting children from unhealthy exhaust emissions.

In addition to the school bus-idling ATCM, CARB adopted an idling-restriction ATCM for large commercial diesel-powered vehicles that became effective February 1, 2005. In accordance with this measure, affected vehicles are required to limit idling to no longer than 5 minutes under most circumstances. CARB is currently evaluating additional ATCMs intended to further reduce TACs associated with commercial operations, including a similar requirement to limit idling of smaller diesel-powered commercial vehicles.

In 2001, CARB adopted new PM and NO<sub>x</sub> emission standards to clean up large diesel engines that power big-rig trucks, trash trucks, delivery vans, and other large vehicles. The new standard for PM took effect in 2007 and reduces emissions to 0.01 gram of PM per brake horsepower-hour (g/bhp-hr.) This standard is a 90 percent reduction from the pre-2007 PM standard. New engines will meet the 0.01 g/bhp-hr PM standard with the aid of diesel particulate filters that trap the PM before exhaust leaves the vehicle.

The proposed General Plan Policy CR-7.4 requires that siting sensitive land uses in the vicinity of agricultural processing, industrial land uses, and other uses where TAC emissions could adversely affect the sensitive use be avoided. Also, the proposed General Plan contains Policy CR-7.2 and Policy CR-7.3, which mandate that during project and environmental review, the City will evaluate air quality impacts and incorporate applicable mitigations to reduce impacts consistent with BCAQMD requirements. Compliance with BCAQMD rules and regulations regarding stationary sources of TACs would reduce the exposure of sensitive receptors to substantial TAC pollutant concentrations from stationary and mobile sources because an air permit may not be issued unless proposed development meets the discretionary approval criteria of the BCAQMD's Risk Management Policy for Permitting New and Modified Sources (BCAQMD 2008). Therefore, this impact would be considered to be **less than significant**.

#### **Create Objectionable Odors Affecting a Substantial Number of People (Standard of Significance 5)**

**Impact 3.3.6** Subsequent land use activities associated with implementation of the proposed General Plan could include sources that could create objectionable odors affecting a substantial number of people or expose new residents to existing sources of odor. However, continued implementation of BCAQMD rules and regulations and proposed General Plan policy provisions would address this issue. Thus, this impact is considered to be **less than significant**.

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Subsequent land use activities associated with implementation of the proposed General Plan could allow for the development of uses that have the potential to produce odorous emissions either during the construction or operation of future development. Additionally, subsequent land use activities may allow for the construction of sensitive land uses (i.e., residential development, parks, offices, etc.) near existing or future sources of odorous emissions.

Future construction activities could result in odorous emissions from diesel exhaust associated with construction equipment. However, because of the temporary nature of these emissions and the highly diffusive properties of diesel exhaust, exposure of sensitive receptors to these emissions would be limited. In addition, it is noted that Biggs is an agricultural community and therefore is subject to odors from agricultural operations, which can be perceived as inconveniences or discomforts due to the prevalence of agricultural operations. Currently, residents accept odors from agricultural operations as a normal and necessary aspect of living in a community with an active agricultural sector. Proposed General Plan Policy CR-2.6 supports right-to-farm policies which contain provisions that require subdividers to disclose a property's proximity to farmland to prospective buyers and limit the definition of a "nuisance" to exclude established farms operated according to commonly accepted farming practices.

The BCAQMD has adopted a nuisance rule that addresses the exposure of nuisance air contaminant discharges. Rule 200 states that no person shall discharge from any non-vehicular source such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property (BCAQMD 2008). If public complaints are sufficient to cause the odor source to be considered a public nuisance, the BCAQMD can require the identified source to incorporate mitigation measures to correct the nuisance condition. (As just stated, proposed Policy CR-2.6 limits the definition of a "nuisance" to exclude established farms operated according to commonly accepted farming practices.)

The proposed General Plan contains Policies CR-7.4 and CR-7.5, which include specific requirements that address impacts resulting from odors. Specifically, these provisions require avoidance of siting sensitive land uses in the vicinity of uses where odors could adversely affect the sensitive use as well as the potential for physical separation between odor-producing uses and any habitable structure.

Implementation of the proposed General Plan policies described above, in combination with BCAQMD's Rule 200, would minimize the creation of objectionable odors affecting a substantial number of people. No mitigation measures are required, and this impact is considered **less than significant**.

#### 3.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

##### CUMULATIVE SETTING

The policies and actions in the proposed General Plan would provide direction for growth within the city limits, while the Butte County General Plan policies and actions provide direction for growth outside the city limits within Butte County. Similar relationships between cities and counties occur throughout the Sacramento Valley Air Basin. Thus, the setting for this cumulative analysis consists of the SVAB and associated growth and development anticipated in the basin. A considerable amount of the ozone that is monitored in the SVAB results from pollutants which have been transported from the San Francisco Bay Area. Due to the lack of physical barriers

and coastal winds blowing inland, air pollution generated in the metropolitan Bay Area is easily spread to the Sacramento Valley.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

### Result in a Cumulatively Considerable Net Increase in Nonattainment Criteria Pollutants (Standard of Significance 3)

**Impact 3.3.7** Implementation of the proposed General Plan, in combination with cumulative development in the Sacramento Valley Air Basin, would result in a cumulatively considerable net increase of ozone and of coarse and fine particulate matter. This is considered a **cumulatively considerable** impact.

**Table 3.3-6** summarizes the emissions associated with theoretical buildout conditions with implementation of the proposed General Plan. As illustrated in **Table 3.3-6**, criteria air pollutants and precursors for which SVAB is in nonattainment are anticipated to increase.

**TABLE 3.3-6  
CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (THEORETICAL BUILDOUT)  
(TONS PER YEAR)**

Source	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Biggs Existing 2013 Conditions (Annual) – Tons per Year</b>						
Area Sources	82.99	1.03	93.54	0.03	12.47	12.47
Energy Sources	0.18	1.61	0.93	0.01	0.13	0.13
Mobile Sources	38.57	104.54	350.01	0.27	26.61	4.02
Total	121.74	107.18	444.48	0.31	39.21	16.62
<b>Biggs Theoretical Buildout Conditions (Annual) – Tons per Year</b>						
Area Sources	847.45	10.60	961.50	0.35	128.55	128.71
Energy Sources	1.80	15.6	8.75	0.10	1.25	1.25
Mobile Sources	58.70	211.05	443.65	1.70	156.10	9.45
Total	907.95	237.25	1,413.90	2.15	285.80	139.25
<b>Net Difference (Theoretical Buildout Conditions – 2013 Existing Conditions)</b>						
Net Difference	+786.21	+130.07	+969.42	+1.84	+246.59	+122.63

Source: CalEEMod 2011 (see Appendix 3.3-1).

As discussed throughout this section, the General Plan contains several policy provisions to address air quality. Proposed General Plan Policy CR-7.2 and Policy CR-7.3 mandate that during project and environmental review, the City will evaluate air quality impacts and incorporate applicable mitigations to reduce impacts consistent with BCAQMD requirements. The BCAQMD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs. Other responsibilities include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality. All projects in Biggs are subject to applicable BCAQMD rules and regulations in effect at the time of construction. Descriptions of specific rules applicable to future construction and development operations resulting from implementation of the proposed General Plan have been identified throughout

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this section. However, the contribution of pollutant emission is still considered **cumulatively considerable** and thus a **significant and unavoidable** impact, as these actions might not fully offset air pollutant emissions resulting from construction and operational activities and could violate or substantially contribute to a violation in already nonattainment O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> federal and state standards. There are no feasible mitigation measures that can further offset air pollutant emissions from subsequent development and growth under the proposed General Plan.



#### REFERENCES

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## **3.4 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, the regulations and programs which provide for their protection, and an assessment of the potential impacts of implementing the proposed General Plan. This section also includes a discussion of mitigation measures necessary to reduce impacts to a less than significant level, where feasible.

Note to the reader: As of January 1, 2013, the agency formerly known as the California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife (CDFW). For purposes of this discussion, the agency names and abbreviations are interchangeable.

### 3.4.1 EXISTING SETTING

The following is a description of the existing biological resources within the Biggs Planning Area, including natural and disturbed biological communities, special-status species, and sensitive habitats known to occur or that potentially occur within the Planning Area.

By far the largest land use in within the city limits is urban, most of which consists of single-family dwellings. Furthermore, agricultural practices have disturbed the natural setting in most of the Biggs vicinity, limiting the biological habitat value. Biological communities in the Planning Area have been substantially altered since the mid-1800s, when the area was first hydraulically mined, dredged for gold, and then developed for agriculture. However, pastures, orchards, and other croplands, as well as irrigation and roadside ditches do provide some habitat value for a variety of bird species and deer. For example, flood irrigation provides feeding and roosting sites for wetland-associated birds. Habitats can become established over time along agricultural drainage ditches and irrigation canals located around Biggs, which could support an extensive variety of plant and animal species. The most widespread natural resource in the Biggs Planning Area is high-quality agricultural land surrounding the city.

#### BIGGS PLANNING AREA BIOLOGICAL COMMUNITIES

Land cover types in the Biggs Planning Area fall under three broad categories: urban, agriculture, and open water. Within these categories, specific land uses and agricultural practices have resulted in the establishment of the several different biological community types, as depicted in **Figure 3.4-1**. These communities are discussed below under each of the larger land cover categories. The community descriptions below are primarily derived from the classification system from Mayer and Laudenslayer (1988), the *Butte County General Plan Technical Update, Background Report (Final Draft)* (Butte County 2005), and the *City of Biggs General Plan 1997–2015* (Biggs 1998).

#### Urban

Urban areas comprise approximately 404 acres in the Planning Area, which includes the city and some commercially developed areas along the State Route 99 corridor. 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*

### 3.4 BIOLOGICAL RESOURCES

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*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.

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.

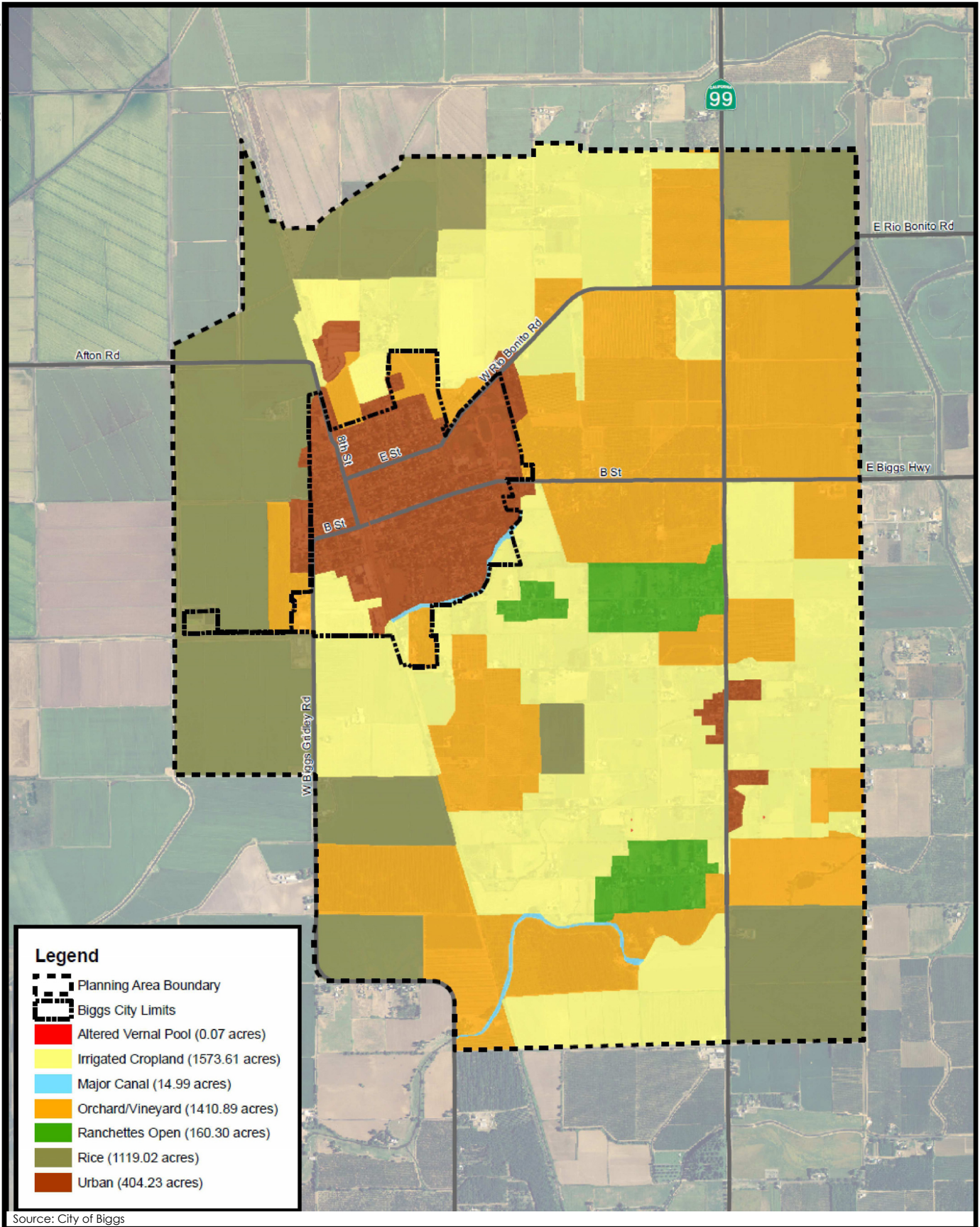
#### Agriculture

Totaling approximately 3,870 acres, agricultural lands are the largest use of land within the Planning Area. Agricultural areas occur on a variety of land types throughout California. Agricultural biological community includes orchards, rice, and row crops. Agricultural lands in the Planning Area surround the City of Biggs and account for most of the non-urban land found in the area. The soils to the north, east, and south of the city are generally deeper loam in character and well drained. As such, these soils are well suited for orchard production of walnuts, prunes, and peaches (Biggs 1998). By contrast, the soils underlying the majority of the city and the land to the west are heavier, less well drained and more suitable for rice production (Biggs 1998). Consequently, this is precisely the pattern of agricultural utilization and production that is found in the Planning Area.

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 Planning Area, agricultural lands are most commonly associated with urban communities. Transitions between habitats are generally abrupt, marking the edge of cultivated areas.

Within the Planning Area, there are four types of established agriculture: irrigated cropland, orchard/vineyard, open ranchettes, and rice.

- **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 man-made ditches, fence lines, road sides, 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.



**Figure 3.4-1**  
Biological Community Types





- **Open Ranchettes:** These are described as areas within grass-dominated landscape with small agricultural fields, houses, and ranch structures that cover or disturb at least 20 percent of the ground surface.
- **Rice:** Rice fields are designed for periodic flooding, generally of several unusually shaped polygons that fit together with berms between fields.

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.

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 Planning Area, including greater sandhill crane (*Grus canadensis tabida*), Aleutian Canada goose (*Branta canadensis leucopareia*), and great egret (*Ardea alba*) (Butte County 2005). Additionally, rice fields are considered suitable habitat for the federally listed giant garter snake (*Thamnophis gigas*).

Mature orchards can provide nesting habitat for various raptor species such as Swainson's hawks (*Buteo swainsoni*). 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.

#### Open Water

The open water community consists of potential jurisdictional waters of the United States, including ephemeral drainages and intermittent to perennial streams/rivers that occur within the Planning Area. Other open water types that may occur in association with these features include freshwater emergent wetlands. The freshwater emergent wetland habitat type can occur in patches along the margins of open water habitats in the Planning Area, especially in the Hamilton Slough drainage.

The Biggs Planning Area is located on essentially flat terrain that once formed the historic floodplain for the Feather and Sacramento rivers (Biggs 1998). As mapped, perennial and ephemeral drainages occur throughout Biggs and occupy approximately 15 acres. These drainages are constructed irrigation and drainage ditches built, maintained, and operated by Reclamation District 833 (RD 833) and surround the city and adjacent agricultural lands.

### 3.4 BIOLOGICAL RESOURCES

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Two drain laterals surround the city: Hamilton Slough on the east and south, and a bypass lateral known as Lateral K along the north and west. The bypass lateral flows into Hamilton Slough southwest of Biggs adjacent to the City's wastewater treatment plant. A large agricultural area east of the city drains through the Biggs Unified School District property and joins the bypass lateral at the intersection of Second Street and Rio Bonito Road. Lateral E drains an area in the far southern portion of the Biggs Planning Area. While most of the drainages in the Planning Area are ephemeral in nature due to fluctuating seasonal irrigation runoff, Hamilton Slough contains some amount of water year-round. Thin stringers of remnants of oak woodlands and riparian habitat exist along Hamilton Slough.

Open water provides habitat for a variety of wildlife. Birds such as great blue herons (*Ardea herodias*) and belted kingfishers (*Ceryle alcyon*) forage in these communities, primarily along the water's edge. Many species of insectivorous birds (e.g., swallows, swifts, and flycatchers) catch their prey over open water. Mammals that can be found in and along riverine habitats include river otter (*Lutra canadensis*), muskrat (*Ondatra zibethicus*), beaver (*Castor canadensis*), and raccoon. The remnant oak woodlands and riparian habitats that exist along Hamilton Slough can provide potential habitat for protected migratory species (primarily birds) to occur in the Planning Area.

Special-status wildlife species that may occur within the open water habitats in the Planning Area include the giant garter snake, as the irrigation/drainage ditches and adjacent upland habitat meet the breeding and aestivation habitat requirements for this species. Additionally, the connectedness of these waterways throughout the Planning Area and to the flooded rice fields to the west would allow for movement of the species.

Freshwater emergent wetland habitats typically range from approximately 1 percent to 5 percent of the landscape and are often the most ecologically productive portion of the landscape. Characteristic vegetation within these wetlands include cattails (*Typha* sp.), rushes (*Juncus* sp.), and sedges (*Carex* sp.). Vegetation associated with this habitat type provides foraging, nesting, and refuge habitat for numerous wildlife species that also occur in the adjacent open water. Common wildlife that is expected to occur in areas of freshwater marsh habitats include Pacific chorus frog (*Pseudacris regilla*), common garter snake (*Thamnophis sirtalis*), great egret, great blue heron, red-winged blackbird (*Agelaius phoeniceus*), and song sparrow (*Melospiza melodia*) (Butte County 2007). Wetland habitats may also support numerous special-status plant and animal species.

#### SPECIAL-STATUS SPECIES

Special-status plant and animal species are those that are afforded special recognition by federal, state, or local resource agencies or organizations. Special-status species are of relatively limited distribution and generally require specialized habitat conditions. Special-status species are defined as:

- 1) Listed, proposed, or candidate for listing under the state or federal Endangered Species Acts;
- 2) Protected under other regulations (e.g., local policies, Migratory Bird Treaty Act);

- 3) California Department of Fish Wildlife's Species of Special Concern<sup>1</sup> and California Fully Protected Species<sup>2</sup>;
- 4) Listed as species of concern (List 1A, 1B, 2, or 3 plants) by the California Native Plant Society<sup>3</sup>; or
- 5) Species that receive consideration during environmental review under the California Environmental Quality Act (CEQA).

The potential for special-status species to occur within the Planning Area was evaluated in the City of Biggs Existing Conditions Report (Biggs 2010) by querying the California Natural Diversity Database (CNDDDB), the United States Fish and Wildlife Service (2008) *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.

The California Department of Fish and Wildlife (CDFW) maintains records for the distribution and known occurrences of sensitive species and habitats in the CNDDDB. The CNDDDB is organized into map areas based on 7.5-minute topographic maps produced by the US Geological Survey (USGS). The CNDDDB 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 CNDDDB 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 3.4-1** and **3.4-2**, which identify the special-status species plant and animal species, respectively, that have potential to be affected by projects occurring within the Planning Area. **Figure 3.4-2** depicts the locations of special-status species recorded within a 1-mile radius of the Biggs Planning 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.

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<sup>1</sup> List of California Department of Fish Wildlife's Species of Special Concern found at: <http://www.dfg.ca.gov/wildlife/nongame/ssc/>

<sup>2</sup> List of California Department of Fish Wildlife's Fully Protected Species found at: [http://www.dfg.ca.gov/wildlife/nongame/t\\_e\\_spp/fully\\_pro.html](http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/fully_pro.html)

<sup>3</sup> List of plant species of special concern found at: <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEPlants.pdf>

### 3.4 BIOLOGICAL RESOURCES

**TABLE 3.4-1  
SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING WITHIN THE BIGGS PLANNING AREA**

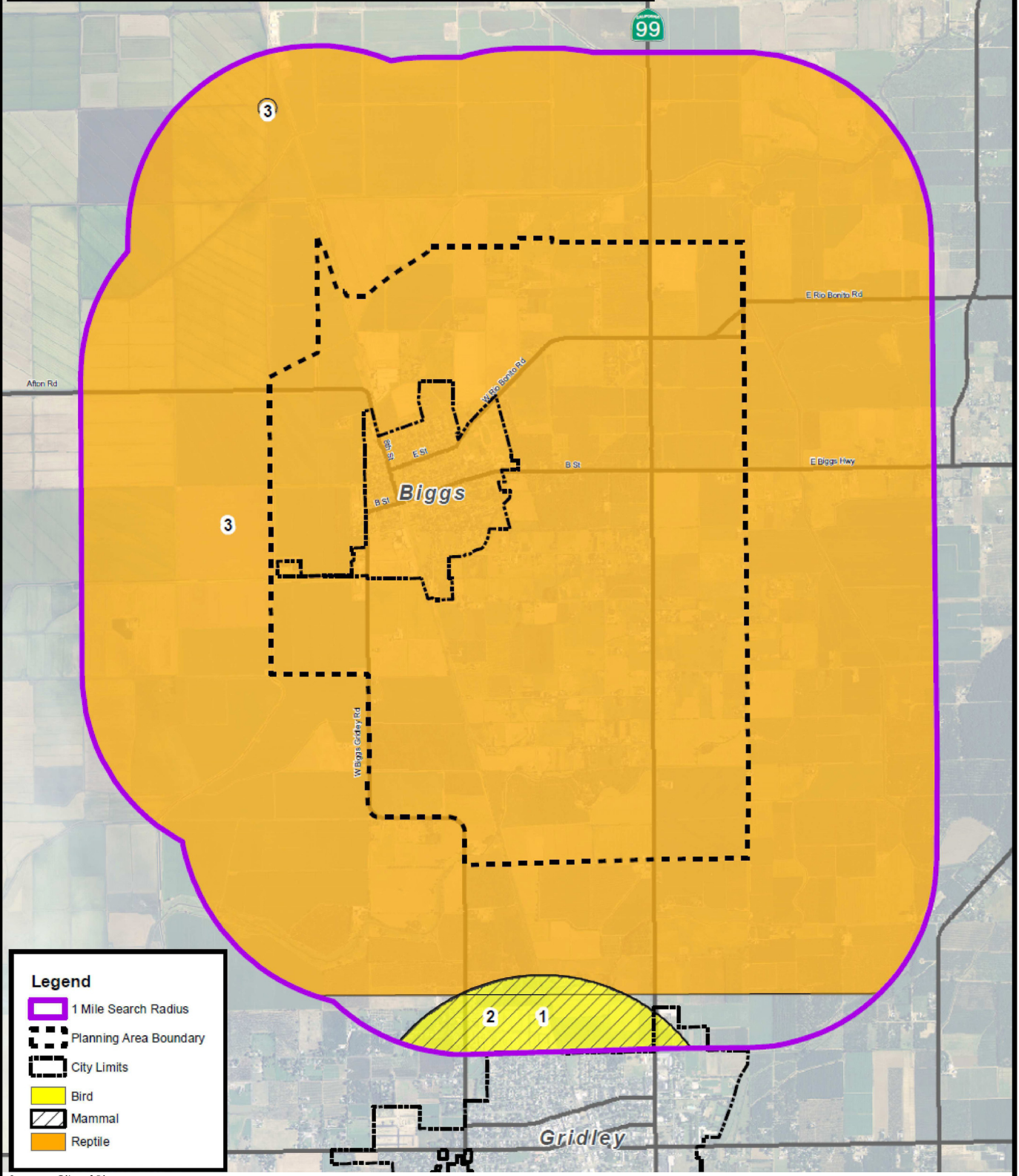
Scientific Name Common Name	Status			Habitat Description <sup>4</sup>	Considered in Impact Analysis	Species Occurrences and Habitat in Biggs Vicinity
	Federal <sup>1</sup>	State <sup>2</sup>	CNPS <sup>3</sup>			
<b>Plants</b>						
Ahart's dwarf rush Juncus leiospermus var. ahartii	~	~	1B	Found on margins 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 milk- vetch Astragalus tener var. ferrisiae	~	~	1B	Meadows and seeps (vernally mesic), Valley and foothill grassland (sub- alkaline 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 September) Elevation: 30–1,070 meters	No	Suitable habitat is not present within the Biggs Planning Area. There are 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

<sup>1</sup> Federal status: 2009 USFWS Listing	<sup>2</sup> State status: 2009 CDFG Listing	<sup>3</sup> CNPS: 2009 CNPS Listing
<b>FE</b> = Listed as endangered under the Endangered Species Act	<b>SE</b> = Listed as endangered under the California Endangered Species Act	<b>1B</b> = Plant species that are rare, threatened, or endangered in California and elsewhere
<b>FT</b> = Listed as threatened under the Endangered Species Act	<b>CR</b> = Species identified as rare by California Department of Fish & Game	<b>List 2</b> = Plant species that are rare, threatened, or endangered in California, but more common elsewhere

Source: Biggs 2010

ID	Scientific Name	Common Name	Federal Listing	California Listing	CNPS Listing
1	<i>Grus canadensis tabida</i>	Greater Sandhill Crane	None	Threatened	None
2	<i>Lasiorycteris noctivagans</i>	Silver-haired Bat	None	None	None
3	<i>Thamnophis gigas</i>	Giant Garter Snake	Threatened	Threatened	None



Source: City of Biggs

**Figure 3.4-2**  
Special Status Species



TABLE 3.4-2  
SPECIAL-STATUS ANIMAL SPECIES POTENTIALLY OCCURRING WITHIN THE BIGGS PLANNING AREA

Common Name <i>Scientific Name</i>	Status		Habitat Description <sup>3</sup>	Considered in Impact Analysis	Species Occurrences and Habitat in Biggs Vicinity
	Federal <sup>1</sup>	State <sup>2</sup>			
<b>Invertebrates</b>					
California linderiella <i>Linderiella occidentalis</i>	~	~	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 <i>Desmocerus californicus dimorphus</i>	FT	~	Occurs in association with elderberry shrubs ( <i>Sambucus</i> 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 <i>Branchinecta lynchi</i>	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 <i>Lepidurus packardi</i>	FE	~	Occurs in vernal pools and other seasonal freshwater habitats	1	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within one mile of the Planning Area.
<b>Fish</b>					
Chinook salmon Central Valley spring-run ESU <i>Oncorhynchus tshawytscha</i>	FT	ST	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	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.

### 3.4 BIOLOGICAL RESOURCES

Common Name Scientific Name	Status		Habitat Description <sup>3</sup>	Considered in Impact Analysis	Species Occurrences and Habitat in Biggs Vicinity
	Federal <sup>1</sup>	State <sup>2</sup>			
			apparently all have been extirpated.		
Chinook salmon Central Valley winter-run ESU <i>Oncorhynchus tshawytscha</i>	FE	SE	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 <i>Hypomesus transpacificus</i>	FT	ST	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 <i>Acipenser medirostris</i>	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.
Steelhead Central Valley ESU <i>Oncorhynchus mykiss irideus</i>	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.
<b>Amphibians</b>					
California red-legged frog <i>Rana aurora draytonii</i>	FT	CSC	Lowlands and foothill streams, pool, and marshes in or near permanent or late season sources of deep water with dense, shrubby, riparian, or emergent vegetation (e.g. ponds, perennial drainages, well developed riparian) below 3,936 feet in elevation. Breeds late December to early April.	No	Suitable habitat is not present within the Biggs Planning Area. There are no recorded occurrences within 1 mile of the Planning Area.
<b>Reptiles</b>					
Giant garter snake <i>Thamnophis gigas</i>	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	Yes	Suitable habitat is present within the Planning Area. There are two recorded occurrences within the



### 3.4 BIOLOGICAL RESOURCES

Common Name <i>Scientific Name</i>	Status		Habitat Description <sup>3</sup>	Considered in Impact Analysis	Species Occurrences and Habitat in Biggs Vicinity
	Federal <sup>1</sup>	State <sup>2</sup>			
			crevices suitable for snakes to reside during their dormancy period (November–mid March).		Biggs Planning Area.
<b>Birds</b>					
Northern harrier <i>Circus cyaneus</i>	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 <i>Buteo swainsoni</i>	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 <i>Grus canadensis tabida</i>	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, pairs generally nest in open habitats.	Yes	Suitable habitat is present within the Biggs Planning Area. There is one recorded occurrences within 1 mile of the Planning Area.
Burrowing owl <i>Athene cunicularia</i>	~	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.
<b>Mammals</b>					
Silver-haired bat <i>Lasionycteris noctivagans</i>	~	~	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 occurrences within 1 mile of the Planning Area.

## 3.4 BIOLOGICAL RESOURCES

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### CODE DESIGNATIONS

<sup>1</sup> Federal status: 2009 USFWS Listing	<sup>2</sup> State status: 2009 CDFG Listing
<b>ESU</b> = Evolutionary Significant Unit (a distinctive population)	<b>SE</b> = Listed as endangered under the California Endangered Species Act (CESA)
<b>FE</b> = Listed as endangered under the Federal Endangered Species Act (FESA)	<b>ST</b> = Listed as threatened under the CESA
<b>FT</b> = Listed as threatened under the FESA	<b>CSC</b> = Species of Concern as identified by the CDFG
<b>MNBMC</b> = Migratory Nongame Bird of Management Concern, protected under the Migratory Bird Treaty Act	<b>CFP</b> = Listed as fully protected under CDFG code

Source: Biggs 2010. See Appendix 3.4-1 for biological query results.

Species that have the potential for occurrence within the Biggs Planning 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 (Alismaceae) 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 2010).

#### 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 2010).

#### 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 2010).

### **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 non-native 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 2010).

### **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 2010).

### **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

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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 2010).

#### **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 2010). The silver-haired bat has no formal special status, 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.

### 3.4.2 REGULATORY FRAMEWORK

This section lists specific environmental review and consultation requirements and identifies permits and approvals that must be obtained from local, state, and federal agencies before implementation of the proposed project.

#### FEDERAL

#### **Endangered Species Act**

Provisions of the federal Endangered Species Act (ESA), as amended (16 USC 1531), protect federally listed threatened and endangered species and their habitats from unlawful take. "Take" under the ESA includes activities such as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS regulations define harm to include some types of "significant habitat modification or degradation." In the case of *Babbitt, Secretary of Interior, et al., Petitioners v. Sweet Home Chapter of Communities for a Great Oregon, et al.* (No. 94-859) (US Supreme Court 1995), the United States Supreme Court ruled on June 29, 1995, that "harm" may include habitat modification "where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."

For projects with a federal nexus, Section 7 of the ESA requires that federal agencies, in consultation with the USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), use their authorities to further the purpose of the ESA and to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of critical habitat. Section 10(a)(1)(B) allows non-federal entities to obtain permits for incidental taking of threatened or endangered species through consultation with the USFWS or NOAA Fisheries. In general, NOAA Fisheries is responsible for protection of federally listed marine species and anadromous fish, while other listed species come under USFWS jurisdiction. Key provisions of the ESA are summarized below under the section that implements them.

### Section 10

Section 10 of the ESA provides a means for nonfederal entities (states, local agencies, and private parties) that are not permitted or funded by a federal agency to receive authorization to disturb, displace, or kill (i.e., take) threatened and endangered species. It allows the USFWS and/or NOAA Fisheries to issue an incidental take permit authorizing take resulting from otherwise legal activities, as long as the take would not jeopardize the continued existence of the species. Section 10 requires the applicant to prepare a habitat conservation plan (HCP) addressing project impacts and proposing mitigation measures to compensate for those impacts. The HCP is subject to USFWS and/or NOAA Fisheries review and must be approved by the reviewing agency or agencies before the proposed project can be initiated. Because the issuance of the incidental take permit is a federal action, the USFWS and/or NOAA Fisheries must also comply with the requirements of ESA Section 7 and the National Environmental Policy Act (NEPA).

### Section 7

Section 7 of the ESA applies to the management of federal lands as well as other federal actions, such as federal approval of private activities through the issuance of federal permits, licenses, funding, or other actions that may affect listed species. Section 7 directs all federal agencies to use their existing authorities to conserve threatened and endangered species and, in consultation with the USFWS, to ensure that their actions do not jeopardize listed species or destroy or adversely modify critical habitat. Critical habitat is defined as specific areas that are essential to the conservation of federally listed species.

### **Clean Water Act, Section 404**

The objective of the Clean Water Act (CWA 1977, as amended) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Discharge of fill material into waters of the United States, including wetlands, is regulated by the US Army Corps of Engineers (USACE) under Section 404 of the federal Clean Water Act (33 USC 1251–1376). USACE regulations implementing Section 404 define waters of the United States to include intrastate waters, including lakes, rivers, streams, wetlands, and natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3; 40 CFR 230.3). The jurisdictional boundaries for other waters of the United States are identified based on the presence of an ordinary high water mark (OHWM) as defined in 33 CFR 328.3(e). The placement of structures in "navigable waters of the United States" is also regulated by the USACE under Section 10 of the federal Rivers and Harbors Act (33 USC 401 et seq.). Projects are permitted under either individual or general (e.g., nationwide) permits. Specific applicability of permit type is determined by the USACE on a case-by-case basis.

In 1987, the USACE published a manual that standardized the manner in which wetlands were to be delineated nationwide. To determine whether areas that appear to be wetlands are subject to USACE jurisdiction (jurisdictional wetlands), a wetlands delineation must be performed. Under normal circumstances, positive indicators from three parameters—wetland hydrology, hydrophytic vegetation, and hydric soils—must be present to classify a feature as a jurisdictional wetland. More recently, the USACE developed the Arid West Regional Supplement (2006) for identifying wetlands and distinguishing them from aquatic habitats and other nonwetlands. The supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. For any wetland delineations submitted after June 5, 2007, the

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USACE requires that the site be surveyed according to both the 1987 manual and the supplement guidelines. In addition to verifying wetlands for potential jurisdiction, the USACE is responsible for the issuance of permits for projects that propose filling of wetlands. Any permanent loss of a jurisdictional wetland as a result of project construction activities is considered a significant impact.

A “no net loss” wetlands policy is an overall policy goal for wetland protection first adopted by the George Bush Administration (1989–1993) and endorsed and updated by the Clinton Administration (1993–2001).

#### **Clean Water Act, Section 401**

Section 401 of the CWA requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board regulates Section 401 requirements (see under State below).

#### **Migratory Bird Treaty Act**

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

#### **Bald and Golden Eagle Protection Act**

The bald eagle and golden eagle are federally protected under the Bald and Golden Eagle Protection Act (16 USC 668–668c). It is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export, or import at any time or in any manner a bald or golden eagle, alive or dead, or any part, nest or egg of these eagles unless authorized by the Secretary of the Interior. Violations are subject to fines and/or imprisonment for up to one year. Active nest sites are also protected from disturbance during the breeding season.

STATE

#### **California Endangered Species Act**

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of endangered and threatened species (California Fish and Game Code 2070). The CDFW maintains a list of “candidate species,” which are species that the CDFW formally notices as being under review for addition to the list of endangered or threatened species. The CDFW also maintains lists of “species of special concern,” which serve as species “watch lists.” Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project site and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA.

“Take” of protected species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 206.591. Authorization from the CDFW would be in the form of an Incidental Take Permit.

### **Porter-Cologne Water Quality Control Act**

Water quality in California is governed by the Porter-Cologne Water Quality Control Act. This law assigns overall responsibility for water rights and water quality protection to the State Water Resource Control Board (SWRCB) and directs the nine statewide Regional Water Quality Control Boards (RWQCBs) to develop and enforce water quality standards within their boundaries.

### **California Wetlands Conservation Policy**

In August 1993, the Governor announced the “California Wetlands Conservation Policy.” The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of state and federal wetlands conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetlands conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an interagency task force to direct and coordinate administration and implementation of the policy.

### **California Regional Water Quality Control Board**

#### Clean Water Act, Section 401 Water Quality Certification

Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board (in California) regulates Section 401 requirements. The Central Valley Regional Water Quality Control Board (CVRWQCB) is responsible for enforcing water quality criteria and protecting water resources within the Planning Area. The CVRWQCB is responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements (WDR) or commonly by issuing conditional waivers to WDRs. The CVRWQCB requires that a project proponent obtain a CWA Section 401 water quality certification for Section 404 permits granted by the USACE.

#### Delegated Permit Authority

California has been delegated permit authority for the National Pollutant Discharge Elimination System (NPDES) permit program including stormwater permits for all areas except Indian lands. Issuing CWA Section 404 dredge and fill permits remains the responsibility of the USACE, but the

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State actively uses its CWA Section 401 certification authority to ensure 404 permits protect state water quality standards.

#### State Definition of Covered Waters

Under California state law, "waters of the state" means "any surface water or groundwater, including saline waters, within the boundaries of the state." Therefore, water quality laws apply to both surface and groundwater. After the US Supreme Court decision in *Solid Waste Agency of Northern Cook County v. Army COE of Engineers (SWANCC v. USCOE)*, the Office of Chief Counsel of the SWRCB released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act, discharges to wetlands and other waters of the state are subject to state regulation, and this includes isolated wetlands. In general, the RWQCBs regulate discharges to isolated waters in much the same way as they do for federal-jurisdictional waters, using Porter-Cologne rather than CWA authority.

#### **California Fish and Game Code**

##### Fully Protected Species

Certain species are considered fully protected, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals.

It is possible for a species to be protected under the California Fish and Game Code, but not fully protected. For instance, mountain lion (*Puma concolor*) is protected under Section 4800 et seq., but is not a fully protected species.

##### Protection of Birds and Their Nests

Eggs and nests of all birds are protected under Section 3503 of the California Fish and Game Code, nesting birds (including raptors and passerines) under Sections 3503.5 and 3513, and birds of prey under Section 3503.5. Migratory non-game birds are protected under Section 3800 and other specified birds under Section 3505.

##### Stream and Lake Protection

The CDFW has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Sections 1600 et seq. through administration of lake or streambed alteration agreements. Such agreements are not a permit, but rather a mutual accord between the CDFW and the project proponent. California Fish and Game Code Section 1600 et seq. was repealed and replaced in October of 2003 with the new Section 1600–1616 that took effect on January 1, 2004 (Senate Bill 418, Sher). Under the new code, the CDFW has the authority to regulate work that will "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river lake or stream." The CDFW enters into a streambed alteration agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources. Because the CDFW includes under its jurisdiction streamside habitats that may



not qualify as wetlands under the federal CWA definition, CDFW jurisdiction may be broader than USACE jurisdiction.

A project proponent must submit a notification of streambed alteration to the CDFW before construction. The notification requires an application fee for streambed alteration agreements, with a specific fee schedule to be determined by the CDFW. The CDFW can enter into programmatic agreements that cover recurring operation and maintenance activities and regional plans. These agreements are sometimes referred to as Master Streambed Alteration Agreements.

### LOCAL

#### **Butte Regional Conservation Plan and Natural Community Conservation Plan**

The Butte Regional Conservation Plan/Natural Community Conservation Plan is being coordinated by the Butte County Association of Governments (BCAG) on behalf of the cities of Biggs, Chico, Gridley, Oroville, and the County of Butte. The plan is a comprehensive and broad-based approach to biological resource preservation. These efforts identify the most important areas to preserve for protection of plants, animals, and habitats, but also allow for compatible land development, urban growth, and other economic activities. The plan is a voluntary plan that will provide comprehensive species, wetlands, and ecosystem conservation and contribute to the recovery of endangered species within the plan area while also providing a more streamlined process for environmental permitting. It is anticipated that the public draft plan document will be released for formal public review by the end of the summer in 2013 and will be approved and permitted in 2014.

#### **Biggs Municipal Code Section 9.15.080**

Section 9.15.080 states that it is unlawful and prohibited for any person other than the superintendent or his duly authorized agent or deputy to cut, trim, prune, spray, brace, plant, move, remove, or replace any tree in any public street within the city, or to cause the same to be done, unless a written permit has first been obtained from the city superintendent.

### **3.4.3 IMPACTS AND MITIGATION MEASURES**

#### STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the application of the State CEQA Guidelines Appendix G thresholds of significance. A project is considered to have significant impacts if implementation of the project will:

- 1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- 2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the CDFW or USFWS.
- 3) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool,

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coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means.

- 4) 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.
- 5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- 6) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional or State habitat conservation plan.

#### METHODOLOGY

The impact assessment was based on information available from various existing planning documents and database searches, as well as on the standards of significance described above. The assessment discusses potential impacts that could occur upon implementation of the proposed General Plan. Impacts were determined by comparing existing habitat baseline data and sensitive species associations to the proposed General Plan Land Use Diagram (**Figure 2.0-2**) and by determining effects that could occur through future development.

The biological resources within the Planning Area were determined from a review of previous environmental documentation for the Biggs Planning Area including the *Butte County General Plan Technical Update, Background Report (Final Draft)* (Butte County 2005), *Butte County General Plan 2030, Settings and Trends Report Public Draft* (Butte County 2007), *City of Biggs General Plan 1997–2015* (Biggs 1998), and the Final Landcover Dataset generated by Science Applications International Corporation (SAIC) for the Butte County Association of Governments in support of habitat conservation planning efforts (BCAG 2007). In addition, a number of other resources were used for this evaluation, including an online list of federally listed species for the project vicinity provided by the USFWS Endangered Species Office (2008), the CDFW, the CNDDDB, and the CNPS's Electronic Inventory (2008) for the Biggs, California, US Geological Survey (1970) 7.5-minute quadrangle.

#### ASSUMPTIONS

Since the exact nature, location, extent, and intensity of development on parcels associated with the proposed General Plan is not known at this time, it is likely that some level of natural resources would be retained within each project parcel. Several areas in the Planning Area are not expected to be developed under the proposed General Plan.

The following general potential impacts were considered in the analysis of impacts included below. Where applicable, the analysis of impacts includes a discussion of state and/or federal regulations, including permitting requirements, which could mitigate impacts.

- Vegetation removal, grading, and construction of new residential, industrial, and commercial uses could result in the direct loss of special-status species and their habitats and loss of sensitive and/or critical habitats.
- Construction in or adjacent to creeks and adjacent riparian habitats could result in direct loss of special-status species and their habitat and loss and/or degradation of aquatic and riparian habitat and wetlands.

- Discharge of construction and other potential sources of polluted stormwater, and increased urban stormwater runoff could result in indirect impacts to special-status species and sensitive and/or critical habitats. Water quality impacts are discussed in more detail in Section 3.8, Hydrology and Water Quality.
- Loss of natural ground cover and increase in impervious areas could result in hydrologic changes that could affect special-status species and riparian habitat through alteration of surface and subsurface flows, timing, and velocities. Hydrology impacts are discussed in more detail in Section 3.8, Hydrology and Water Quality.
- Increased urban development, particularly on the edge of existing development, could result in further fragmentation of wildlife habitats and disruption of movement corridors.
- Roadway improvements and extensions could result in fragmentation of habitats and disruption of movement corridors.

The following proposed General Plan policies and actions address biological resources:

- 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-3.2 (Butte HCP/NCCP) – Actively participate in and support regional conservation planning efforts such as the Butte Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) sponsored by the Butte County Association of Governments (BCAG) to protect habitats and species and streamline permitting requirements and timelines.*
- 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.*
- Action CR-4.2.1 (Hamilton Slough) – Pursue the development of a linear parkway and recreation corridor along Hamilton Slough in the southwestern portion of the city and require new development adjacent to the Slough to dedicate sufficient land for this intent. Include components of habitat preservation and public recreation, as well as maintaining functions of storm water and irrigation water transport.*
- Action CR-4.2.2 (Coordination) – Work with Reclamation District 833 on options to allow for the Slough to function as an open water way providing multiple-use benefits to include recreation, water conveyance and storm water drainage.*

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The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analysis identifies and describes how specific policies and actions provide enforceable requirements and/or performance standards that address biological resources and avoid or minimize significant impacts.

### IMPACTS AND MITIGATION MEASURES

#### Special-Status Species and Sensitive and Critical Habitats (Standards of Significance 1, 2, and 3)

**Impact 3.4.1** Land uses and development consistent with the proposed General Plan could result in adverse effects, either directly or indirectly, on special-status plant and animal species and sensitive and critical habitats in the Biggs Planning Area. However, implementation of General Plan policy provisions would address this impact. This impact would be considered **less than significant**.

Land use and development consistent with the proposed General Plan could result in adverse impacts on special-status species or essential habitat for special-status species in the Planning Area. As indicated in **Tables 3.4-1** and **3.4-2**, several special-status species occurrences are known to occur within or near the Planning Area. Any development in areas that are currently undeveloped 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.

#### Habitat Modification

Implementation of the proposed General Plan could result in disturbance, degradation, and removal of riparian and wetland habitats, which are defined as critical and/or sensitive habitat. Riparian habitats and waters of the United States, including wetlands, are considered to be sensitive natural communities by the CDFW. In addition, the USACE and the CDFW have a “no net loss” policy for jurisdictional features.

Development of previously undeveloped land for residential and nonresidential 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 below.

#### Increased Human/Wildlife Interactions

Development of residential and nonresidential uses would result in increased human presence in areas formerly uninhabited by humans. Additionally, development of previously undeveloped land for residential uses can expose species to impacts from feral and unconfined pets.

#### Habitat Fragmentation and Edge Effects

Much of the habitat within the Planning Area that may support or is occupied by special-status species is currently interconnected with areas of open space and rural and agricultural uses that generally have limited impacts on plant and wildlife species in the Planning Area. Development within these areas could fragment available habitat. Development of the Biggs Planning Area

consistent with the proposed General Plan could result in small pockets of conserved habitat that are no longer connected by open space, resulting in indirect impacts to species diversity and movement within the Planning Area.

### Encroachment by Exotic Weeds

Generally, landscaping installed as part of development in the region has relied heavily on exotic, non-native plant species (ornamentals) for decoration. However, some of these species can spread to natural areas, causing native plant life to be replaced by exotic species. Construction activities, grading, and other ground or vegetation-clearing disturbances can eliminate the native plant population and allow invasive non-native species to become established. As native plants are replaced by exotic species, indirect impacts to the habitat of listed species would occur such as modification or degradation of habitat.

### Changes in Hydrologic Conditions

As development occurs, surface water flows and overall hydrology in sloughs, drainages, and other waterways are altered due to an increase in impermeable surfaces through, for example, the placement of building materials and paving over permeable surfaces. In addition, surface water flows are modified due to changes in surface flow by point source stormwater infrastructure installed as well as from the introduction of drainage flows during seasons when waterways and wetland features are typically dry (commonly referred to as "summer nuisance flows"). Some biological communities that contain habitat for special-status species can be indirectly impacted by such changes. For example, seasonal wetlands survive along a rigid set of soil, water, and climatic conditions. Alteration of current inundation and desiccation regimes due to altered hydrology could substantially alter the characteristics of seasonal wetland habitat, resulting in loss or degradation of habitat in developed and undeveloped areas of the Planning Area.

Biological communities provide potential habitat for, or are known to support, special-status species. Please refer to **Tables 3.4-1** and **3.4-2** for special-status species associated with the Biggs Planning Area. It is important to note that the exact nature and degree of development on individual parcels is unknown at this time. Future development design proposals on a project-by-project basis will be subject to state and federal regulations that protect habitat and species, and the application of proposed General Plan policies and actions also address protection of biological resources, as discussed further below.

The proposed General Plan could result in direct and indirect impacts to special-status plant and animal species. A key goal of proposed 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. In addition, the proposed General Plan policy provisions and Land Use Diagram direct the City to maintain clear urban 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 proposed General Plan seeks to avoid the growth effects of sprawl development patterns, such as the loss of biological resources. Furthermore, the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and the California Fish and Game Code protect special-status species through regulatory permitting procedures that include mitigation and compensation requirements.

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Although the Butte Regional Conservation Plan (discussed under Regulatory Framework above) is currently under development and has not yet been adopted, the General Plan directs the City's active participation in the Butte Regional Conservation Plan process. Once adopted and implemented, the conservation plan will include a conservation strategy that provides a regional approach for the long-term conservation of covered species and natural communities while allowing for compatible future land development. Conservation planning and implementation at a regional scale allows for creation of a comprehensive natural preserve system that is more efficient in providing for the needs of covered species than the existing project-by-project process. The conservation plan will be particularly effectual in addressing habitat fragmentation and range restriction in that it will provide for the protection of species, natural communities, and ecosystems on a landscape (larger-scale) level, rather than through small pockets of conserved habitat. When the conservation plan is in place, it will include a range of conservation measures for aquatic and terrestrial species and habitats, avoidance and minimization measures, and monitoring and adaptive management plans intended to ensure compliance with, and the effectiveness of, the conservation system.

In addition, 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. Proposed 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**.

#### **Wildlife Corridors (Standard of Significance 4)**

**Impact 3.4.2** Urban development consistent with the proposed General Plan, including roadway expansion and utility piping, could interfere with the movement of native resident or migratory fish or wildlife species as well as use of native wildlife nursery sites. These land uses could also restrict the range of special-status species in the Biggs Planning Area. This would be considered a **less than significant** impact.

Wildlife movement corridors are routes frequently utilized by wildlife that provide shelter and sufficient food supplies to support wildlife species during migration. Movement corridors generally consist of riparian or forested habitats that span contiguous acres of undisturbed habitat. Migratory birds may use the sloughs, drainages, and other natural habitats within the Planning Area during migration and breeding. Furthermore, open space provides an opportunity for dispersal and migration of wildlife species. The primary travel corridors available in the Planning Area include the approximate 15 acres of perennial and ephemeral drainages occurring throughout Biggs, especially the thin stringers of remnants of oak woodlands and riparian habitat existing along Hamilton Slough. Corridors provided by these perennial and ephemeral drainage habitats provide important routes for species moving through the area as well as for local species that use these corridors to spread to new habitat, to mate, and to disperse genetic material. New and intensified development resulting from implementation of the proposed General Plan, including building construction and roadway improvements, could result in disturbance, degradation, and removal of these important corridors for the movement of common and special-status wildlife species.

The proposed General Plan policy provisions include protection for the habitat value of Biggs's perennial and ephemeral drainage corridors. Proposed General Plan Action CR-4.2.1 mandates the pursuit of a linear parkway and recreation corridor along Hamilton Slough in the southwestern portion of the city and requires new development adjacent to the slough to dedicate sufficient land for this intent. Future development would also have to include components of habitat preservation and public recreation, as well as maintaining functions of storm water and irrigation water transport. This action would assist in reducing impacts associated with the movement and range of wildlife in that it would ensure that Hamilton Slough would be adequately buffered from new or intensified development. Similarly, Policy CR-4.2 promotes the establishment of open space reserves along riparian corridors in the Biggs Planning Area for habitat protection and enhancement as well as connectivity and open space.

Open space, including agricultural lands, also provides an opportunity for dispersal and migration of wildlife species. New development in currently undeveloped open space areas resulting from implementation of the proposed General Plan could interfere with wildlife migration and thus restrict the range of special-status species. As previously discussed, a key goal of proposed 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. In addition, the proposed General Plan policy provisions and Land Use Diagram direct the City to maintain clear urban boundaries. Also, if adopted and implemented, the Butte Regional Conservation Plan/Natural Community Conservation Plan will address habitat fragmentation and range restriction in the Biggs Planning Area in that it will provide for the protection of species, natural communities, and ecosystems on a landscape (larger-scale) level, rather than through small pockets of conserved habitat.

The compact urban form and conservation provisions included in the General Plan would minimize movement and range impacts as discussed above. In addition, as stated under Impact 3.4.1, General Plan Policy CR-3.1 ensures that applicants for future development projects that have the potential to negatively affect special-status species habitat 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. Proposed 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 habitat impacts. This impact is considered **less than significant**.

### **Conflict with Habitat Conservation Plans or Local Ordinances (Standards of Significance 5 and 6)**

**Impact 3.4.3** No habitat conservation plan (HCP), recovery plan, or natural community conservation plan has been adopted encompassing all or portions of Biggs. The General Plan would not conflict with Biggs Municipal Code Section 9.15.080 (Tree Preservation Regulations) that regulates the removal and preservation of trees on public rights-of-way within the city. Therefore, **no impact** would occur.

Land uses and development consistent with the proposed General Plan would not conflict with any adopted habitat conservation plan, natural community conservation plan, or other approved conservation plan. Currently, no such conservation plans have been adopted encompassing all or portions of Biggs; however, the Planning Area is located within the Butte Regional Conservation Plan/Natural Community Conservation Plan planning area. This plan is

## 3.4 BIOLOGICAL RESOURCES

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currently under preparation by various local agencies. The geographic area that will be addressed in the conservation plan covers approximately 560,000 acres of the lowland portion of Butte County up to and including the foothill oak woodlands. The proposed General Plan includes Policy CR-3.2 that calls for active participation in the conservation plan. In addition, future development allowed under the proposed General Plan would be required to comply with Biggs Municipal Code Section 9.15.080 (Tree Preservation Regulations). Thus, **no impact** would occur.

### 3.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

Biggs and the surrounding area of Butte County as a whole must be considered for the purpose of evaluating land use conversion issues associated with biological resources on a cumulative level. In particular, this cumulative setting condition includes proposed and approved projects, existing land use conditions, and planned development under the proposed General Plan, existing land use conditions, and planned and proposed land uses in the region.

Continued development in the city and in the region could directly and indirectly affect biological resources. The development of natural areas could cause loss of wildlife habitats or plant communities. The implementation of the proposed General Plan would contribute incrementally to the cumulative loss of native plant communities, wildlife habitat values, special-status species and their potential habitat, and wetland resources in the county as well as in the Central Valley region. Growth and urbanization of Biggs and other unincorporated county areas in the Biggs vicinity cumulatively contribute to the loss of these resources.

The cumulative impact analysis below focuses on the proposed General Plan's contribution to the loss of special-status species and sensitive and critical habitat.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Biological Resource Impacts

**Impact 3.4.4** The proposed General Plan, in combination with other reasonably foreseeable projects, would result in direct and indirect mortality and loss of habitat for special-status species and sensitive and/or critical habitat. This would be a **cumulatively considerable** impact.

There are several biological communities within the Biggs Planning Area and in the region that are critically important for the protection of several sensitive species. Implementation of the proposed General Plan may result in degradation of wildlife habitat through a variety of actions which, when combined with other habitat impacts occurring from development within surrounding areas, would result in significant cumulative impacts. Future development within Biggs and in the surrounding vicinity would contribute to cumulative impact on special-status species and sensitive and critical habitats. Furthermore, increased development and disturbance created by human activities (e.g., fires, increased nighttime lighting, reduced access to habitat and movement corridors) would result in direct mortality, habitat loss, and deterioration of habitat suitability. These impacts are considered **cumulatively considerable**.

Implementation of the proposed General Plan policies and actions described under Impacts 3.4.1 through 3.4.3 would reduce the proposed General Plan's impacts to these resources. However, the extent of sensitive and/or critical habitat loss that urban development, including roadway expansion and utility piping, would contribute to the considerable regional loss of



these resources. It is anticipated that the eventual implementation of the proposed Butte Regional Conservation Plan would address and mitigate regional biological resource impacts. However, this plan has yet to be adopted. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable**.

### 3.4 BIOLOGICAL RESOURCES

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## **3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES**



## 3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

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This section considers and evaluates the potential impacts of the proposed City of Biggs General Plan on historical, cultural, and paleontological resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, or religious reasons. Paleontological resources include fossil remains, as well as fossil localities and formations which have produced fossil material.

For analysis purposes, cultural resources may be categorized into four groups: archaeological resources (prehistoric and historical); historic properties, buildings, and districts; areas of importance to Native Americans; and paleontological resources (fossilized remains of plants and animals). Cultural resource impacts include those to existing historic resources (i.e., historic districts, landmarks, etc.) and to archaeological and paleontological resources.

### CONCEPTS AND TERMINOLOGY FOR EVALUATION OF CULTURAL RESOURCES

The following definitions are common terms used to discuss the regulatory requirements and treatment of cultural resources:

*Cultural resources* is the term used to describe several different types of properties: prehistoric and historical archaeological sites; architectural properties such as buildings, bridges, and infrastructure; and resources of importance to Native Americans.

*Historic properties* is a term defined by the National Historic Preservation Act (NHPA) as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such a property.

*Historical resource* as described in the California Environmental Quality Act (CEQA) includes buildings, sites, structures, objects, or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance and is eligible for listing or is listed in the California Register of Historical Resources (CRHR) or a local register of historical resources. The CRHR includes resources listed in, or formally determined eligible for listing in, the NRHP, as well as some California State Landmarks and Points of Historical Interest.

*Paleontological resource* is defined as including fossilized remains of vertebrate and invertebrate organisms, fossil tracks and trackways, and plant fossils. A unique paleontological site would include a known area of fossil-bearing rock strata.

#### 3.5.1 EXISTING SETTING

The existing conditions discussion for cultural and historic resources in the Biggs Planning Area addresses the prehistory and ethnography of the region, discusses the history of Biggs, and identifies known cultural and historic resources.

##### 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

### 3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

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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 (PMC 2008).

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 north-central 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 (PMC 2008).

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 (PMC 2008).

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 Maidu peoples in the region (PMC 2008).

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 (PMC 2008).

#### ETHNOGRAPHY

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 (Kroeber 1925). 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 (PMC 2008).

#### 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 (PMC 2008).

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.

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### KNOWN HISTORIC, CULTURAL, AND PALEONTOLOGICAL RESOURCES IN THE BIGGS PLANNING AREA

The portions of B Street located between Fifth Street and Seventh Street have always formed the commercial core of the city, forming a traditional main street area. This area includes small markets, the Post Office, and several historically significant buildings that are locally listed in the City's General Plan (Biggs 1998). The structures are not listed in the National Register of Historic Places or the California Register of Historic Places. Most prominent is the Colonial Hotel, once the centerpiece of social life in Biggs. Several other locally historically significant buildings are located on a few streets surrounding B Street. The Sacramento Valley Bank Building, Carnegie Library, Methodist Church, and various residences around the community are excellent reminders of Biggs's past. All of these structures have significant historic architectural features. Mixed with the remaining older homes built in the 1800s are generally more modest dwellings of more recent construction.

A records search and field survey conducted as part of the City's General Plan did not identify any archaeological resources in the Biggs Planning Area. The Planning Area for the current General Plan includes a larger area than the previous General Plan's Planning Area. No paleontological resources have been found in Biggs.

### NATIVE AMERICAN COORDINATION

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 August 2013, the City of Biggs initiated the consultation process (see **Appendix 3.5-1**) as required under these provisions of the Government Code, and consultation meetings between the City and tribal representatives have been ongoing.

### 3.5.2 REGULATORY FRAMEWORK

#### FEDERAL

#### **National Register of Historic Places**

The NRHP is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP. The criteria for listing in the NRHP include resources that:

- a) Are associated with events that have made a significant contribution to the broad patterns of history;
- b) Are associated with the lives of persons significant in our past;



- c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d) Have yielded or may likely yield information important in prehistory or history.

STATE

#### **California Register of Historical Resources**

The State Historical Resources Commission has designed the California Register of Historic Resources for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The CRHR is the authoritative guide to the state's significant historical and archeological resources. This program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding, and affords certain protections under CEQA.

#### **California Environmental Quality Act**

Under CEQA, public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to Public Resources Code (PRC) Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

*Historical resource* is a term with a defined statutory meaning (PRC Section 21084.1; determining significant impacts to historical and archaeological resources is described in the CEQA Guidelines, Section 15064.5[a], [b]). Under CEQA Guidelines Section 15064.5(a), historical resources include the following:

- 1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC Section 5024.1).
- 2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- 3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources (PRC Section 5024.1), including the following:

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- a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
  - b) Is associated with the lives of persons important in our past;
  - c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
  - d) Has yielded, or may be likely to yield, information important in prehistory or history.
- 4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

Historic resources are usually 45 years old or older and must meet at least one of the criteria for listing in the California Register, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC Section 5024.1 and California Code of Regulations (CCR), Title 14, Section 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

For historic structures, CEQA Guidelines Section 15064.5(b)(3) indicates that a project which follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995) shall be considered as mitigating impacts to a less than significant level.

As noted above, CEQA also requires lead agencies to consider whether projects will impact "unique archaeological resources." Public Resources Code Section 21083.2(g) states:

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

- *Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.*
- *Has a special and particular quality such as being the oldest of its type or the best available example of its type.*

### 3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

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- *Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

Treatment options under 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).

Section 7050.5(b) of the California Health and Safety Code specifies protocol when human remains are discovered, as follows:

*In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.*

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 must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely as 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.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to Section 15064.5(f), these provisions should include "an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

Paleontological resources are classified as non-renewable scientific resources. California Public Resources Code Section 5097.5 et seq. makes it a misdemeanor for anyone to knowingly disturb any archaeological, paleontological, or historical features situated on public lands. No state or local agencies have specific jurisdiction over paleontological resources. No state or local agency requires a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earth-moving on state or private land in a project site. A records search and field survey conducted as part of the City's General Plan did not identify any paleontological resources with the Biggs Planning Area

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### LOCAL

#### City of Biggs Municipal Code Chapter 14.55

Chapter 14.55 of the Municipal Code provides a design review process for development in the city intended to promote a visual environment of high aesthetic quality. The Biggs Planning Department and Planning Commission promote responsible architectural design that is consistent with the city's character by enforcing the design guidelines as set forth in Chapter 14.55 of the Biggs Municipal Code. The Planning Department and Planning Commissions 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.

#### 3.5.3 IMPACTS AND MITIGATION MEASURES

##### THRESHOLDS OF SIGNIFICANCE

Following Public Resources Code Sections 21083.2 and 21084.1, and Section 15064.5 and Appendix G of the CEQA Guidelines, cultural resource impacts are considered to be significant if implementation of the project considered would result in any of the following:

- 1) Cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5.
- 2) Cause a substantial adverse change in the significance of an archaeological resource as defined in Public Resources Code Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5.
- 3) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.
- 4) Disturb any human remains, including those interred outside of formal cemeteries.

State CEQA Guidelines Section 15064.5 defines "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired.

CEQA Guidelines, Section 15064.5(b)(2) defines "materially impaired" for purposes of the definition of substantial adverse change as follows:

*The significance of an historical resource is materially impaired when a project:*

- (A) *Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or*
- (B) *Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project*

### 3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

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*establishes by a preponderance of evidence that the resource is not historically or culturally significant; or*

- (C) *Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.*

CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

- Identify potential historical resources and unique archaeological resources;
- Evaluate the eligibility of historical resources; and
- Evaluate the effects of the project on eligible historical resources.

#### METHODOLOGY

A records search was completed by PMC at the Northeast Information Center, California State University, Chico, of the California Historical Resources Information System. A sacred lands search conducted by the Native American Heritage Commission, and consultation with the Native American community per the requirements of SB 18, was initiated by the City of Biggs in August 2013. All Native American groups identified by the NAHC were contacted by letter regarding the proposed General Plan.

The potential impacts of the proposed General Plan on cultural resources have been evaluated by considering both potential future construction activities and operational impacts of potential proposed projects which could occur under the proposed General Plan. The proposed policies and actions providing mitigation have been identified for each significant impact in this section. If the applicable proposed General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided.

The following proposed General Plan policies and actions address cultural and paleontological resources:

- |                        |   |
|------------------------|---|
| <i>Policy CE-8.1</i>   | <i>(Historic Structures) – Identify, protect, and promote the restoration of historic structures and physical reminders of Biggs’s past when financially and physically feasible.</i>                     |
| <i>Action CE-8.1.1</i> | <i>Continue to work closely with owners of historically significant structures to facilitate maintenance and enhancement activities that maintain the historical characteristics of those structures.</i> |
| <i>Policy CE-8.2</i>   | <i>(Public Assistance) – Provide assistance as appropriate to developers that promote historic features as a part of their development design.</i>  |
| <i>Action CE-8.2.1</i> | <i>Provide assistance as appropriate and available to groups or individuals that undertake historic restoration or preservation.</i>  |

### 3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

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- Policy CE-8.3      *(Record Keeping) – Maintain and archive public and private records important to the area's history and culture.*
- Action CE-8.3.1    *Maintain an updated list of historic structures and known culturally significant features in the city.*
- Policy CE-8.4      *(Preservation) – Promote the preservation and revitalization of all historic structures and areas in Biggs where financially and physical feasible.*
- Action CE-8.4.1    *Include standards in the City's Design Guidelines program that promote the retention of historic features and work to maintain the integrity of existing historic structures and features.*
- 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.*

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that address cultural and paleontological resources and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

#### Potential Destruction or Damage to Historical Resources (Standard of Significance 1)

**Impact 3.5.1**      Subsequent activities under the proposed General Plan could potentially cause a direct substantial adverse change in the significance of a historical resource or structure. However, policy provisions in the proposed General Plan and continued implementation of the City's Municipal Code would ensure that historic resources are not adversely impacted. This would be a **less than significant** impact.

Future development allowed under the proposed General Plan could result in the destruction of historic buildings and alterations, resulting in the loss of historic character-defining features of buildings. Indirect impacts could also occur from development adjacent to historic structures that conflict in design. As noted above, the Biggs Planning Department and Planning Commission promote responsible architectural design that is consistent with the city's character by enforcing the design guidelines as set forth in Chapter 14.55 of the Biggs Municipal Code. The Planning Department and Planning Commission 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 ensure that development and new land uses are designed and operated in a manner compatible with the preservation of these historic resources.

Implementation of the proposed General Plan Community Enhancement Element policies and actions would ensure protection and preservation of significant historical resources by identifying resources and avoiding or mitigating potential impacts. For example, Action CE-8.4.1 requires an update of the City's Design Guidelines program to include standards that promote the retention of historic features and work to maintain the integrity of existing historic structures and features. Implementation of Policy CE-8.1 would identify, protect, and promote the restoration of historic structures and physical reminders of Biggs's past when financially and physically feasible. In addition, future discretionary approvals that could result in the demolition of historical resources will be subject to individual review of potential impacts under a separate CEQA document. However, the proposed General Plan does not propose the removal of any historic resources. Thus, this impact would be **less than significant**.

#### **Potential Destruction or Damage to Known and Undiscovered Archaeological Resources and Human Remains (Standards of Significance 2 and 4)**

**Impact 3.5.2** Subsequent activities under the proposed General Plan could result in the potential disturbance of cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features) and human remains. State policy in the form of the California Environmental Quality Act would ensure that archaeological resources are not adversely impacted by future development under the proposed General Plan. This would be a **less than significant** impact.

A records search and field survey conducted as part of the City's General Plan did not identify any archaeological resources with the current Biggs Planning Area; however, the Planning Area for the proposed General Plan includes a larger area than the previous General Plan's Planning Area. Therefore, there is a possibility that cultural resources may be discovered in areas of the city during construction and buildout of land uses allowed under the proposed General Plan. Development which could occur has the potential to destroy and/or degrade known and unknown prehistoric archaeological resources, historical archaeological resources, or human remains. As noted above, CEQA requires lead agencies to consider whether projects will impact unique archaeological resources. Proposed General Plan Action CE-8.5.1 requires that future discretionary projects under the General Plan conduct record searches for with the Northeast Ceter of California Historical Resoures Information System (CHRIS) location at CSU Chico. Additionally, Action CE-8.5.2 require future development to consult with and distribute environmental review documents to the Native American Heritage Commission through the State Clearinghouse.

Treatment options under 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 city 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),

### 3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

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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**.

#### **Potential Destruction or Damage to Paleontological Resources (Standard of Significance 3)**

**Impact 3.5.3** Adoption of the proposed General Plan could result in the potential disturbance of paleontological resources (i.e., fossils and fossil formations) within the Planning Area. However, state policy in the form of the California Environmental Quality Act would ensure that paleontological resources are not adversely impacted by future development under the proposed General Plan. This would be a **less than significant** impact.

A records search and field survey conducted as part of the City's General Plan did not identify any paleontological resources within the Biggs Planning Area; however, the Planning Area for the proposed General Plan includes a larger area than the previous General Plan's Planning Area. Therefore, there is a possibility that paleontological resources may be discovered in areas within the city during construction and buildout of land uses allowed under the proposed General Plan.

However, the General Plan does not propose any development activities that would directly disturb currently undiscovered paleontological resources. Future discretionary approvals that could result in the potential disturbance of paleontological resources will be subject to individual review of potential impacts under a separate CEQA document. As such, this impact would be **less than significant**.

#### **3.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES**

##### CUMULATIVE SETTING

The cumulative setting associated with the proposed General Plan includes existing, proposed, planned, and reasonably foreseeable projects and growth within the Biggs Planning Area and the region (see Section 4.0 for a further description of cumulative growth conditions). Continued growth in the region would contribute to potential conflicts with cultural and paleontological resources. These resources include archaeological resources associated with Native American activities and historic resources associated with settlement, farming, and economic development.

##### CUMULATIVE IMPACTS AND MITIGATION MEASURES

#### **Cumulative Impacts on Historic Resources, Prehistoric Resources, and Human Remains (Standards of Significance 1, 2, and 4)**

**Impact 3.5.4** Implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development in the region, could result in cumulative impacts to cultural resources in the region. However, proposed General Plan policy provisions and state policy in the form of the California Environmental Quality Act would ensure that historic and prehistoric resources are not adversely impacted. This impact would be **less than cumulatively considerable**.



Implementation of the proposed General Plan, in combination with cumulative development in the surrounding region, would increase the potential to disturb known and undiscovered cultural resources. The project might contribute to the cumulative loss of cultural resources in the region. This contribution might be considerable when combined with other past, present, and reasonably foreseeable development in the region.

However, as discussed under Impacts 3.5.1 and 3.5.2, the Biggs Planning Department and Planning Commission review architectural drawings or renderings, which are required to be submitted with an application for a building permit, in order to ensure that development and new land uses are designed and operated in a manner compatible with the preservation of these historic resources. In addition, future discretionary approvals that could result in the potential disturbance of historic and cultural resources will be subject to individual review of potential impacts under a separate CEQA document. Furthermore, Section 7050.5(b) of the California Health and Safety Code specifies protocol when human remains are discovered on a project site, while Public Resources Code Section 21083.2 includes requirements for activities that preserve unique archeological resources in place in an undisturbed state. Future environmental and discretionary review of development projects under the proposed General Plan would ensure that the project's contribution to cumulative impacts would be **less than cumulatively considerable**.

#### **Cumulative Impacts on Paleontological Resources (Standard of Significance 3)**

**Impact 3.5.5** Implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development in the region, could result in cumulative impacts to paleontological resources in the region. However, policy provisions in the proposed General Plan would ensure that impacts would be **less than cumulatively considerable**.

While multiple impacts may occur during the implementation period of the General Plan, cumulative impacts are unlikely. Cumulative impacts that may occur would be reduced to **less than cumulatively considerable** levels by the requirements of CEQA, which includes requirements for activities that preserve unique resources in place in an undisturbed state.

### 3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

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#### REFERENCES

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Kroeber, A. V. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Washington, D.C. Reprinted in 1976 by Dover Publications, Inc., New York.

PMC. 2008. *City of Chico, General Plan Update, Existing Conditions Report*.

## **3.6 GEOLOGY AND SOILS**



This section describes the geology and seismicity of the Biggs Planning Area, as well as the types of soils that have been identified and their properties as they relate to the proposed General Plan. Potential exposure of people and future improvements to soil-related hazards (e.g., unstable or expansive soils) and erosion are analyzed. In addition, potential geologic and seismic hazards, such as fault rupture, ground shaking, liquefaction, and landslides, are discussed. This section also addresses mineral resources within the Biggs Planning Area and discusses the proposed General Plan's potential to impact those resources.

### 3.6.1 EXISTING SETTING

#### REGIONAL GEOLOGIC 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.

#### LOCAL GEOLOGY AND TOPOGRAPHY

Biggs and the surrounding area are predominantly flat with slopes generally not exceeding 2 percent. The Biggs Planning Area slopes to the southwest and ranges in elevation from 89 to 106 feet above sea level.

#### Geologic Formations

Biggs is 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.

#### SOILS

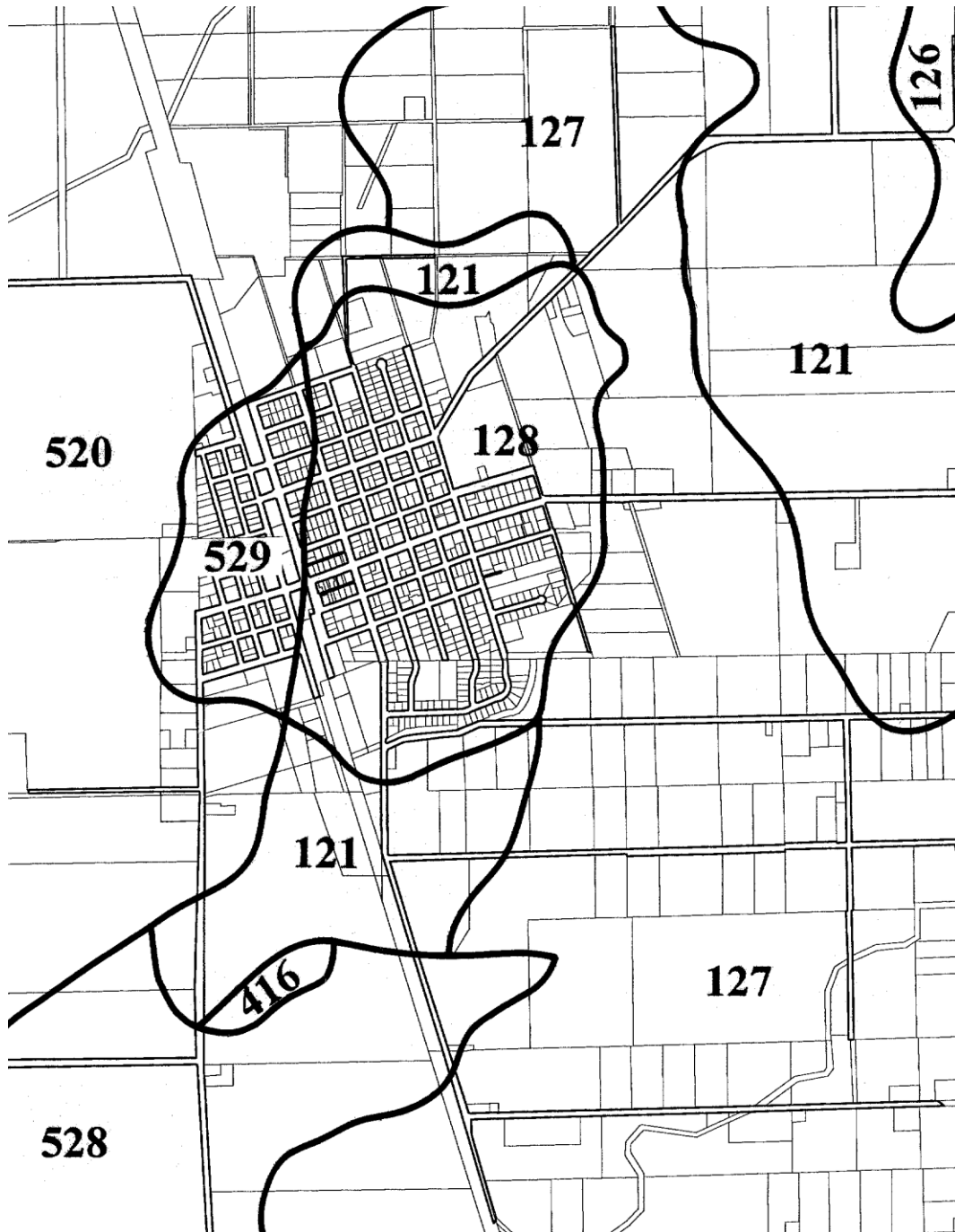
Soils in the vicinity of Biggs are part of the Great Valley Fan Deposits. They are of alluvial origin and are rated excellent for agricultural production. High quality soils are one of the prime resources of the Biggs area.

The US Department of Agriculture, Natural Resources Conservation Service (NRCS) evaluates and maps farmland soils. The NRCS is in the process of mapping Butte County farmlands, and

### 3.6 GEOLOGY AND SOILS

the following descriptions are based upon the preliminary findings of this effort. The locations of the soil types underlying the Biggs Planning Area are depicted on **Figure 3.6-1**. The soil types are described below.

**FIGURE 3.6-1  
SOIL CLASSIFICATIONS**



**121 – Boga-Loemstone Complex, 0 to 2 Percent Slope**

Located north of the city limits, this soil is characterized as a very deep, moderately well drained soil. Typical profile includes strata of loam, clay loam, and densely compacted loam. Depth to hardpan is typically 40 to 80 inches, with high water table generally 30 to 60 inches deep. This soil type has a low shrink-swell potential, with water erosion potential slight and wind erosion potential moderate in areas of bare soil.

**127 – Gridley Loam, 0 to 2 Percent Slope**

Located to the north, east, and south east of the city, this soil is characterized as a moderately deep, moderately well drained soil. Typical profile includes strata of loam, clay loam, clay, and cemented duripan. Depth to hardpan is typically 20 to 40 inches, with high water table 20 to 40 inches deep. This soil type has a high shrink-swell potential, and both wind- and water-related erosion potential is slight.

**128 – Gridley-Urbanland Complex, 0 to 2 Percent Slope**

Constituting the eastern 80 percent of the city, this soil is characterized as a moderately deep, moderately well drained soil. Typical profile includes strata of loam, clay loam, clay, and cemented duripan. Depth to hardpan is typically 20 to 40 inches. The high water table may be perched above duripan. This soil type has a high shrink-swell potential, and wind- and water-related erosion potential is slight.

**520 – Esquon-Neerdobe Complex, 0 to 1 Percent Slope**

Located to the west of the city, this soil is characterized as a deep, somewhat poorly drained soil. Typical profile includes strata of silty clay, moderately cemented clay loam, and strongly cemented duripan. Depth to hardpan is 40 to 60 inches, with frequent ponding from December through March. This soil type has a high shrink-swell potential, and both wind- and water-related erosion potential is slight.

**529 – Esquon-Neerdobe-Urbanland Complex, 0 to 1 Percent Slope**

Making up the western 20 percent of the city, this soil is characterized as a deep, somewhat poorly drained soil. Typical profile includes strata of silty clay, moderately cemented clay loam, and strongly cemented duripan. Depth to hardpan is 40 to 60 inches, with frequent ponding from December through March. This soil type has a high shrink-swell potential, and both wind- and water-related erosion potential is slight.

**SOIL SUMMARY**

The soils to the north, east, and south of the city are generally deeper loam in character and well drained. These soils are well suited for orchard production of walnuts, prunes, and peaches. By contrast, the majority of the city and the land to the west of Biggs are underlain by soils that are heavier, less well drained and are more suitable for rice production. Another aspect of soil type is stability for construction as represented by soil shrink-swell potential. The high shrink-swell potential of the land in and around the city may require more thorough site preparation to avoid settling after construction is complete.

## 3.6 GEOLOGY AND SOILS

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### Erosion/Accelerated Erosion

The NRCS classifies soils based on the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. Erosion 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 under ordinary climatic conditions 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 off-site damage are likely, and erosion-control measures are costly and generally impractical. The erosion rating for many of the soil types found in the Biggs Planning Area is slight. However, soils found in pockets just north and just south of the city limits, as well as in the eastern portion of the Planning Area, are considered to be at a moderate risk of wind erosion.

### Settlement

Surface settlement can occur due to immediate settlement of coarse-grained soils or consolidation of fine-grained soils under increased loading. Settlement can also result from shrinkage of expansive soil or liquefaction (described below). Immediate settlement occurs when a load from a structure or placement of new fill material is applied, causing distortion in the underlying materials. This settlement occurs relatively quickly and is typically substantially complete within several hours or days after placement of the final load. Consolidation settlement occurs in saturated or near-saturated fine-grained (clay) soil due to volume change caused by load-induced squeezing out of water from the pore spaces. Consolidation occurs over a relatively long period of time (often years or even decades) and is followed by secondary compression, which is a continued change in void ratio under the continued application of the load from the pore water to the soil grains. Total settlements can vary over an area, referred to as differential settlement, due to variations in loading, soil characteristics, and thickness of compressible layers.

### Landslides and Slope Instability

Landslides may be triggered by both natural and human-induced changes in the environment resulting in slope instability. The term *landslide* includes a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. Although gravity acting on an over-steepened slope is the primary reason for a landslide, there are other contributing factors, including the following:

- Erosion by rivers, glaciers, or ocean waves creating over-steepened slopes
- Rock and soil slopes being weakened through saturation by snowmelt or heavy rains
- Earthquakes creating stresses that make weak slopes fail
- Earthquakes of magnitude 4.0 and greater
- Volcanic eruptions producing loose ash deposits, heavy rain, and debris flows
- Excess weight from accumulation of rain or snow, stockpiling of rock or ore, from waste piles, or from human-made structures stressing weak slopes to failure



Slope material that becomes saturated with water may develop a debris flow or mud flow. The resulting slurry of rock and mud may pick up trees, houses, and cars, thus blocking bridges and tributaries and causing flooding along its path.

Although steep slopes are commonly present where landslides occur, it is not necessary for the slopes to be long. Landslides, rock falls, and debris flows occur continuously on all slopes; some processes act very slowly, while others occur very suddenly. Slope stability is dependent on many factors and their interrelationships, including rock type, slope steepness, and natural or human-made undercutting (Butte County 2007).

Butte County has a history of landslides, most of which occur in areas that have experienced previous landslides. The areas of highest landslide potential are in the mountainous central area of the county where well-developed soils overlay impervious bedrock on steep slopes that at times undergo heavy rainfall. The slopes around flat uplands, such as Table Mountain, are also highly susceptible to landslides. Most of the rest of Butte County has moderate to low landslide potential. The overwhelming majority of the Biggs Planning Area has no potential to low potential for landslides.

### **Expansive Soils**

Expansive soils are soils that tend to shrink or swell depending on their moisture content. These swelling soils typically contain clay minerals, as many types of clay minerals are expansive. Expansive clay minerals include smectite, bentonite, montmorillonite, beidellite, vermiculite, attapulgite, nontronite, illite, and chlorite. When a soil contains a large amount of expansive minerals, it has the potential for significant expansion. As expansive soils get wet, the clay minerals absorb water molecules and expand; conversely, as they dry they shrink, leaving large voids in the soil. When structures are located on expansive soils, foundations have the tendency to rise during the wet season and shrink during the dry season. This movement can create new stresses on various sections of the foundation and connected utilities and can lead to structural failure and damage to infrastructure. Cracked foundations, floors, and basement walls are typical types of damage done by swelling soils. Damage to the upper floors of the building can occur when motion in the structure is significant.

The Biggs Planning Area is in a region where expansive soils are known to exist. Within Butte County, soils with no or low expansion potential occur along stream and river valleys and on steep mountain slopes. Soils of high expansion potential generally occur in the level areas of the Sacramento Valley, including Biggs (Butte County 2007). Furthermore, most of the soils found in the Biggs Planning Area have a high shrink-swell potential.

### **MINERAL RESOURCES**

There are no active mines and no known areas with mineral resource deposits in the Biggs Planning Area. The majority of the closest mining operations are located to the northeast, outside of the Biggs Planning Area.

### **FAULTING AND SEISMICITY**

An earthquake is the sudden, rapid shaking of the ground caused by the breaking and shifting of rock beneath the earth's surface. For hundreds of millions of years, the forces of plate tectonics have shaped the earth as the huge plates that form the earth's surface move slowly over, under, and past each other. Sometimes the movement is gradual and at other times the plates are locked together, unable to release the accumulating energy. When the

### 3.6 GEOLOGY AND SOILS

accumulated energy grows strong enough, the plates break free and cause the ground to shake. Most earthquakes occur at the boundaries where the plates meet; however, some earthquakes occur in the middle of plates (Butte County 2007).

Earthquakes can cause strong ground shaking that may damage property and infrastructure. The strength of an earthquake is generally expressed in two ways: magnitude and intensity. The magnitude is a measure that depends on the seismic energy radiated by the earthquake as recorded on seismographs. The intensity at a specific location is a measure that depends on the effects of the earthquake on people or buildings and is used to express the severity of ground shaking. Although there is only one magnitude for a specific earthquake, there may be many values of intensity (damage) for that earthquake at different sites.

The most commonly used magnitude scale today is the moment magnitude (Mw) scale. Moment magnitude is related to the physical size of fault rupture and the movement (displacement) across the fault, and it is therefore a more uniform measure of the strength of an earthquake. The seismic moment of an earthquake is determined by the resistance of rocks to faulting multiplied by the area of the fault that ruptures and by the average displacement that occurs across the fault during the earthquake. The seismic moment determines the energy that can be radiated by an earthquake and hence the seismogram recorded by a modern seismograph (CGS 2002).

The most commonly used scale to measure earthquake intensities (ground shaking and damage) is the Modified Mercalli Intensity (MMI) Scale, which measures the intensity of an earthquake's effects in a given locality and is based on observations of earthquake effects at specific places. On the Modified Mercalli Intensity Scale, values range from I to XII (see **Table 3.6-1**). While an earthquake has only one magnitude, it can have various intensities, which decrease with distance from the epicenter (CGS 2002).

**Table 3.6-1** provides descriptions of the effects of ground shaking intensities along with a general range of moment magnitudes that are often associated with those intensities.

**TABLE 3.6-1  
EFFECTS OF RICHTER MAGNITUDE AND MODIFIED MERCALLI INTENSITY**

Mw	Modified Mercalli Scale	Effects of Intensity
1.0–3.0	I	I. Not felt except by a very few under especially favorable conditions.
3.0–3.9	II–III	II. Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing. III. Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
4.0–4.9	IV–V	IV. Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably. V. Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
5.0–5.9	VI–VII	VI. Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight. VII. Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.

Mw	Modified Mercalli Scale	Effects of Intensity
6.0–6.9	VIII–IX	<p>VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.</p> <p>IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.</p>
7.0 and higher	X or higher	<p>X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (sloped) over banks.</p> <p>XI. Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.</p> <p>XII. Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.</p>

Source: CGS 2002

The Seismic Hazards Zonation Program of the California Geological Survey (CGS) categorizes Butte County as a seismic hazard zone. Seismic risk in Butte County results from earthquake faults in the county as well as from faults outside the county whose seismic activity would cause potentially damaging ground shaking in Butte County, including in the Biggs Planning Area (Butte County 2007). The following is a description of the active faults in or near Butte County and the potential effect they have on the county in terms of magnitude (Butte County 2007). Faults in the vicinity of the Biggs Planning Area are also shown in **Figure 3.6-2**.

**Cleveland Hills Fault.** As discussed below, 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. Ground motions were experienced in Gridley and Oroville, with significant structural damage occurring to unreinforced masonry buildings in Oroville. Geologic studies indicate that the total length of the Cleveland Hills fault is probably 11 to 15 miles (Butte County 2007). The fault is located approximately 17 miles southeast of the Chico city limits. The maximum credible earthquake on this fault is approximately magnitude 6.5 to 6.7. An event of this magnitude would cause substantially more damage in the Planning Area than the 1975 event caused.

**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 Biggs Planning Area.

**Chico Monocline Fault.** The Chico Monocline fault, which extends northwesterly from Chico, was considered potentially active in an unpublished 1988 report by the CGS. 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 Biggs Planning Area.

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

## 3.6 GEOLOGY AND SOILS

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**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 Planning Area.

**San Andreas Fault System.** The San Andreas fault, along with related faults such as the Hayward and Calaveras, is one of the most active faults in California. Total displacement along this fault has been at least 450 miles and could possibly be as much as 750 miles. This fault system was responsible for the magnitude 8.0 San Francisco earthquake of 1906 as well as for numerous other damaging earthquakes, including the 1989 Loma Prieta earthquake. At its nearest point, the San Andreas fault is about 125 miles west of Biggs. The 1906 earthquake was strongly felt in Butte County, at approximately MMI V and VI in western Butte County, but there was little damage. Earthquakes along this fault are not anticipated to result in major damage in the Biggs Planning Area.

**Hayward-Calaveras Fault.** The Hayward-Calaveras fault complex is considered to be a branch of the San Andreas fault. An 1868 earthquake is reported to have caused strong fluctuations in the water level in the Sacramento River near Sacramento and in a slough near Stockton. Earthquakes along this fault are not anticipated to result in major damage in the Planning Area.

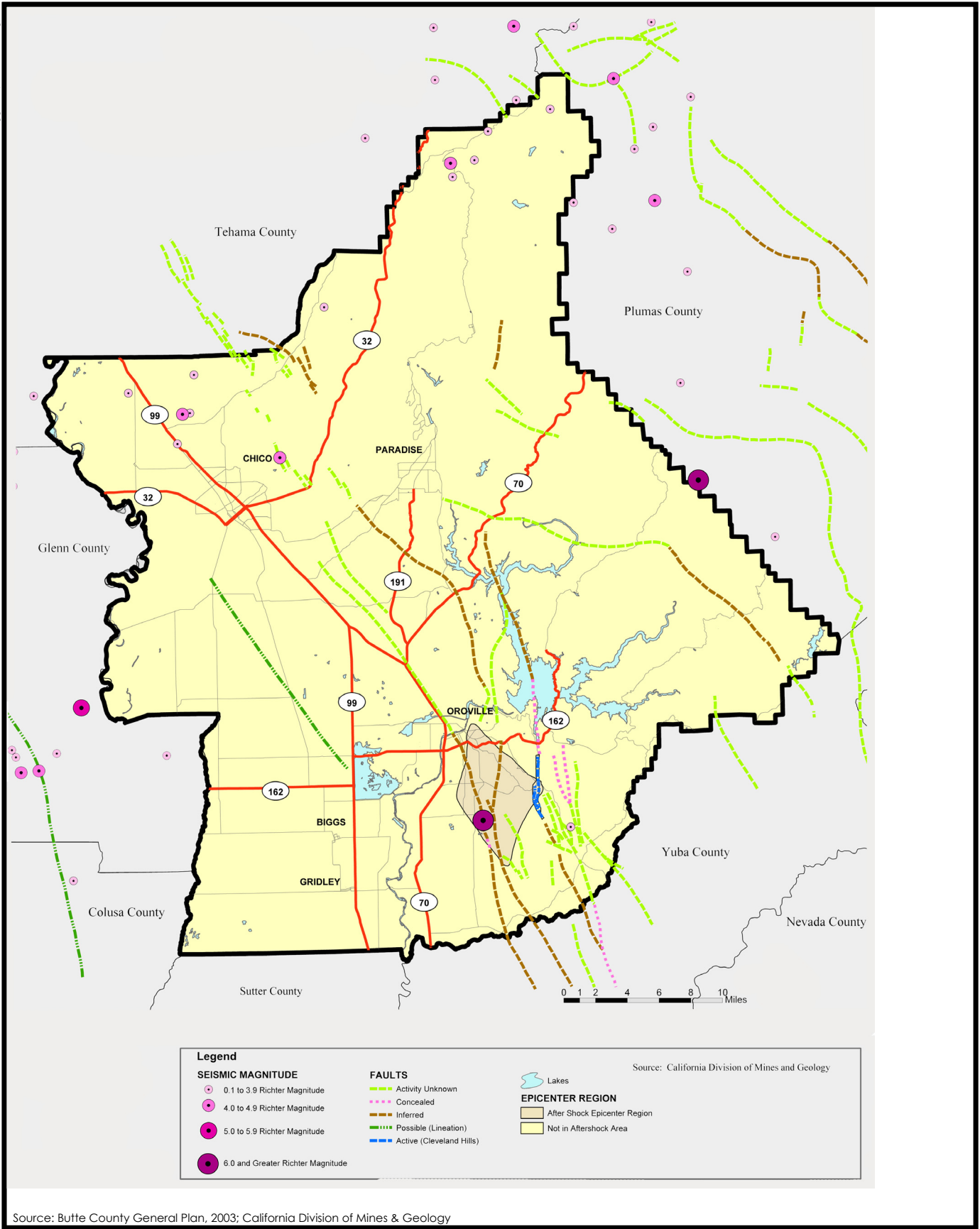
**Midland-Sweitzer Fault.** The 80-mile-long Midland-Sweitzer fault lies approximately 55 miles southwest of Biggs. Historically, earthquakes of Richter magnitudes between 6.0 and 6.9 have occurred on or near this fault, including two strong earthquakes in 1892. Based on the fault length and the historic 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 Biggs Planning 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.

An "active" fault, as defined by the 1994 Alquist-Priolo Earthquake Fault Zoning Act, is one that shows displacement within the last 11,000 years and therefore is considered more likely to generate a future earthquake and surface rupture than a fault that shows no sign of recent rupture. The Alquist-Priolo Earthquake Fault Zoning Act requires the California State Geologist to establish regulatory zones (known as earthquake fault zones) around the surface traces of active faults and to issue appropriate maps in order to mitigate the hazard of surface faulting to structures for human occupancy. No Alquist-Priolo Earthquake Fault Zones exist within the Planning Area (DOC 2012). The only known active fault in Butte County is the Cleveland Hills fault south of Oroville, the site of the August 1975 Oroville earthquake. This earthquake was felt in



Source: Butte County General Plan, 2003; California Division of Mines & Geology



**Figure 3.6-2**  
Known Faults in the Planning Area



Biggs, but there was no recorded damage. The Cleveland Hills fault is within an earthquake fault zone as mapped by the Alquist-Priolo Earthquake Fault Zoning Act.

Although there are no active faults in the Biggs Planning Area, the Sierra foothills contain hundreds of mapped faults, dozens of which are located in Butte County. Most of these faults are not considered active. Furthermore, most of these faults are very short and thus are probably not capable of producing severely damaging earthquakes.

### **Liquefaction**

Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Earthquake waves cause water pressures to increase in the sediment and the sand grains to lose contact with each other, leading the sediment to lose strength and behave like a liquid. The soil can lose its ability to support structures, flow down even very gentle slopes, and erupt to the ground surface to form sand boils. Many of these phenomena are accompanied by settlement of the ground surface, usually in uneven patterns that damage buildings, roads, and pipelines.

Three factors are required for liquefaction to occur: (1) loose, granular sediment (typically "made" land and beach and stream deposits that are young enough (late Holocene) to be loose); (2) saturation of the sediment by groundwater (water fills the spaces between sand and silt grains); and (3) strong shaking. Liquefaction causes three types of ground failure: lateral spreads, flow failures, and loss of bearing strength. In addition, liquefaction enhances ground settlement and sometimes generates sand boils (fountains of water and sediment emanating from the pressurized liquefied zone).

In Butte County, areas paralleling the Sacramento River that contain clean sand layers with low relative densities are estimated to have generally high liquefaction potential. Areas of bedrock, including most of eastern Butte County, have no liquefaction potential, although localized areas of valley fill alluvium can have moderate to high liquefaction potential (Butte County 2007). The Planning Area, in general, has a moderate risk for liquefaction (Butte County 2007).

### **Subsidence**

Land subsidence results in a slow-to-rapid downward movement of the ground surface as a result of the vertical displacement of the ground surface, usually resulting from groundwater withdrawal. Subsidence is common in the Sacramento Valley and in large areas of the San Joaquin Valley. Subsidence is a greater hazard in areas where the subsurface geology includes compressible layers of silt and clay. The amount of subsidence caused by groundwater withdrawal depends on several factors, including the extent of water level decline, the thickness of the water-bearing strata tapped, the thickness and compressibility of silt-clay layers within the vertical sections where groundwater withdrawal occurs, the duration of maintained groundwater level decline, the number and magnitude of water withdrawals in a given area, and the general geology and geologic structure of the groundwater basin. Subsidence can result in gradient changes in roads, streams, canals, drains, sewers, and dikes that may be significantly damaged by even small elevation changes. Other damaging effects of subsidence include damage to water wells resulting from sediment compaction and increased likelihood of flooding of low-lying areas. No land subsidence has been recorded in Butte County. However, land subsidence is considered to be a potential hazard for the portions of Butte County located within the Sacramento Valley. Groundwater supplies and groundwater withdrawal are discussed further in Section 3.12, Public Services and Utilities, of this Draft EIR.

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### Lateral Spreading

Lateral spreading occurs when the ground slides down very gentle slopes or toward stream banks riding on a buried liquefied layer. In soils, this movement is generally due to failure along a weak plane and is associated with liquefaction. Within the Planning Area, lateral spreading is possible along the banks of the approximate 15 acres of perennial and ephemeral drainages occurring throughout Biggs.

### Seiches

Seismic seiches are periodic oscillations, or standing waves, on rivers, reservoirs, ponds, and lakes that occur when seismic waves from an earthquake pass through the area. The period of the oscillation varies depending on the size of the body of water and may be several minutes to several hours. Depending on the magnitude of the oscillations, seiches can cause considerable damage to dams, levees, and shoreline facilities. Seiches have not been recorded in any of the reservoirs in Butte County that are within the jurisdiction of the California Division of Dam Safety. However, the potential for seiches does exist in Butte County (Butte County 2007). The Biggs Planning Area could also be at risk for seiches; however, this risk is considered very low since the only water bodies in the Planning Area that could be affected are swimming pools and water tanks.

### 3.6.2 REGULATORY FRAMEWORK

#### STATE

##### **Alquist-Priolo Earthquake Fault Zoning Act**

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. A direct result of the 1971 San Fernando earthquake and the extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures, the Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface of active faults. The act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Seismic Hazards Mapping Act (discussed below) addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.

The law requires the State Geologist to establish regulatory zones (known as earthquake fault zones) around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. The law requires that before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet) (DOC 2012).

##### **Seismic Hazards Mapping Act**

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Sections 2690–2699.6), passed by the legislature following the 1989 Loma Prieta earthquake, directs the Department of Conservation, California Geological Survey to identify and map areas prone to



liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the act is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards.

Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation those areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. The Seismic Hazards Mapping Act requires that site-specific geotechnical investigations be conducted within the Zones of Required Investigation to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy (DOC 2012).

### **California Building Code**

The California Building Code (CBC) is another name for the body of regulations found in the California Code of Regulations (CCR), Title 24, Part 2, which is a portion of the California Building Code. The purpose of the CBC is to provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The provisions of the CBC apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout the State of California (CBSC 2008).

Published by the International Conference of Building Officials, the International Building Code is a widely adopted model building code in the United States. The CBC incorporates by reference the International Building Code with necessary California amendments. These amendments include significant building design criteria that have been tailored for California earthquake conditions. Design criteria for seismic loading and other geologic hazards are included in the design standards in the CBC. The CBC provides design criteria for geologically induced loading that govern sizing of structural members and provides calculation methods to assist in the design process.

### LOCAL

#### **Butte County Environmental Health Division**

In Butte County, septic systems are regulated by the Environmental Health Division. The County is currently preparing an environmental impact report (EIR) for the Butte County Individual On-Site Wastewater Ordinance. The ordinance would apply to unincorporated portions of Butte County not served by municipal wastewater treatment and disposal facilities. The ordinance would update and replace existing county regulations in order to be consistent with applicable requirements of the Central Valley Regional Water Quality Control Board Basin Plan and to incorporate other changes based on the current state of knowledge and advances in practices and technologies for on-site wastewater treatment and disposal. Notably, the ordinance would (a) implement more standardized procedures for soil and site evaluations; (b) incorporate new requirements pertaining to the vertical separation between the bottom of dispersal systems and groundwater or restrictive layers; (c) provide a broader range of treatment and dispersal designs; and (d) institute a program to assure ongoing maintenance of certain types of systems (Butte County 2009). (Proposed General Plan Policy PFS-3.2 would require all new development

## 3.6 GEOLOGY AND SOILS

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to connect to the City wastewater system. Septic tank systems will not be allowed except for special cases.)

### 3.6.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

This analysis evaluates the proposed General Plan's impacts on geology and soils and mineral resources based on the standards identified in the California Environmental Quality Act (CEQA) Guidelines Appendix G. The City has determined that a geology and soils impact is considered significant if implementation of the project would:

- 1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - a) 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 or other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.
  - b) Strong seismic ground shaking.
  - c) Seismic-related ground failure, including liquefaction.
  - d) Landslides.
- 2) Result in substantial soil erosion or the loss of topsoil.
- 3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- 4) 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.
- 5) 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, or 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.

As discussed under the Existing Setting subsection above, the Planning Area is not within an Alquist-Priolo Earthquake Fault Zone and therefore would not be subject to hazards associated with fault rupture. In addition, the Planning Area has a very low risk for seiche hazards, since the only water bodies in the Planning Area that could be affected are swimming pools and water tanks. Therefore, these seismic hazard issues are not discussed further in this Draft EIR.

As there are no active mines and no known areas with mineral resource deposits within the Planning Area, implementation of the proposed General Plan would not result in the loss of availability of a known mineral resource, and this issue is not discussed further in this Draft EIR.

### METHODOLOGY

The geology and soils analysis is based on a review of published information, surveys, and reports regarding regional geology and soils. Information was obtained from private and governmental agencies and Internet websites, including the USDA Natural Resources Conservation Service, the California Geological Survey (formerly the California Department of Mines and Geology), and the United States Geological Survey. These materials were then compared to the proposed General Plan's specific geology and soil-related impacts.

The analysis takes into account the density and type of existing and proposed land uses in the Biggs Planning Area, as well as proposed and anticipated development in Biggs and surrounding areas. The reader is referred to Section 3.0 of this DEIR for a discussion of assumed land uses and development conditions in the area.

The following proposed General Plan policies and actions address geology and soils:

- |                       |   |
|-----------------------|---|
| <i>Policy CR-5.3</i>  | <i>(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.</i>  |
| <i>Policy PFS-3.2</i> | <i>(Wastewater Treatment) – Require all new development to connect to the City wastewater system. Septic tank systems will not be allowed except for special cases defined by City ordinance.</i>   |
| <i>Policy S-3.1</i>   | <i>(Potential Damage to New Structures) – Prevent damage to new structures caused by seismic, geologic, or soil conditions.</i>   |
| <i>Action S-3.1.1</i> | <i>(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.</i> |
| <i>Action S-3.1.2</i> | <i>(Potential Soil Hazards) – In areas identified as having highly expansive soils, require appropriate studies and structural precautions through project review.</i>  |
| <i>Action S-3.1.3</i> | <i>(Reducing Subsidence) – Applications for projects that extract groundwater, oil, or gas shall include a report evaluating the potential for resulting subsidence. Reports shall discuss appropriate mitigation measures to reduce the potential for subsidence.</i>  |
| <i>Action S-3.2.3</i> | <i>(Groundwater Monitoring) – Monitor the elevations of groundwater at city wells. Fluctuations in groundwater levels shall be recorded to determine long-term trends in groundwater elevation.</i>   |
| <i>Action S-3.2.4</i> | <i>(Groundwater Sales) – Oppose groundwater transfers and sales that would substantially impact city water supplies or regional groundwater supplies.</i>   |

## 3.6 GEOLOGY AND SOILS

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The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analysis identifies and describes how specific policies and actions as provide enforceable requirements and/or performance standards that address geologic conditions and avoid or minimize significant impacts.

### IMPACTS AND MITIGATION MEASURES

#### Seismic Hazards (Standard of Significance 1)

**Impact 3.6.1** Subsequent land use activities associated with implementation of the proposed General Plan could result in the exposure of more people, structures, and infrastructure to seismic hazards. However, policy provisions in the proposed General Plan would ensure that people, structures, and infrastructure are not adversely impacted by seismic hazards. This is considered a **less than significant** impact.

As previously discussed, Butte County is located in a seismic hazard zone and could experience strong seismic ground shaking and seismic-related ground failure (i.e., liquefaction, settlement, and landslides) from earthquakes on faults both within and outside of the county. The increase in population and development under the proposed General Plan could expose more people, structures, and infrastructure to seismic hazards as a result of seismic activity.

However, future development in Biggs would be required to adhere to the California Building Code (CBC), which includes design criteria for seismic loading and other geologic hazards, including design criteria for geologically induced loading that govern sizing of structural members and provide calculation methods to assist in the design process. Thus, while shaking impacts would be potentially damaging, they would also tend to be reduced in their structural effects due to CBC criteria that recognize this potential. The CBC includes provisions for buildings to structurally survive an earthquake without collapsing and includes measures such as anchoring to the foundation and structural frame design. In addition, the Seismic Hazards Mapping Act requires that cities use the Seismic Hazard Zone Maps in their land use planning and building permit processes and that site-specific geotechnical investigations be conducted within the Zones of Required Investigation in order to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy.

Also, proposed General Plan Action S-3.1.1 mandates 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 liquefaction potential of sites and recommend measures to minimize such hazards.

These requirements would ensure this impact would be **less than significant**.

#### Potential Increase of Erosion and Loss of Topsoil (Standard of Significance 2)

**Impact 3.6.2** Implementation of the proposed General Plan could result in construction and grading activities that could expose topsoil and increase soil erosion. However, policy provisions in the proposed General Plan would ensure that there are no adverse impacts from erosion and loss of topsoil. This impact is considered to be **less than significant**.

Implementation of the proposed General Plan would result in the potential construction of new roadways and of substantial infrastructure (water and sanitary sewer facilities), improvements to existing roadways, and the potential for additional commercial, residential, and industrial development in the Biggs Planning Area. The grading and site preparation activities associated with such development would remove topsoil, disturbing and potentially exposing the underlying soils to erosion from a variety of sources, including wind and water. In addition, construction activities may involve the use of water, which may further erode the topsoil as the water moves across the ground.

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 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 General Plan 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 proposed General Plan policy described above, would ensure that soil erosion and related impacts would be **less than significant**.

### **Potential Development on Unstable Soils (Standard of Significance 3)**

**Impact 3.6.3** Implementation of the proposed General Plan could allow for development on a geologic unit or soil that is unstable, thus creating substantial risks to life and property. However, policy provisions in the proposed General Plan would ensure that potential development is not adversely impacted by unstable soils. This is considered a **less than significant** impact.

Many of the soils found within areas identified for development under the proposed General Plan have a high shrink-swell potential, which could result in development constraints. Structures or improvements constructed on expansive soils can suffer damage as the expansive soils shrink and swell. A soil's potential to shrink and swell depends on the amount and types of clay in the soil, since certain clays expand when wet and disproportionately shrink when dry. Future structures and improvements associated with the proposed General Plan could experience stresses on various sections of foundations and connected utilities, as well as structural failure and damage to infrastructure if located on expansive or unstable soils.

## 3.6 GEOLOGY AND SOILS

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The CBC and other related construction standards apply seismic requirements and address certain grading activities. The CBC includes common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil-related impacts. Compliance with CBC regulations would ensure the adequate design and construction of building foundations to resist soil movement.

Proposed General Plan Action S-3.1.1 mandates 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. Such reports generally contain a summary of all subsurface exploration data including a subsurface soil profile, exploration logs, laboratory or on-site test results, and groundwater information. The reports also interpret and analyze the subsurface data, recommend specific engineering design elements, provide a discussion of conditions for the solution of anticipated problems, and recommend geotechnical special provisions. These provisions, which could include, but are not limited to, the requirement of controlled pre-wetting of the soil prior to placement of the foundation or the removal of the upper several feet of expansive soil and importation and compaction of new non-expansive material to create a stable layer of soil at the building footprint. Such geotechnical special provisions would address any site-specific expansive soil hazards for future development under the proposed General Plan.

Proposed General Plan Action S-3.1.1 and adherence to the CBC would mitigate the potential for negative impacts resulting from developing on unstable soils for the reasons noted above. This impact is therefore considered to be **less than significant**.

### Soils Incapable of Supporting Septic Tanks (Standard of Significance 4)

**Impact 3.6.4** Subsequent land use activities associated with implementation of the proposed General Plan would not allow for development in areas where sewers are not available for the disposal of wastewater. There would be no adverse impacts from soils incapable of supporting septic tanks. This is considered a **less than significant** impact.

Proposed General Plan Policy PFS-3.2 would require all new development to connect to the City wastewater system. Septic tank systems will not be allowed except for special cases. Therefore, any potential impacts related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems would be **less than significant**.

### 3.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

Site-specific topography, soil conditions, and surrounding development determine geological and soil-related impacts, which generally are not considered cumulative in nature. However, erosion and sediment deposition can be cumulative in nature, depending on the type and amount of development proposed in a given geographical area. The cumulative setting for soil erosion consists of existing, planned, proposed, and reasonably foreseeable land use conditions in the region. However, construction constraints are primarily based on specific sites within a proposed development and on the soil characteristics and topography of each site. As discussed throughout this section, all new development in the proposed General Plan Planning Area would be required to comply with the California Building Code.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

#### Cumulative Geologic and Soil Hazards

**Impact 3.6.5** Subsequent land use activities associated with implementation of the proposed General Plan, in combination with other existing, planned, proposed, and reasonably foreseeable development in the region, may result in cumulative geologic and soil hazards. However, policy provisions in the proposed General Plan ensure that potential development is not adversely impacted by cumulative geologic and soil hazards. This is considered a **less than cumulatively considerable** impact.

All new development, including development in areas outside of Biggs, would be required to comply with the CBC, which requires stringent earthquake-resistant design parameters and common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil-related impacts. Furthermore, 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 NPDES provisions. NPDES requirements would significantly reduce the potential for substantial erosion or topsoil loss to occur in association with new development by requiring an approved SWPPP that provides a schedule for the implementation and maintenance of erosion control measures and a description of erosion control practices, including appropriate design details and a time schedule. The proposed General Plan also requires that damage to new structures from seismic, geologic, or soil conditions be prevented to the maximum extent feasible.

Implementation of NPDES requirements and CBC standards as discussed under Impacts 3.6.1 through 3.6.3 above would reduce cumulative impacts associated with geology and soils throughout the region. Furthermore, site-specific review, including soil reports, required by the City of Biggs would reduce the proposed General Plan's contribution to cumulative impacts to **less than cumulatively considerable**.

### 3.6 GEOLOGY AND SOILS

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## **3.7 HAZARDS AND HAZARDOUS MATERIALS**



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## 3.7 HAZARDS AND HAZARDOUS MATERIALS

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This section provides information on safety hazards in Biggs, analyzes the proposed General Plan's potential to create hazards to the public health or to the environment related to hazardous materials, substances, or waste, and identifies other potential hazards that may impact public safety. Impacts associated with the following hazards are addressed in the applicable section of this Draft EIR, as listed below.

- Rail safety, including at-grade crossings – Section 3.13, Transportation and Circulation
- Air quality hazards – Section 3.3, Air Quality
- Noise hazards – Section 3.10, Noise
- Geologic and seismic hazards – Section 3.6, Geology and Soils
- Flooding and water quality hazards, including hazards from groundwater plumes and dam inundation – Section 3.8, Hydrology and Water Quality

In addition, it should be noted that the provision of fire protection services and solid waste services is discussed further in Section 3.12, Public Services and Utilities.

### 3.7.1 EXISTING SETTING

#### HAZARDOUS MATERIALS AND WASTE DEFINED

According to 22 California Code of Regulations (CCR) Section 66261.20, the term *hazardous substance* refers to both hazardous materials and hazardous wastes and both are classified according to four properties: toxicity, ignitability, corrosiveness, and reactivity. A hazardous material is defined by 22 CCR Section 66261.10 as a substance or combination of substances that may cause or significantly contribute to an increase in serious, irreversible, or incapacitating illness or may pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Public health is potentially at risk whenever hazardous materials are or will be used. It is necessary to differentiate between the hazard of these materials and the acceptability of the risk they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, and to the inherent toxicity of a material (DTSC 2012a).

Factors that can influence health effects when human beings are exposed to hazardous materials include the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly (22 CCR Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific 22 CCR criteria. While hazardous substances are regulated by multiple agencies, as described under the Regulatory Framework subsection below, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

## 3.7 HAZARDS AND HAZARDOUS MATERIALS

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### HAZARDOUS AND CONTAMINATED SITES

Hazardous materials consist of substances that by their nature, lack of containment, and reactivity have the capability for inflicting harm. Hazardous materials can be toxic, corrosive, flammable, explosive, reactive, an irritant, or a strong sensitizer and include certain infectious agents, radiological materials, oxides, oil, used oil, petroleum products, and industrial solid waste substances. They are used in almost every manufacturing operation and by retailers, service industries, and homeowners. Hazardous material incidents are one of the most common technological threats to public health and the environment. Incidents may occur as the result of natural disasters, human error, or accident. Hazardous material incidents typically take three forms (Butte County 2007a):

- **Fixed facility incidents** – It is reasonably possible to identify and prepare for a fixed site incident, because laws require those facilities to notify state and local authorities about what is being used or produced there.
- **Transportation incidents** – Transportation incidents are more difficult to prepare for because it is impossible to know what materials could be involved until an accident actually happens.
- **Pipeline incidents** – Pipelines carry natural gas and petroleum. Breakages in pipelines carry differing amounts of danger, depending on where and how the break occurs and what is in the pipe.

### Areas of Known Hazardous Contamination

#### Cortese List

The State of California Hazardous Waste and Substances Site List (also known as the Cortese List) is a planning document used by state and local agencies and by private developers to comply with California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials sites. California Government Code Section 65962.5 requires the California Environmental Protection Agency to annually update the Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for preparing a portion of the information that comprises the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information that is part of the complete list.

The EnviroStor database provides the DTSC's component of Cortese List data by identifying state response sites, federal Superfund sites, school cleanup sites, and voluntary cleanup sites. The EnviroStor database identifies sites that have known contamination or sites for which further investigation is warranted. It also identifies facilities that are authorized to treat, store, dispose, or transfer hazardous waste (DTSC 2012b).

The EnviroStor database identifies one hazardous material site in the Biggs Planning Area under evaluation associated with a hazardous material-related release or occurrence. The terms release and occurrence include any means by which a substance could harm the environment by spilling, leaking, discharging, dumping, injecting, or escaping. This site is listed in **Table 3.7-1**.

TABLE 3.7-1  
KNOWN HAZARDOUS MATERIAL SITES IN THE PLANNING AREA

Site/Facility Name	Address Description	Site/Facility Type	Cleanup Status
Enzenauer Property	2907 Fifth Street	Local Agency Response	Evaluation

Source: DTSC 2012b

Leaking Underground Storage Tanks

Leaking underground storage tanks (LUST) are a significant source of petroleum impacts to groundwater and can also result in the following potential threats to health and safety (SWRCB 2012):

- Exposure from impacts to soil and/or groundwater
- Contamination of drinking water aquifers
- Contamination of public or private drinking water wells
- Inhalation of vapors

The State Water Resources Control Board (SWRCB) records soil and/or groundwater contamination caused by LUSTs in its Geotracker database. An inquiry through the SWRCB's Geotracker database does not identify any open LUST sites in the Biggs Planning Area (SWRCB 2012).

Household Hazardous Waste

Hazardous materials, used in many household products (such as drain cleaners, waste oil, cleaning fluids, insecticides, and car batteries), are often improperly disposed of as part of normal household trash. These hazardous materials can interact with other chemicals to create risks to people or cause soil and groundwater contamination. The California Department of Health Services and the City of Biggs define household hazardous waste as any substance that is characteristic of one of the following:

- **Ignitability** – flammable (e.g., lighter fluid, spot and paint removers)
- **Corrosivity** – eats away materials and can destroy human and animal tissue by chemical action (e.g., oven and toilet bowl cleaners)
- **Reactivity** – creates an explosion or produces deadly vapors (e.g., bleach mixed with ammonia-based cleaners)
- **Toxicity** – capable of producing injury, illness, or damage to humans, domestic livestock, or wildlife through ingestion, inhalation, or absorption through any body surface (e.g., rat poison, cleaning fluids, pesticides, bleach)

In April 2002, Butte County assumed responsibility for a permanent household hazardous waste collection facility known as the Butte Regional Household Hazardous Waste Collection Facility (BRHHWCF). All Butte County residents are able to recycle and properly dispose of household hazardous waste at the BRHHWCF, which is located at the Chico Airport Industrial Park at 1101

### **3.7 HAZARDS AND HAZARDOUS MATERIALS**

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Marauder Street in Chico and is operated under contract by A/C Industrial Services, Inc. The facility also accepts hazardous waste from small businesses who qualify as Conditionally Exempt Small Quantity Generators.

#### **TRANSPORTATION OF HAZARDOUS MATERIALS**

Hazardous materials transported through Butte County, including the Biggs Planning Area, are carried by truck on the state highway system or via the rail line. Registered hazardous waste haulers may use all county roadways to transport hazardous materials (Pacific Land Advisors 2008). To date, regulators have not placed restrictions on roadways available for the transportation of hazardous waste (BCAG 2008).

Hazardous materials are also regularly shipped via the Union Pacific Railroad, which runs through the Biggs Planning Area parallel to Eighth Street. Transported commodities include chemicals, coal, food and food products, truck trailers and containers, forest products, grain and grain products, metals and minerals, and automobiles and parts. On an average day, approximately 24 trains pass through Biggs on the Union Pacific tracks (Biggs 2010). Neither Butte County nor the City of Biggs has control over the types of materials that are shipped via the rail line.

#### **KNOWN AND UNKNOWN HAZARDOUS MATERIALS IN BIGGS**

##### **Asbestos-Containing Building Materials**

Structures constructed or remodeled between 1930 and 1981 have the potential to contain asbestos-containing building materials (ACBM). Asbestos is the name given to a number of naturally-occurring fibrous minerals with high tensile strength, the ability to be woven, and resistance to heat and most chemicals. Because of these properties, asbestos fibers have been used in a wide range of manufactured goods, including roofing shingles, ceiling and floor tiles, paper and cement products, textiles, coatings, and friction products such as automobile clutch, brake, and transmission parts.

When asbestos-containing materials are damaged or disturbed by repair, remodeling, or demolition activities, microscopic fibers become airborne and can be inhaled into the lungs, where they can cause significant health problems. The current federal definition of asbestos is the asbestiform varieties of chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite/grunerite), anthophyllite, tremolite, and actinolite. A distinction is made between building materials that would readily release asbestos fibers when damaged or disturbed and those materials that were unlikely to result in significant fiber release. The terms friable and nonfriable are used to make this distinction. The US Environmental Protection Agency (EPA) has determined that, if severely damaged, otherwise nonfriable materials can release significant amounts of asbestos fibers. Friable asbestos-containing material (ACM) is defined by the Asbestos National Emission Standards for Hazardous Air Pollutants as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM are also known as regulated asbestos-containing materials (RACM). Nonfriable ACM is any material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. If nonfriable ACM becomes or is likely to become friable due to the forces expected to act upon the materials during renovation or demolition, they become an RACM. Exposure to airborne RACM may result in a potential health risk because persons breathing the air may breathe in asbestos fibers. Continued exposure can increase the amount of fibers that remain in the lung. Fibers embedded in lung tissue over time may cause serious lung diseases including asbestosis, lung cancer, or mesothelioma (EPA 2009a).

### Lead

Lead is a toxic metal that was used for many years in a variety of products. Lead also can be emitted into the air from motor vehicles and industrial sources, and lead can enter drinking water from plumbing materials. Lead may cause a range of health effects, from behavioral problems and learning disabilities to seizures and death. Children six years old and under are most at risk. Research suggests that the primary sources of lead exposure are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated residential soil (EPA 2009b).

Lead dust can form when lead-based paint is dry scraped, dry sanded, or heated. Dust also forms when painted surfaces bump or rub together. Settled lead dust can re-enter the air when people vacuum, sweep, or walk through it. Lead in soil can be a hazard when children play in bare soil or when people bring soil into the house on their shoes (EPA 2009b). In addition, lead can be deposited in unpaved areas or formerly unpaved areas, primarily due to vehicle emissions.

### Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) belong to a broad family of human-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until their manufacture was banned in 1979. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. Due to their nonflammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and in many other industrial applications (EPA 2009c).

Prior to the 1979 ban, PCBs entered the environment during their manufacture and use in the United States. Today, PCBs can still be released into the environment from poorly maintained hazardous waste sites that contain PCBs, illegal or improper dumping of PCB wastes, leaks or releases from electrical transformers containing PCBs, and disposal of PCB-containing consumer products into municipal or other landfills not designed to handle hazardous waste. PCBs may also be released into the environment by the burning of some wastes in municipal and industrial incinerators (EPA 2009c). Once in the environment, PCBs do not readily break down and therefore may remain for long periods of time cycling between air, water, and soil. PCBs can accumulate in the leaves and aboveground parts of plants and food crops. They are also taken up into the bodies of small organisms and fish. PCBs have been demonstrated to cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system (EPA 2009c).

### Residual Agricultural Chemicals

Historically, agriculture has been one of the major elements of Butte County's economic base, and although greater diversification of land use has occurred over the past decade, agriculture remains an active industry. In 2010, 1,945,444 pounds of active pesticide ingredients were applied to lands in Butte County (DPR 2010a). Pesticide use in the county has reduced in recent years (just over 3 million pounds per year were applied from 1990 through 2000, and 2,462,411 pounds were applied in 2009) (DPR 2010a). The most commonly used pesticides included copper sulfate, propanil, kaolin, copper hydroxide, glyphosate, and isopropylamine salt (DPR 2010b).

Frequent applications of agriculture-related chemicals over time can eventually result in chemicals accumulating in the topsoil. Therefore, persistent residual chemicals may be present at differing levels in soils in the Biggs Planning Area. Exposure to pesticides can cause harm to

## 3.7 HAZARDS AND HAZARDOUS MATERIALS

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humans, animals, or the environment because they are designed to kill or otherwise adversely affect living organisms.

### NATURALLY-OCCURRING HAZARDOUS MATERIALS

#### **Fibrous (Asbestiform) Minerals (Naturally-Occurring Asbestos)**

Asbestos is the generic term for the naturally-occurring fibrous (asbestiform) varieties of six silicate minerals. These minerals are chrysotile, tremolite (when fibrous), actinolite (when fibrous), crocidolite (fibrous riebeckite), anthophyllite (when fibrous), and amosite (fibrous cummingtonite-grunerite). Chrysotile, which belongs to the serpentine mineral group, and amphibole asbestos (such as tremolite) occur naturally in certain geologic settings in California, most commonly in association with ultramafic rocks and along associated faults.

Asbestos is a known carcinogen, and exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a noncancerous lung disease which causes scarring of the lungs) (CARB 2010). The asbestos content of many manufactured products has been regulated in the United States for a number of years. In 1998, new concerns were raised about activities that disturb rocks and soil containing naturally-occurring asbestos that could release asbestos-laden dust. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present (CARB 2010).

Since natural asbestos occurs most commonly in association with ultramafic rocks, the presence of ultramafic rocks in a region indicates the possibility of naturally-occurring asbestos materials. The potential occurrence and distribution of naturally-occurring asbestos fibers in Butte County is documented by the US Geological Survey and California Geological Survey. According to these agencies, the Biggs Planning Area does not contain any areas that have been identified as containing ultramafic rock (USGS 2011).

#### **Radon Potential**

Radon isotope-222 is a colorless, odorless, tasteless radioactive gas that comes from the natural decay of uranium that is found in nearly all soils. Current evidence indicates that increased lung cancer risk is directly related to radon-decay products. The amount of radon in the soil depends on soil chemistry, which varies depending on location. Radon levels in soil range from a few hundred to several thousands of pico curies per liter (pCi/L). The amount of radon that escapes from the soil to enter a building depends on the weather, soil porosity, soil moisture, and the suction within the building. The EPA recommends radon control methods be used if the radon level is 4 pCi/L or higher (EPA 2009d).

The EPA uses three zone designations in order to reflect the average short-term radon measurement that can be expected in a building without the implementation of radon control methods. The radon zone designation of the highest potential is Zone 1. Butte County, including the Biggs Planning Area, is in Zone 3, which indicates a predicted average indoor radon screening level less than 2 pCi/L, considered a low potential for radon (EPA 2009d).



### AIRPORT OPERATIONS HAZARDS

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Other airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the imaginary surfaces surrounding an airport. There are no public or private airports located in the Biggs Planning Area. 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.

### WILDLAND FIRES

A wildfire is an uncontrolled fire spreading through vegetative fuels, posing danger and causing destruction to life and property. Wildfires can occur in undeveloped areas and spread to urban areas where structures and other human development are more concentrated. A wildland-urban interface is an area where urban development has been located in proximity to open space or "wildland" areas. Fires that occur in the wildland-urban interface areas affect natural resources as well as life and property. This type of fire is described as "a fire moving from a wildland environment, consuming vegetation for fuel, to an environment where structures and buildings are fueling the fire" (Butte County 2007a).

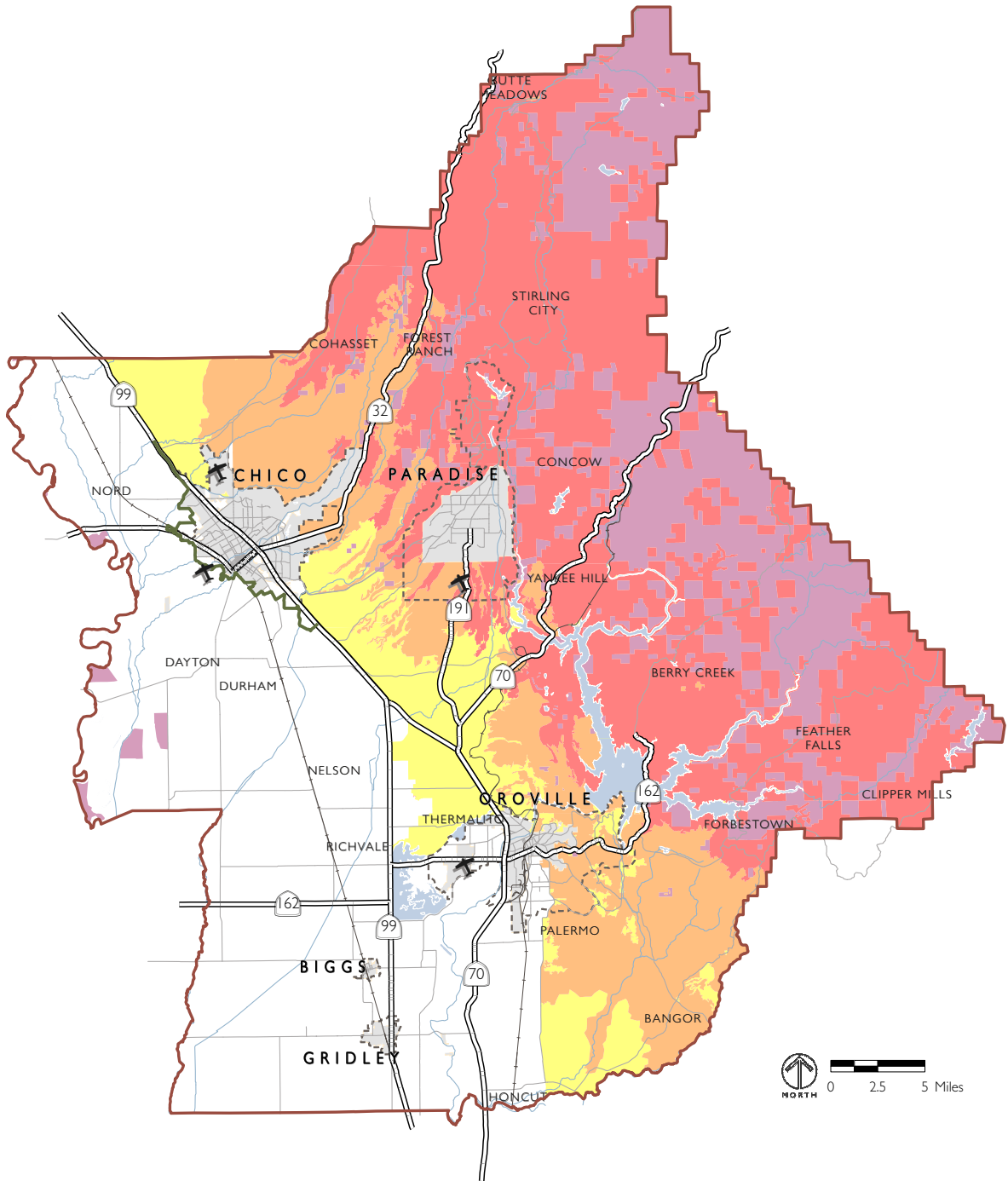
Wildland fire hazards (open space, rangeland, chaparral, and forested areas) exist in varying degrees over approximately 70 percent of Butte County, which has an extensive history of large damaging fires, most of which have burned in the wildland-urban interface area. During the past decade, Butte County has experienced several large and damaging wildfires in and around the wildland-urban interface areas. Most recently, the Butte Lightning Complex of fires burned 59,440 acres throughout Butte County, destroying 106 residences and 11 outbuildings in June and July of 2008. Also in June 2008, the Humboldt Fire burned 23,344 acres east of Chico at State Route 32 and Humboldt Road on Stilson Canyon, and the Ophir Fire burned 1,600 acres near State Route 70 and Ophir Road, 2 miles south of Oroville (Cal-Fire 2009).

The Biggs Planning Area, entirely within the Sacramento Valley, is not subject to the threat of significant wildland fires (see **Figure 3.7-1**). 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 nearest areas designated to have Moderate Fire Hazard Severity are located adjacent to riparian areas near the Feather River, approximately 3 miles from the current city limits.








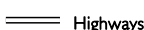


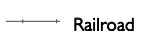
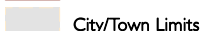
### **3.7 HAZARDS AND HAZARDOUS MATERIALS**

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Sources: Butte County GIS, 2009; California Department of Forestry and Fire Protection, 2007.

- |  |   |   |
|--|---|---|
|  Moderate   |  Airports    |  Greenline           |
|  High   |  Major Roads |  Sphere of Influence |
|  Very High  |  Highways    |  County Boundary     |
|  Federal Responsibility Area<br>(not classified by CALFIRE) |  Railroad    |  City/Town Limits    |

**Figure 3.7-1**  
Fire Hazards Severity Zones



### 3.7.2 REGULATORY FRAMEWORK

#### FEDERAL – HAZARDOUS MATERIALS

##### **Environmental Protection Agency**

The United States Environmental Protection Agency (EPA) provides leadership in the nation's environmental science, research, education, and assessment efforts with the mission of protecting human health and the environment. The EPA works to develop and enforce regulations that implement environmental laws enacted by Congress. The EPA is responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. The agency also performs environmental research, sponsors voluntary partnerships and programs, provides direct support through grants to state environmental programs, and advances educational efforts regarding environmental issues. The EPA develops and enforces regulations that span many environmental categories, including hazardous materials. Specific regulations include those regarding asbestos, brownfields, toxic substances, underground storage tanks, and Superfund sites, as discussed below.

##### Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the act was significantly reorganized and expanded in 1972. The Clean Water Act became the act's common name with amendments in 1977.

The CWA implemented pollution control programs such as setting wastewater standards for industry and water quality standards for all contaminants in surface waters. The CWA also made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. The EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges.

##### Clean Air Act

The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes the EPA to establish national ambient air quality standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants. Section 112 of the Clean Air Act addresses emissions of hazardous air pollutants. Prior to 1990, the CAA established a risk-based program under which only a few standards were developed. The 1990 Clean Air Act Amendments revised Section 112 to first require issuance of technology-based standards for major sources and certain area sources. Major sources are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants. For major sources, Section 112 requires that the EPA establish emission standards that require the maximum degree of reduction in emissions of hazardous air pollutants. These emission standards are commonly referred to as maximum achievable control technology, or MACT standards. Eight years after the technology-based MACT standards are issued for a source category, the EPA is required to review those standards to determine whether any residual risk exists for that source category and, if necessary, revise the standards to address such risk (EPA 2009e).

## **3.7 HAZARDS AND HAZARDOUS MATERIALS**

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### Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) gives the EPA the authority to control hazardous waste from “cradle to grave,” including the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid wastes. The 1986 amendments to the RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

The Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to the RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program (EPA 2009e).

### Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), provides a federal “superfund” to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the EPA was given power to seek out those parties responsible for any release and assure their participation in the cleanup. The EPA is authorized to implement the CERCLA in all 50 states and in United States territories. Superfund site identification, monitoring, and response activities in states are coordinated through the state environmental protection or waste management agencies. The Superfund Amendments and Reauthorization Act (SARA) of 1986 reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definition clarifications, and technical requirements were added to the legislation, including additional enforcement authorities (EPA 2009e).

### Small Business Liability Relief and Brownfields Revitalization Act

On January 11, 2002, the Small Business Liability Relief and Brownfields Revitalization Act was signed into law. The law amended CERCLA by providing funds to assess and clean up brownfields, clarified CERCLA liability protections, and provided funds to enhance state and tribal response programs.

### Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides for federal regulation of pesticide distribution, sale, and use. All pesticides distributed or sold in the United States must be registered (licensed) by the EPA. Before the EPA may register a pesticide under the FIFRA, the applicant must show, among other things, that using the pesticide according to specifications “will not generally cause unreasonable adverse effects on the environment” (EPA 2009e).

The FIFRA defines the term *unreasonable adverse effects on the environment* to mean: “(1) any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide, or (2) a human dietary risk from residues that result from a use of a pesticide in or on any food inconsistent with the standard under section 408 of the Federal Food, Drug, and Cosmetic Act” (EPA 2009e).

### Occupational and Safety Health Act

Congress passed the Occupational and Safety Health Act (OSHA) in 1970 to ensure worker and workplace safety. The goal was to ensure that employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. OSHA is a division of the US Department of Labor that oversees the administration of the act and enforces standards in all 50 states.

### Toxic Substances Control Act of 1976

The Toxic Substances Control Act of 1976 (TSCA) provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from the TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

Various sections of the TSCA provide authority to:

- Require, under Section 5, pre-manufacture notification for “new chemical substances” before manufacture.
- Require, under Section 4, testing of chemicals by manufacturers, importers, and processors where risks or exposures of concern are found.
- Issue Significant New Use Rules (SNURs), under Section 5, when it identifies a “significant new use” that could result in exposures to, or releases of, a substance of concern.
- Maintain the TSCA Inventory, under Section 8, which contains more than 83,000 chemicals. As new chemicals are commercially manufactured or imported, they are placed on the list.
- Require those importing or exporting chemicals, under Sections 12(b) and 13, to comply with certification reporting and/or other requirements.
- Require, under Section 8, reporting and recordkeeping by persons who manufacture, import, process, and/or distribute chemical substances in commerce.
- Require, under Section 8(e), that any person who manufactures (including imports), processes, or distributes in commerce a chemical substance or mixture and who obtains information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment to immediately inform the EPA, except where the EPA has been adequately informed of such information.

In 2008, the EPA expanded efforts to protect citizens from existing chemicals by making basic screening-level toxicity information on them publicly available with the Chemical Assessment and Management Program, or ChAMP (EPA 2009e).

## 3.7 HAZARDS AND HAZARDOUS MATERIALS

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### US Department of Transportation

#### Federal Hazardous Materials Transportation Law and Hazardous Materials Regulations

The federal hazardous materials transportation law (federal hazmat law), 49 USC Section 5101 et seq., is the basic statute regulating hazardous materials transportation in the United States. Section 5101 of the federal hazmat law states that the purpose of the law is to “protect against the risks to life, property, and the environment that are inherent in the transportation of hazardous material in intrastate, interstate, and foreign commerce.”

The Hazardous Materials Regulations, which implement the federal hazmat law, govern the transportation of hazardous materials by highway, rail, vessel, and air. The regulations address hazardous materials classification, packaging, hazard communication, emergency response information, and training. The Pipeline and Hazardous Material Safety Administration (PHMSA) also issues procedural regulations, including provisions on registration and public sector training and planning grants (49 CFR Parts 105, 106, 107, and 110). The Pipeline and Hazardous Material Safety Administration issues the Hazardous Materials Regulations (PHMSA 2009).

#### The Federal Motor Carrier Safety Administration

The Federal Motor Carrier Safety Administration issues regulations concerning highway routing of hazardous materials, the hazardous materials endorsement for a commercial driver's license, highway hazardous material safety permits, and financial responsibility requirements for motor carriers of hazardous materials (PHMSA 2009).

#### The Federal Aviation Administration

The Federal Aviation Administration issues regulations covering hazardous materials that are part of the required aircraft equipment. The FAA also regulates the transportation of radioactive materials on passenger-carrying aircraft when the material is intended for use in, or incident to, research or medical diagnosis or treatment (PHMSA 2009).

### FEDERAL – FIRE HAZARDS

#### **Healthy Forest and Rangelands – National Fire Plan**

Healthy Forests and Rangelands is a cooperative effort between the United States Department of the Interior (DOI), the United States Department of Agriculture (USDA), and their land management agencies. Healthy Forests and Rangelands provides fire, fuels, and land management information to government officials, land and fire management professionals, businesses, communities, and other interested organizations and individuals.

The National Fire Plan (NFP) was developed in August 2000, following a landmark wildland fire season, with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future. The NFP addresses five key points: firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability. Finalized in August 2001 by the Department of the Interior and the Department of Agriculture, the National Fire Plan outlines a coordinated national ten-year comprehensive strategy for the management of wildland fire, hazardous fuels, and ecosystem restoration and rehabilitation on federal and adjacent state, tribal, and private forest and rangelands in the United States. This approach recognizes fire as part of the ecosystem; focuses on hazardous fuels reduction, integrated vegetation management, and firefighting strategies; and allocates and



utilizes resources in a cost-effective manner on a long-term basis. An implementation plan of the National Fire Plan, completed in May 2002, designates general responsibilities for federal, state, and local agencies. The implementation plan was most recently updated in December 2006, with the goals of restoring fire-adapted ecosystems and reducing hazardous fuels in order to reduce risks to communities and provide economic benefits, as well as improve fire prevention and suppression (Healthy Forests and Rangelands 2009).

### STATE – HAZARDOUS MATERIALS

#### **California Environmental Protection Agency**

The California Environmental Protection Agency (CalEPA) was created in 1991 by Governor's Executive Order. The six boards, departments, and office were placed under the CalEPA "umbrella" to create a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of state resources. The mission of CalEPA is to restore, protect, and enhance the environment to ensure public health, environmental quality, and economic vitality (CalEPA 2012).

#### Unified Program

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs (CalEPA 2012):

- The Hazardous Waste Generator program and Hazardous Waste Onsite Treatment activities
- The Aboveground Storage Tank program Spill Prevention Control and Countermeasure Plan requirements
- The Underground Storage Tank program
- The Hazardous Materials Release Response Plans and Inventory program
- California Accidental Release Prevention program
- The Hazardous Materials Management Plans and the Hazardous Materials Inventory Statement requirements

The Secretary of CalEPA is directly responsible for coordinating the administration of the Unified Program, which requires all counties to apply to the CalEPA Secretary for the certification of a local unified program agency. Qualified cities are also permitted to apply for certification. The local Certified Unified Program Agency (CUPA) is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements in the county. Most CUPAs have been established as a function of a local environmental health or fire department.

The Butte County Environmental Health Department is the CUPA for Butte County. CalEPA periodically evaluates the ability of each Certified Unified Program Agency to carry out the requirements of the Unified Program. A program evaluation of the Butte County Environmental Health CUPA was conducted on January 19 and 20, 2011. The evaluation found that the Butte

### **3.7 HAZARDS AND HAZARDOUS MATERIALS**

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County Environmental Health CUPA's program performance "meets program's performance standards" (CalEPA 2011).

#### Department of Pesticide Regulation

Within CalEPA, the California Department of Pesticide Regulation (DPR) protects human health and the environment by regulating pesticide sales and use and by fostering reduced-risk pest management. The DPR's oversight begins with product evaluation and registration and continues through statewide licensing of commercial applicators, dealers and consultants, residue testing of fresh produce, and local permitting and use enforcement by agricultural commissioners in each of the state's 58 counties (CalEPA 2012).

#### **California Air Resources Board**

In 1967, California's legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus—the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board—to establish the California Air Resources Board (CARB). Since its formation, CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problem. CARB's mission is to promote and protect public health, welfare, and ecological resources through the effective and efficient reduction of air pollutants, while recognizing and considering the effects on the state's economy. CARB also oversees the activities of 35 local and regional air pollution control districts. These districts regulate industrial pollution sources, as well as issue permits, develop local plans to attain healthy air quality, and ensure that the industries in their area adhere to air quality mandates.

CARB's statewide comprehensive air toxics program was established in the early 1980s. The Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the Assembly Bill (AB) 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Under AB 1807, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community" (Health and Safety Code Section 39666[f]). AB 1807 also requires CARB to use available information gathered from the AB 2588 program to include in the prioritization of compounds. This report includes available information on each of the above factors required under the mandates of the AB 1807 program.

#### **Department of Toxic Substances Control**

The California Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. The DTSC regulates hazardous waste in California, primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. The US Environmental Protection Agency authorizes the DTSC to carry out the Resource Conservation and Recovery Act program in California. Permitting, inspection, compliance, and corrective action programs ensure that people who manage hazardous waste follow state and federal requirements. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and

emergency planning. The following are descriptions of the roles and responsibilities of the DTSC's organizational programs (DTSC 2012a).

#### Site Mitigation and Brownfields Reuse Program

- **Statewide Cleanup Operations Division** – The DTSC's Statewide Cleanup Operations Division conducts and oversees cleanup of sites contaminated with a toxic substance, coordinating all aspects of the cleanup from investigation through certification. Expediting this cleanup work is one of the most important goals of the program. The DTSC created the Voluntary Cleanup Program, Expedited Remedial Action Pilot program, and other brownfields tools to encourage redevelopment of blighted urban areas. The DTSC also encourages property owners to investigate and clean up contamination through a combination of low-interest loans. In 2001, the Investigating Site Contamination and Cleanup Loans and Environmental Assistance to Neighborhoods (ISCP and CLEAN) programs received eleven loan applications totaling \$7.9 million to investigate and clean up urban properties.
- **School Property Evaluation and Cleanup Division** – The School Property Evaluation and Cleanup Division works to ensure that all new, existing, and proposed school sites are environmentally safe. State law requires all proposed school sites that will receive state funding for purchase or construction to go through the DTSC's rigorous environmental review. If the properties were previously contaminated, DTSC Schools Division staff makes sure they have been cleaned up to a level that is safe for students and faculty.
- **Emergency Response and Statewide Operations Division** – The DTSC's Emergency Response and Statewide Operations Division (ERSO) encompasses several elements. The Emergency Response Program provides immediate assistance in the case of sudden releases or threatened releases of hazardous materials. This program includes disaster response, illegal drug lab cleanup, development of remediation guidelines for illegal drug labs, and off-highway removal. ERSO also houses the Engineering and Geological Services Branch, which supports the other programs within the DTSC by providing expert technical assistance. ERSO has lead responsibility for conducting cleanup and enforcement actions at several high-profile federal Superfund sites.
- **Planning and Management Branch** – The Planning and Management Branch is a headquarters organization responsible for developing and managing various federal grants that help fund the Site Mitigation and Brownfields Reuse Program. Staff analyze state and federal legislation, develop policy and procedure, coordinate the annual workplan, and perform consolidated budget and personnel functions. In addition, Site Mitigation and Brownfields Reuse maintains a database of confirmed and suspected hazardous waste substance release sites.

#### Hazardous Waste Management Program

The Hazardous Waste Management Program regulates hazardous waste through its permitting, enforcement, and Unified Program activities. The program's main focus is to ensure the safe storage, treatment, transportation, and disposal of hazardous wastes.

- **Permitting & Corrective Action Division** – The Permitting Division authorizes facilities to treat, store, and dispose of hazardous waste in a manner consistent with federal, state, and local laws. Types of authorization include permits, emergency permits, and variances. The purpose of this process is to ensure that these facilities and their operators

### 3.7 HAZARDS AND HAZARDOUS MATERIALS

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meet requirements for safe operating conditions, financial assurance, and environmental monitoring. In addition, the division conducts the corrective action and closure programs, including long-term maintenance of closed facilities for closed hazardous waste facilities.

- **Statewide Compliance Division** – The Statewide Compliance Division monitors hazardous waste transfer, storage, treatment, and disposal facilities for illegal activity. The division carries out a technical investigation program that provides sampling, technical site investigation, and expert testimony for civil and criminal investigations brought by the California Attorney General, district attorneys, regional environmental crimes task forces, and federal attorneys. Staff members conduct routine inspections, investigate complaints, monitor hazardous waste transporters and their manifests, and take enforcement action against those who violate hazardous waste laws. In addition, the division makes sure that commercial hazardous waste management facilities have adequate financial resources to cover both sudden accidental liability and the long-term costs of closing the facility.
- **State Regulatory Programs Division** – The State Regulatory Programs Division oversees the implementation of the hazardous waste generator and on-site treatment program, one of the six environmental programs at the local level consolidated within the Unified Program. The division participates in the triennial review of 72 Certified Unified Program Agencies to ensure that their programs are consistent statewide, conform to standards, and deliver quality environmental protection at the local level. The division also carries out the state's hazardous waste recycling and resource recovery program, a waste evaluation program to assist in waste determinations, and the household hazardous waste and agricultural chemical collection programs. The division conducts a corrective action oversight program that assures any releases of hazardous constituents at generator facilities that conduct on-site treatment of hazardous waste are safely and effectively remediated.

#### **State Water Resources Control Board**

The State Water Resources Control Board was created by the legislature in 1967. The mission of the SWRCB is to ensure the highest reasonable quality for waters of the state, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters.

#### Porter-Cologne Water Quality Control Act

In 1969, the California legislature enacted the Porter-Cologne Water Quality Control Act, the cornerstone of today's water protection efforts in California. Through it, the SWRCB and the nine statewide Regional Water Quality Control Boards are entrusted with broad duties and powers to preserve and enhance all beneficial uses of the state's surface water and groundwater.

#### Land Disposal Program

The SWRCB's Land Disposal program regulates waste discharge to land for treatment, storage, and disposal in waste management units, which include waste piles, surface impoundments, and landfills. CCR Title 23, Chapter 15, contains the regulatory requirements for discharge of hazardous waste to land. The regulations establish waste and site classifications and waste management requirements for waste treatment, storage, or disposal in landfills, surface impoundments, waste

piles, and land treatment facilities. The regulations also include minimum standards for proper management of each waste category. In addition, the regulations apply to cleanup and abatement actions for unregulated discharges to land of hazardous waste (e.g., spills).

### **California Department of Industrial Relations – Division of Occupational Safety and Health**

In California, every employer has a legal obligation to provide and maintain a safe and healthful workplace for employees, according to the California Occupational Safety and Health Act of 1973. The Division of Occupational Safety and Health (Cal/OSHA) program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. Cal/OSHA regulations are administered through Title 8 of the CCR. The regulations require all manufacturers or importers to assess the hazards of substances which they produce or import and all employers to provide information to their employees about the hazardous substances to which they may be exposed.

### **California Office of Environmental Health Hazard Assessment**

Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986, was enacted as a ballot initiative in November 1986. The proposition was intended by its authors to protect California citizens and the state's drinking water sources from chemicals known to cause cancer, birth defects, or other reproductive harm and to inform citizens about exposures to such chemicals. Proposition 65 requires the governor to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity.

### **STATE – FIRE HAZARDS**

#### **California Department of Forestry and Fire Protection**

The California Department of Forestry and Fire Protection (Cal-Fire) protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. Cal-Fire's firefighters, fire engines, and aircraft respond to an average of more than 5,600 wildland fires each year. Those fires burn more than 172,000 acres annually (Cal-Fire 2009).

The Office of the State Fire Marshal supports Cal-Fire's mission by focusing on fire prevention. The Office of the State Fire Marshal provides support through a wide variety of fire safety responsibilities including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities.

The responsibility for the prevention and suppression of wildfires in Butte County belongs to Cal-Fire, the Butte County Fire Department (BCFD), and individual cities in their incorporated areas. As the major firefighting force in the county, Cal-Fire/BCFD maintains 48 fire stations and support facilities either fully or cooperatively, as well as a fleet of firefighting equipment in Butte County, including engines, aircraft, squads/rescues, bulldozers, water tenders, hazardous materials units, and heavy rescue vehicles (Butte County 2007a).

## **3.7 HAZARDS AND HAZARDOUS MATERIALS**

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### Wildland-Urban Interface Fire Area Building Standards

The California Building Code (CBC) includes wildland-urban interface codes, which in turn include provisions for ignition-resistant construction standards in the wildland-urban interface. The broad objective of the Wildland-Urban Interface Fire Area Building Standards is to establish minimum standards for materials and material assemblies and provide a reasonable level of exterior wildfire exposure protection for buildings in wildland-urban interface fire areas. The standards require the use of ignition-resistant materials and design to resist the intrusion of flame or burning embers projected by a vegetation fire (wildfire exposure) (Cal-Fire 2009).

### **Vegetation Management Program**

The Cal-Fire Vegetation Management Program is a cost-sharing program that focuses on the use of prescribed fire and mechanical means for addressing wildland fire fuel hazards and other resource management issues on State Responsibility Area (SRA) lands. The use of prescribed fire mimics natural processes, restores fire to its historic role in wildland ecosystems, and provides significant fire hazard reduction benefits that enhance public and firefighter safety. The program allows private landowners to enter into a contract with Cal-Fire to use prescribed fire to accomplish a combination of fire protection and resource management goals. Implementation of program projects is by Cal-Fire units. The projects which fit within a unit's priority areas (e.g., those identified through the Fire Plan) and are considered to be of most value to the unit are those that will be completed. The Vegetation Management Program has been in existence since 1982 and has averaged approximately 35,000 acres per year since its inception (Cal-Fire 2009).

### California Public Resources Code

#### Fire Hazard Severity Zones

The California Public Resources Code Sections 4201–4204 and Government Code Section 51175–89 direct Cal-Fire to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), define the application of various mitigation strategies to reduce risk associated with wildland fires.

As previously stated, the Biggs Planning Area, entirely within the Sacramento Valley, is not subject to the threat of significant wildland fires (see **Figure 3.7-1**).

#### Defensible Space Requirements

In 1987, Senate Bill (SB) 1075 was adopted to require the California Board of Forestry to establish minimum fire safety standards that apply to State Responsibility Areas (SRAs). Subsequently, Public Resources Code Section 4290 required local jurisdictions to implement these fire safe standards. The concept of defensible space is the cornerstone of fire safety regulations. The intent is to reduce the intensity of a wildland fire by reducing the volume and density of fuels (e.g., vegetation that can transmit fire from the natural growth to a building or structure), to provide increased safety for fire equipment and evacuating civilians, and to provide a point of attack or defense from a wildland fire. Defensible space is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names, building identification, and fuel modification measures. Changes to Public Resources Code Section 4291 in 2006 expanded the defensible space clearance requirement maintained around buildings and structures from 30 feet to a distance of 100 feet.

### California Fire Code

The 2007 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

### LOCAL – HAZARDOUS MATERIALS, FIRE HAZARDS, AND EMERGENCY MANAGEMENT

#### Hazardous Materials Joint Power Agreement

The Hazardous Materials (Hazmat) Joint Powers Agreement (JPA) was initiated in December 1990 by the County of Butte and the five cities in Butte County—Biggs, Chico, Gridley, Oroville, and Paradise. It is governed by the fire chiefs of the six signatory agencies.

The key components of the JPA are:

- Establishment and equipping of a countywide Hazardous Materials Response Team with a maximum membership of 40 fire department personnel.
- Each entity provides state-certified hazardous materials specialists and a small ten cents per capita financial contribution commensurate to their overall percentage of total county population.
- Operation of two Type 1/Level A response units, one stationed in Chico and one stationed in Kelly Ridge.
- Dispatching of the closest on-duty specialists to any hazardous materials incident regardless of jurisdiction.
- The JPA provides emergency response services, but it is not responsible for cleanup or removal of hazardous materials.
- Accepting additional funding from donations, grants, billing for services, and court-ordered restitution.

The response agency establishes training and operational standards in accordance with applicable laws and regulations. In early 2006, a third response unit designated for mass decontamination and rehabilitation was located in Oroville. As Homeland Security first responders, the team is trained and equipped to respond to incidents involving weapons of mass destruction. The team works closely with the County Environment Health and Agriculture departments.

## **3.7 HAZARDS AND HAZARDOUS MATERIALS**

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### **Butte County Multi-Jurisdictional All Hazard Pre-Disaster Mitigation Plan**

The County of Butte is required to adopt a federally approved Hazard Mitigation Plan to be eligible for certain disaster assistance and mitigation funding. Therefore, Butte County and the participating jurisdictions (Biggs, Chico, Gridley, Oroville, and Paradise) developed the Butte County Multi-Jurisdictional All Hazard Pre-Disaster Mitigation Plan. The overall intent of the plan is to reduce or prevent injury and damage from hazards in the county. The plan identifies past and present mitigation activities, current policies and programs, and mitigation strategies for the future. It also guides hazard mitigation activities by establishing hazard mitigation goals and objectives (Butte County 2007a).

### **County of Butte Office of Emergency Management**

California Government Code Section 8607 requires the development of a standardized emergency management system (SEMS). SEMS facilitates coordination among all responding agencies and expedites the flow of resources and communication at all organizational levels (OES 2003). SEMS regulations authorize each county board of supervisors to designate an operational area (OpArea) lead agency. The County of Butte Office of Emergency Management (County OEM) has been designated the OpArea Coordinator in Butte County. The OEM works with state and local agencies to develop effective emergency response systems in the county. The OEM also acts as the requesting and coordinating agency when situations require the involvement of state and other outside agencies (Butte County 2007b). The OpArea includes Biggs, Chico, Durham, Gridley, Oroville, Magalia, Paradise, and the unincorporated areas of Butte County.

In an emergency, County OEM may be contacted and requested to activate in order to coordinate among local "political subdivisions" and act as a single point of contact for state and federal agencies. If two or more jurisdictions are affected, the OpArea activates automatically. The level of activation is dependent on the scope of the event.

### **Butte County Operational Area Disaster Plan**

The Butte County Operational Area Disaster Plan (EOP) serves as the official emergency plan for Butte County. It includes planned operational functions and the overall responsibilities of each area of the county in addressing emergency situations. The EOP provides an overview of operational concepts, identifies components of the County's emergency management organization within the SEMS National Incident Management System (NIMS), and describes the overall responsibilities of the federal, state, and county entities and the Butte County Operational Area for protecting life and property and assuring the overall well-being of the population. While emergency services are administered at the county level, they are available to local jurisdictions.

The EOP is designed to focus on potential large-scale disasters, rather than daily emergencies that are regularly handled by local law enforcement and protection agencies. The EOP defines the County's planned response to "extraordinary" emergency situations associated with natural disasters, technological incidents, and nuclear defense operations (Butte County 2007b).



### 3.7.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

This analysis evaluates the project's impacts from hazards to human health and hazardous materials based on the standards identified in State CEQA Guidelines Appendix G. The City has determined that a hazards and hazardous materials impact is considered significant if implementation of the project would:

- 1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 2) 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.
- 3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- 4) Be located on a site which is included on a list of hazardous materials sites compiled by Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- 5) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.
- 6) For a project in the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
- 7) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- 8) Expose people or structures to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

As discussed under the Existing Setting subsection above, there are no public or private airports located in the Biggs Planning Area. 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, hazard issues associated with public and private airports are not discussed further in this Draft EIR.

As also discussed, the Biggs Planning Area, entirely within the Sacramento Valley, is not subject to the threat of significant wildland fires (see **Figure 3.7-1**). There are no unique or significant fire hazards that exist in the rural/urban interface between the city and surrounding open spaces, or within the Biggs Planning Area (Biggs 2010). The nearest areas designated to have Moderate Fire Hazard Severity are located adjacent to riparian areas near the Feather River, approximately 3 miles from the current city limits. Therefore, this issue is not discussed further in this Draft EIR.

### 3.7 HAZARDS AND HAZARDOUS MATERIALS

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#### METHODOLOGY

This analysis of hazards was based on review of existing documentation such as the Butte County Multi-Hazard Mitigation Plan and DTSC and USEPA databases for hazardous sites in the city, as well as review of the applicable fire codes and regulations, and other relevant literature. A detailed list of reference material used in preparing this analysis can be found at this end of this section. This material was compared to the proposed General Plan's specific hazard-related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment and/or on the health of the public.

The following proposed General Plan policies and actions address hazards to the public health and safety or the environment:

- Policy S-1.1 (Emergency Preparedness) – Promote public safety from hazards that may cause death, injury, or property damage through emergency preparedness and awareness.*
- Action S-1.1.1 (Emergency Plan Maintenance) – Maintain, and update as needed, the City's Emergency Plan to guide emergency management in the city.*
- Action S-1.1.2 (Emergency Response Awareness) – Promote community awareness of emergency evacuation routes, notification methods, and planning in the Biggs area.*
- Action S-1.1.3 (Regional Hazard Agency Participation) – Actively participate and partner with Butte County and other regional agencies for comprehensive hazard and emergency planning.*
- Action S-1.1.4 (Incident Training) – Participate in the Federal Emergency Management Agency's National Incident Management System program, which provides a standardized approach to emergency incidents.*
- 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.*

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant hazard impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that protect public health and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

#### **Transportation, Use, and Disposal of Hazardous Materials (Standard of Significance 1)**

**Impact 3.7.1**      Implementation of the proposed General Plan would allow for land uses that would involve the routine transportation, use, or disposal of hazardous materials in the Biggs Planning Area. Such activities would continue to be regulated in order to protect public health and will not create a significant hazard to the public or the environment. Therefore, this impact is considered **less than significant**.

Implementation of the proposed General Plan would allow for land uses that routinely store, use, and transport hazardous materials, including industrial uses and certain commercial uses (such as water and wastewater treatment plant operations, swimming pool facilities, gas stations, and dry cleaners). New development that involves construction, demolition, and landscaping activities could also result in the transport, use, and disposal of hazardous materials such as gasoline fuels, demolition materials, asphalt, lubricants, toxic solvents, pesticides, and herbicides. The transport, use, and disposal of these materials could pose a potential hazard to the public and the environment.

Furthermore, increased population in these areas could increase the amount of household hazardous waste being transported to the Butte Regional Household Hazardous Waste Collection Facility (BRHHWCF). State law prohibits the transportation of more than 5 gallons or 50

### **3.7 HAZARDS AND HAZARDOUS MATERIALS**

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pounds of hazardous waste without a hazardous materials transportation license. Therefore, it is anticipated that the transport of additional household waste to the BRHHWCF would be in relatively small amounts and would not result in significant hazards to the public or environment.

The transport, use, and storage of hazardous materials by any development associated with the proposed General Plan would be required to comply with all applicable local, state, and federal regulations during project construction and operation. Facilities that use hazardous materials are required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. Federally, the Resource Conservation and Recovery Act (RCRA) give the EPA the authority to control the generation, transportation, treatment, storage, and disposal of hazardous waste. The Hazardous Materials Regulations included in federal law governs the transportation of hazardous materials. The Federal Motor Carrier Safety Administration issues regulations concerning highway routing of hazardous materials, hazardous materials endorsements for a commercial driver's license, highway hazardous material safety permits, and financial responsibility requirements for motor carriers of hazardous materials.

The Butte County Environmental Health Department is the CUPA for Butte County and is responsible for consolidating, coordinating, and making consistent the administrative requirements, permits, inspections, and enforcement activities of six state programs regarding the transportation, use, and disposal of hazardous materials in Butte County and the Biggs Planning Area, as discussed under the Regulatory Framework subsection above. As the CUPA, the Environmental Health Department inspects businesses or facilities that handle or store hazardous materials; generate and/or treat hazardous waste; own or operate underground storage tanks; store petroleum in aboveground tanks over state thresholds; and store federally regulated hazardous materials over state thresholds. These inspections determine compliance with the California Health and Safety Code, the California Code of Regulations, and the Code of Federal Regulations and focus on site inspections, review of Hazardous Material Business Plans, documentation of employee training programs, disposal documentation for hazardous waste generated onsite, and underground storage tank monitoring records. All development under the General Plan that handles or stores hazardous materials would be subject to these inspections, which would ensure compliance with state and federal laws intended to prevent potential hazards to the public and the environment.

Although the proposed General Plan could result in increased population and thus increased exposure of the public to hazardous material being transported by the Union Pacific Railroad and by trucks on State Route 99 and Planning Area roadways, the federal Hazardous Materials Regulations (HMR) address hazardous material transportation via classification, packaging, hazard communication, emergency response information, and training. Training meeting HMR requirements increases a hazmat employee's safety awareness and thus contributes to a reduction in hazmat incidents. HMR emergency response requirements include initial emergency actions regarding evacuation isolation of the affected area, firefighting, leaking containers, spill containment, and first aid. These requirements would also reduce the number of persons exposed to any hazmat incidents. The Safety Element of the General Plan also includes requirements for the City to consult with relevant local, state, and other agencies regarding hazardous materials routing and incident response programs (Action S-8.1.2).

As previously mentioned, the City has little influence over the types of material transported via the rail line. However, the potential for rail incidents can be reduced by ensuring that at-grade crossings in the Planning Area are operating in a safe and effective manner. The Safety Element of the proposed General Plan includes Action S-7.1.1 that requires the City to request verification from the UPRR that relevant safety measures for at-grade crossings are implemented and

maintained. This policy would assist in ensuring that at-grade crossings in the Planning Area operate in a safe and effective manner, thus reducing the potential for rail incidents involving hazardous materials.

Therefore, even though the proposed General Plan could result in increased storage, use, and transportation of hazardous materials and increased exposure of the public to hazardous materials, federal, state, and local regulations regarding hazardous material transport, use, and disposal are currently enforced and would continue to be enforced as discussed above. These regulations provide a comprehensive regulatory system for handling, using, and transporting hazardous materials in a manner that protects human health and the environment. Therefore, potential hazards to the public and the environment would be **less than significant**.

#### **Release and Exposure of Hazardous Materials (Standards of Significance 2 and 4)**

**Impact 3.7.2** Implementation of the proposed General Plan could 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 or by locating development on a site included on a list of hazardous materials sites compiled by Government Code Section 65962.5. Such activities and circumstances would continue to be regulated in order to protect public health and will not create a significant hazard to the public or the environment. This impact is considered **less than significant**.

As discussed under Impact 3.7.1 above, implementation of the proposed General Plan would allow for land uses that would involve the transportation, use, and disposal of hazardous materials in the Biggs Planning Area. These activities could result in the accidental release of hazardous materials into the environment and/or exposure of the public to hazardous materials via reasonably foreseeable upset conditions. In addition, the General Plan would result in increased population and thus increased exposure of the public to accidental or reasonably foreseeable releases of hazardous materials.

Accidental releases of hazardous materials are those releases that are unforeseen or that result from unforeseen circumstances, while reasonably foreseeable upset conditions are those release or exposure events that can be anticipated and planned for. As discussed under Impact 3.7.1, the transport, storage, and use of hazardous materials by developers, contractors, business owners, and others are required to be in compliance with local, state, and federal regulations during project construction and operation. Facilities that use hazardous materials are required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. These regulations provide a comprehensive regulatory system for handling, using, and transporting hazardous materials in a manner that protects human health and the environment. These requirements would also reduce the number of persons exposed to any hazmat incidents. As such, both accidental and reasonably foreseeable hazardous materials releases would be expected to occur infrequently and result in minimal hazard to the public or the environment.

New development and/or increased population in the city anticipated in the proposed General Plan could also increase exposure to electrical transformers containing polychlorinated biphenyls (PCBs) and persistent residual chemicals, including pesticides, herbicides, and fertilizers, that have the potential to pose a health and safety risk via accidental release, misuse, or historic use. In addition, redevelopment activities associated with the proposed General Plan could result in exposure to hazardous materials by disturbing and thus releasing asbestos and/or lead during demolition and remodeling activities.

### 3.7 HAZARDS AND HAZARDOUS MATERIALS

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The public could also be exposed to hazardous materials if new development or redevelopment were to be located on a current or historical hazardous material site. Currently, there is one hazardous material site known to be associated with a hazardous material-related release in the Biggs Planning Area. This site is required by state and federal regulations to be reviewed, tested, and remediated for potential hazardous materials. Furthermore, the proposed General Plan does not propose any development on identified hazardous material sites. If future development were to be proposed on or near this site, or other hazardous material sites identified in the future, the environmental review for the project would evaluate potential health and environmental impacts and require mitigation measures or conditions of approval as necessary to avoid or lessen hazards consistent with local, state, and federal requirements.

Similarly, future site-specific environmental review would ensure a reasonable level of safety for residents, workers, and property owners of future development through review and mitigation of site-specific health hazards associated with electrical transformers containing PCBs and persistent residual chemicals. In addition, redevelopment activities, including demolition and remodeling, would be subject to federal state and local regulations specifically aimed at preventing lead and asbestos hazards. For example, the EPA requires contractors or firms performing renovation, repair, and painting projects that disturb lead-based paint in homes, child-care facilities, and schools built before 1978 to be certified and to follow specific work practices to prevent lead contamination (the EPA's Renovation, Repair, and Remodeling rule). The EPA has also developed asbestos demolition and renovation requirements in the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation (40 CFR, Part 61, Subpart M), which includes notification, inspection, and emission control requirements.

As discussed under the Existing Setting subsection above, the Planning Area does not contain any areas that have been identified by the US Geological Survey and California Geological Survey as containing ultramafic rock (USGS 2011). Since natural asbestos occurs most commonly in association with ultramafic rocks, the potential for occurrence and distribution of naturally-occurring asbestos fibers in the Biggs Planning Area is considered very low. Additionally, the Biggs Planning Area is identified by the EPA as being in Zone 3 for radon, which indicates a predicted average indoor radon screening level less than 2 pCi/L. Zone 3 represents the lowest potential for radon hazards. Modern building construction practices provide for adequate ventilation of structures that minimize this hazard. For these reasons, no impacts associated with naturally-occurring asbestos or radon would be expected to occur.

Given that federal, state, and local regulations regarding hazardous materials provide a comprehensive regulatory system that would minimize exposure of the public to hazardous materials, both from accidental/reasonably foreseeable releases and from known contaminated sites, impacts would be **less than significant**.

#### **Release and Exposure to Hazardous Materials in the Vicinity of a School Site (Standard of Significance 3)**

**Impact 3.7.3** Implementation of the proposed General Plan would not result in significant emission of hazardous emissions or significant handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. This is considered a **less than significant** impact.

The proposed General Plan Land Use Diagram has not designated land uses that allow for acutely hazardous materials, substances, or waste within one-quarter mile of a school. In addition, zoning regulations generally discourage such uses in the vicinity of each other and, as such, future

discretionary review of development projects would prevent such incompatibilities (see Section 3.9, Land Use, for a discussion of land use compatibility associated with the General Plan). However, it is possible that implementation of the proposed General Plan could result in the need for additional school sites in the Planning Area (see Section 3.12, Public Services and Utilities, for more information). The City of Biggs does not determine the siting of new schools. Therefore, the siting of schools in the vicinity of land uses involving the use, transport, disposal, or release of hazardous materials creates the potential for health impacts to children, who are especially sensitive receptors in regard to exposure to hazardous substances or pollution exposures.

The California Department of Education (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 (DTSC 2012a).

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**.

### **Emergency Response and Evacuation Plans (Standard of Significance 7)**

**Impact 3.7.4** Implementation of the proposed General Plan would not impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan. This impact is considered **less than significant**.

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

### 3.7 HAZARDS AND HAZARDOUS MATERIALS

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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 General Plan 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. Implementation of the proposed General Plan would result in an increased number of people who would require evacuation in case of an emergency. Implementation of the proposed roadway connections under the Circulation Element of the proposed General Plan would provide additional roadway connections that offer more escape route and emergency access options. As such, implementation of the proposed General Plan roadway system would improve implementation of the city's evacuation plans and the City of Biggs Emergency Plan. Therefore, impacts are considered **less than significant**.

#### 3.7.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

##### CUMULATIVE SETTING

The cumulative setting for hazards and human health risks associated with the proposed General Plan includes Biggs as well as the surrounding areas in Butte County. Most hazardous material, human health, and safety impacts as described in CEQA Appendix G are generally site-specific and not cumulative by nature, as impacts generally vary by land use, site characteristics, and site history.

##### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Hazards and Health Risks

**Impact 3.7.5** Implementation of the General Plan would not cumulatively contribute to regional hazards. This is considered a **less than cumulatively considerable** impact.

The cumulative effects from land uses proposed in association with the proposed General Plan could create a risk to public health from exposure to hazardous materials (PCB-containing transformers, underground storage tanks/aboveground storage tanks, etc.). Hazardous material-related impacts are generally site-specific, and each individual development is responsible for mitigating such risks. Exposure to natural hazards can be controlled through proper site design, best management practices during construction and operation, compliance with established building requirements, and appropriate zoning. Various land uses (commercial, industrial, schools, and even residential properties) will use limited hazardous materials during construction and operational activities. All new and existing projects are required to comply with all federal, state, and local regulations regarding the handling, transportation, and disposal of hazardous materials. Therefore, the proposed General Plan's cumulative hazardous material impacts and threats to public health are considered **less than cumulatively considerable**.



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## **3.8 HYDROLOGY AND WATER QUALITY**



This section identifies the hydrological resources, the existing drainage conditions, and the surface water and groundwater quality in Biggs and the surrounding area. This section also evaluates the potential impacts of the proposed General Plan with respect to flooding, drainage, erosion, and water quality, and identifies the appropriate General Plan policies and actions that would lessen the identified impacts. The reader is referred to Section 3.12, Public Services and Utilities, regarding further analysis of groundwater/water supply impacts of the proposed General Plan.

### 3.8.1 EXISTING SETTING

#### REGIONAL HYDROLOGY

Biggs is 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 California Water Plan Update (2009), the state has been subdivided into ten hydrologic regions. Biggs is located in the north-central portion of the Sacramento River Hydrologic Region, which covers approximately 17.4 million acres (27,200 square miles) (DWR 2009) 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 northernmost area, mainly high desert plateau, is characterized by hot, dry summers and cold, snowy winters with only moderate rainfall. The Sacramento Valley, which forms the core of the region, is bounded to the east by the crest of the Sierra Nevada and southern Cascades and to the west by the crest of the Coast Range and Klamath Mountains. Another significant feature is the Sacramento River, which is the longest river system in California with major tributaries the Pit, Feather, Yuba, Bear, and American rivers. Overall, annual precipitation in the Sacramento River Hydrologic Region generally increases as one moves from south to north and west to east. The heavy snow and rain that falls in this region contributes to the overall water supply for the entire state.

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, which is nearly one-third of the state's total natural runoff. 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 acre-feet (DWR 2005). Major reservoirs in the region not only provide water supply but are also the source of recreation, power generation, and other environmental and flood control benefits. In addition, the region has a network of creeks and rivers that convey water for use throughout the region and provide nesting and rearing ground for major fish and wildlife species. Approximately eight million acre-feet of water go to municipal, industrial, and agricultural uses, while approximately 2.5 million acre-feet are stored as groundwater. Much of the remainder of the runoff goes to dedicated natural flows, which support various environmental requirements, including in-stream fishery flows and flushing flows in the Sacramento River Delta.

#### SURFACE WATER

Distinctive geographic features in the Planning Area include ephemeral drainages and intermittent to perennial streams/rivers that, as mapped, occupy approximately 15 acres. These drainages are constructed irrigation and drainage ditches built, maintained, and operated by

### 3.8 HYDROLOGY AND WATER QUALITY

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Reclamation District 833 (RD 833), which surrounds the city and adjacent agricultural lands. Two drain laterals surround the city: Hamilton Slough on the east and south, and a bypass lateral known as Lateral K along the north and west. The bypass lateral flows into Hamilton Slough southwest of Biggs adjacent to the City's wastewater treatment plant. A large agricultural area east of the city drains through the Biggs Unified School District Property and joins the bypass lateral at the intersection of Second Street and Rio Bonito Road. Lateral E drains an area in the far southern portion of the Biggs Planning Area. While most of the drainages in the Planning Area are ephemeral in nature due to fluctuating seasonal irrigation runoff, Hamilton Slough contains some amount of water year-round.

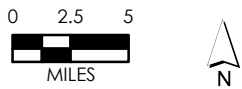
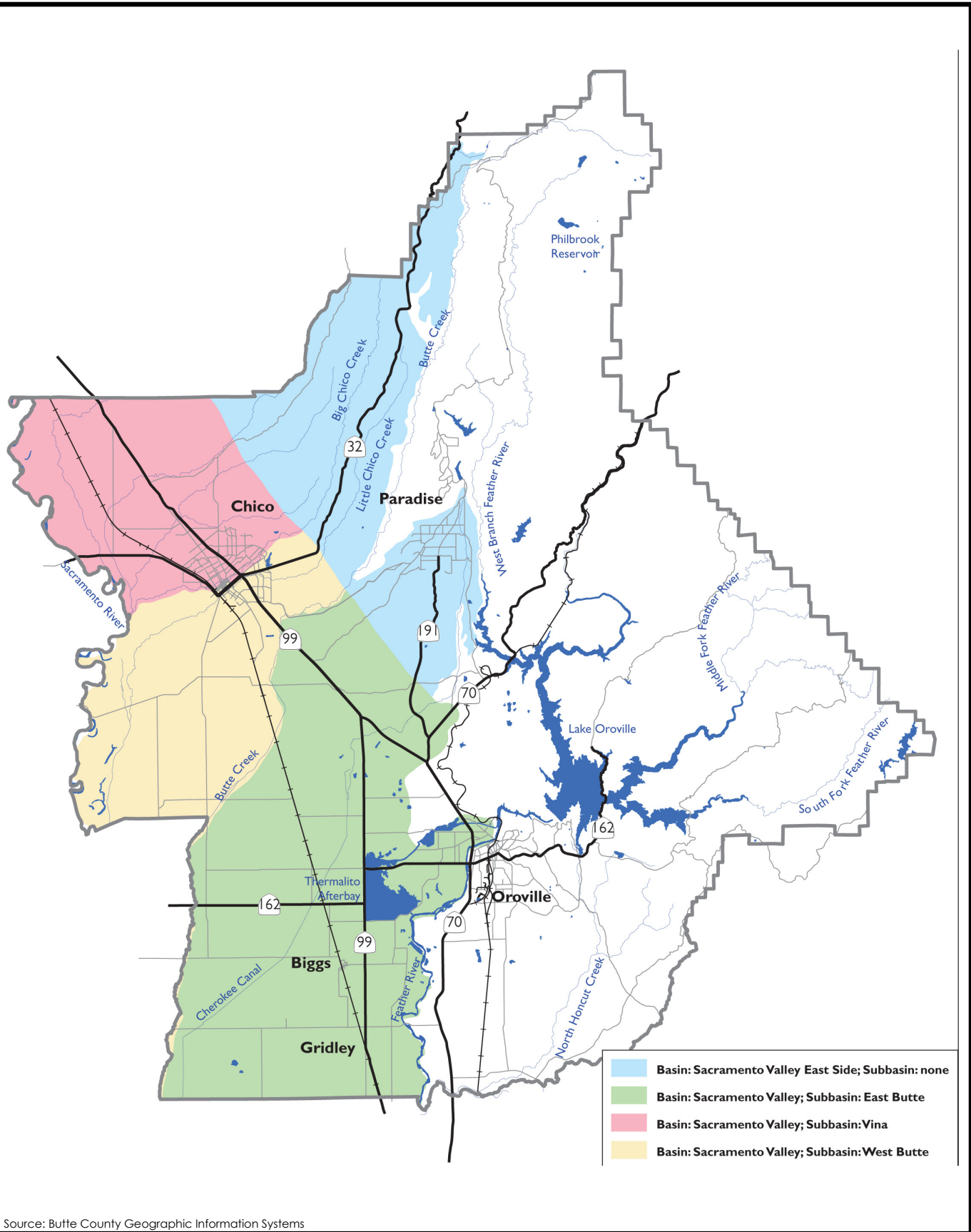
Other open water types that may occur in association with these features include freshwater emergent wetlands. The freshwater emergent wetland habitat type can occur in patches along the margins of open water habitats in the Biggs Planning Area, especially in the Hamilton Slough drainage.

#### GROUNDWATER

Biggs lies above the Sacramento Valley Groundwater Basin and the East Butte Subbasin. The East Butte Subbasin is the portion of the Sacramento Valley Groundwater Basin bounded on the west and northwest by Butte Creek, on the northeast by the Cascade Ranges, on the southeast by the Feather River, and on the south by the Sutter Buttes (DWR 2004) (**Figure 3.8-1**). The northeast boundary along the Cascade Ranges is primarily a geographic boundary, with some groundwater recharge occurring beyond that boundary (DWR 2004). The subbasin is contiguous with the West Butte Subbasin at depth.

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.

The East Butte aquifer system comprises deposits of late Tertiary to Quaternary age. The Quaternary deposits include Holocene stream channel deposits and basin deposits, Pleistocene deposits of the Modesto and Riverbank formations, and Sutter Buttes alluvium. The Tertiary deposits include the Tuscan and Laguna formations. The Tuscan Formation contains an important deep aquifer that underlies 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.



**Figure 3.8-1**  
Groundwater Basins





Deep percolation of streamflow infiltration and precipitation are major sources of groundwater recharge in the valley. Most of this recharge occurs on alluvial fans where streams have sustained flow and the soil is highly permeable. In areas with clay soils or buried hardpan layers, high rates of surface runoff and ponding of water indicate locations where infiltration rates are low. Infiltration of surface runoff does occur at the basin margin where Tuscan and fanglomerate rocks are overlain by valley deposits. Deep subsurface inflow occurs in mountainous areas, flowing west to recharge the adjacent valley area. Localized fluctuations in groundwater levels are observed just south of the Thermalito Afterbay due to the recharging of groundwater from this surface water system (DWR 2004).

The aquifer system underlying Biggs supplies the municipal and agricultural water demands of the city, which is pumped through two primary wells (Botha and Henley) and one back-up well (Willard). The City of Biggs pumps an average of approximately 700,000 gallons per day with the primary source being the newly rehabilitated Botha/Family Park well. This volume equates to an average daily demand of approximately 347 gallons per minute (gpm). A third well (Willard/C Street) is used as an emergency well primarily for fire protection support and to augment system water pressure during peak out-flow events. Combined, the City's two production wells are currently capable of delivering in excess of 2,500 gpm at 40 pounds per square inch (psi) or 2,000 gpm at 55 psi (Butte LAFCo 2008 / City of Biggs 2013). In addition, one well (Botha / Family Park) is equipped with a sand filter and both the Botha and Henley wells are outfitted with diesel back-up generators so that they can continue to operate in the event of a loss of power. The City's three wells were built in 1930, 1971, and 1996. The well built in 1930 was the primary well for the system until 1998 when a newer well, built in 1996, took over as the primary well (Butte LAFCo 2008). Additionally, all three of the City wells were overhauled in 2009 during which the City migrated from a system having primary reliance on direct-drive wells and the City's elevated water storage tank to a system utilizing variable-speed drive pumps able to respond to varying demand levels. Additionally, a telemetry system was installed linking the City's two primary potable water wells. These improvements have eliminated the need for the City to utilize the elevated storage tank, have resulted in increased system operating pressures, increased production volumes and increased reliability and operational efficiencies.

The Biggs region's geology plays a major role in the water resources, as some geological formations (aquifers) can transport and hold considerable amounts of water, while others do not. Also, some geological formations are permeable, allowing rapid infiltration of surface water, while other are relatively impermeable and greatly restrict recharge of groundwater. The Tuscan Formation extends from just west of the Sacramento River into the Sierra Nevada. It averages 1,700 feet in depth in the eastern portions of this swath to approximately 300 feet near the Sacramento River. The formation is of Pliocene age and comprises volcanic mudflows, tuff, breccia, sandstone, and ash deposits. Groundwater in the Sacramento Valley Groundwater Basin Region, which underlies Biggs, is contained primarily within the pore spaces of the reworked sand and gravel layers of this formation. Much of the groundwater is confined under pressure by layers of impermeable clays, mudflows, or tuff breccia. Volcanic sands of this formation can yield high amounts of water to wells in many areas in the eastern portions of the Sacramento Valley.

### **Groundwater-Bearing Zones**

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

### 3.8 HYDROLOGY AND WATER QUALITY

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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.

#### Groundwater Supply

In 2001, available water supplies during normal and drought years were estimated, and regional impacts on groundwater were estimated by comparing groundwater extraction estimates with groundwater hydrology data (Butte County Department of Water and Resource Conservation 2001). Groundwater conditions and supply as concluded by the subsequent report, the Butte County Water Inventory and Analysis, are summarized below (Butte County Department of Water and Resource Conservation 2001).

- The portion of the Sacramento Valley aquifer system under Butte County has recovered from the 1988–1994 drought. Long-term trends in groundwater storage indicate the basin groundwater aquifer is not in a state of decline. During normal to wet years, the aquifer system recharges to its maximum storage capacity by the following spring.
- Butte County, which includes the City of Biggs, has been divided into water inventory units and sub-units. Overall groundwater supply is limited because the groundwater occurs primarily in fractures and joints of volcanic bedrock. Shallow, domestic wells could be susceptible to dewatering during periods of drought.
- Under the normal hydrologic conditions evaluated in the Butte County Water Inventory and Analysis, Butte County has an adequate surface water and groundwater supply to meet current demands.
- Under drought conditions evaluated in the Butte County Water Inventory and Analysis, current demand can generally be met through increased groundwater extraction, provided groundwater extractions are increased to offset reduced surface supplies.
- Under the drought conditions evaluated, additional groundwater wells and conveyance and distribution systems may be required to fully utilize the groundwater resource.
- Future increases in demand will be associated with population growth and environmental regulatory requirements, both within and outside of Butte County.
- A significant amount of water supplied to meet demand remains available for use through deep percolation to groundwater and outflow to other areas.
- Environmental water use (uses including artificial lakes intended to create wildlife habitat, fish ladders around dams, and water releases from reservoirs timed to help fish spawn) constitutes a substantial amount of water demand in Butte County, extending water demand past the typical irrigation season. The trend in environmental water use has increased in the recent past due to regulatory requirements.
- Water quality is generally adequate to meet current demands; however, groundwater nitrate contamination could threaten supply in areas with a high density of septic systems. Regulation of nonpoint source agricultural return water may become an issue in the near future.

The reader is referred to Section 3.12, Public Services and Utilities, regarding further analysis of groundwater/water supply impacts of the proposed General Plan.

### WATER QUALITY

The Sacramento River Hydrologic Region is part of the Central Valley Regional Water Quality Control Board (CVRWQCB).

#### Surface Water Quality

Water quality for all surface water and groundwater for the Sacramento Valley is regulated under the jurisdiction of the CVRWQCB. Water quality standards for all waters in the region are discussed in the region's Basin Plan, which covers the entire area included in the Sacramento and San Joaquin river drainage basins. As stated above, the Sacramento River drainage basin covers approximately 27,000 square miles and includes the entire area drained by the Sacramento River, including the Biggs Planning Area.

Section 303(d) of the federal Clean Water Act (CWA) requires states to identify the waters of the state that do not meet the CWA's national goal of "fishable, swimmable" and to develop total maximum daily loads (TMDLs) for such waters, with oversight of the United States Environmental Protection Agency (EPA). These waters are commonly referred to as "impaired." A TMDL is a quantifiable assessment of potential water quality issues, contributing sources, and load reductions or control actions needed to restore or protect bodies of water. Hamilton Slough is listed on the 303(d) list, though the pollutant is listed as "unknown toxicity" and the toxicity source is also listed as unknown (CVRWQCB 2010). TMDL development is planned for year 2021.

#### Groundwater Quality

Groundwater in the Biggs Planning Area is considered most vulnerable to the following activities associated with contaminants detected in the water supply: sewer collection systems, parks, agricultural drainage, fertilizer and pesticide application, and grazing. The City was fined for various water quality violations between the years 2000 and 2003. The water currently provided by the City meets all state primary and secondary drinking water standards (Butte LAFCo 2008). Arsenic is not detectable in the samples taken in the City's wells (Butte LAFCo 2008). Water is disinfected through chlorination at each well site. The chlorine content is regulated to be maintained within the 0.2–1.0 parts per million range (Butte LAFCo 2008).

### CLIMATE AND PRECIPITATION

The climate in Biggs is generally characterized as Mediterranean in character, with hot, dry summers and moderate to cool, wet winters. Summers are characterized by abundant sunshine and light winds (6–8 miles per hour generally from the northwest in the winter and from the south in the summer). The lack of moisture during the summer makes irrigation necessary in any intensified agricultural program. Winter rains provide moisture for dry farming and growth of annual native range grasses and forbs.

Annual precipitation is variable with an average of 15 inches, most of which falls during the winter. Humidity varies from 70 to 90 percent in the winter and from 25 to 60 percent in the summer. The mean annual temperature is 62°F with extreme highs up to 117°F. The mean minimum temperature in February averages 36°F. Cold snaps occasionally occur, dropping the temperature from 0°F to 20°F.

## 3.8 HYDROLOGY AND WATER QUALITY

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### FLOODING

Currently, the city is located outside of the 100-year floodplain and is not classified as being within a flood hazard area (FEMA 2012).

#### **Local Drainage Flooding**

Several issues cause drainage problems that lead to flooding in the watershed. Ditches and storm sewers are needed to convey stormwater away from developed areas; however, in some areas, the topography prevents surface water from draining quickly to a ditch, stream, or storm drain. Typically, storm drainage systems are designed to handle storm runoff for events smaller than the 100-year event, such as a 10-year event (Butte Creek Watershed Conservancy/Butte County 2005). Runoff increases as a watershed is developed; as a result, older storm sewers designed to convey a 10-year storm or less may become inadequate as additional development takes place. Storm sewers, ditches, and other waterways can be blocked by debris, resulting in the ponding of stormwater prior to the sewer clearing. Ponding is defined as a pool of artificially created still water. Many roads not in the Federal Emergency Management Agency–designated floodplain have undergone damage in the past due to flooding caused by such blockages (Butte Creek Watershed Conservancy/Butte County 2005).

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.

### DAM FAILURE

Flooding of the area below a dam may occur as a result of structural failure of the dam, overtopping, or a seiche (earthquake-generated waves that can overtop the dam). The collapse and structural failure of a dam may be caused by a severe storm, an earthquake, or internal erosion of piping caused by embankment and foundation leakage. Larger dams that would inundate significant portions of Biggs include Oroville Dam on the Feather River (Butte County 2010).

Oroville Dam is a large earthen dam located on the Feather River, near Oroville. The dam was constructed as a major component of the State Water Project to provide water for the growing population of California, irrigation in Central and Southern California, flood control, and hydroelectricity. The dam is over 700 feet high and is almost 7,000 feet long at the top. The inundation area projected for failure of Oroville Dam includes the Biggs Planning Area (Butte County 2010).

### 3.8.2 REGULATORY FRAMEWORK

#### FEDERAL

##### Clean Water Act

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States, including wetlands and perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for “any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters.” Section 404, Title 33, Section 1344 of the CWA in part authorizes the US Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e);
- Issue permits “for the discharge of dredged or fill material into the navigable waters at specified disposal sites”: subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if “the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas”: subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual state or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such state or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain federal or state projects from regulation under this Section: subparagraph (r); and
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).

Section 401 certification is required prior to final issuance of Section 404 permits from the US Army Corps of Engineers.

Section 303(d) of the federal Clean Water Act requires that all states identify water bodies that do not meet specified water quality standards and that do not support intended beneficial uses. Identified waters are placed on the Section 303(d) List of Impaired Water Bodies. Once placed on this list, states are required to develop a water quality control plan—called a total maximum daily load (TMDL)—for each water body and each associated pollutant/stressor. TMDLs are discussed in more detail below.

## 3.8 HYDROLOGY AND WATER QUALITY

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### National Pollutant Discharge Elimination System

As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. It is the responsibility of the water boards, such as the Central Valley RWQCB, to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements (WDRs). WDRs for discharges to surface waters also serve as NPDES permits.

Under Phase I, which started in 1990, the State Water Resources Control Board (SWRCB) adopted a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities, including nontraditional small MS4s, which are governmental facilities such as military bases, public campuses, and prison and hospital complexes. The MS4 permits require the discharger to develop and implement a stormwater management plan/program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what best management practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach, illicit discharge detection and elimination, construction and post-construction, and good housekeeping for municipal operations.

Under Phase II requirements, dischargers in any location whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the statewide General Permit for Discharges of Storm Water Associated with Construction Activity. Construction activity subject to this permit generally include clearing, grading, and disturbances to the ground such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit (CGP) 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. On September 2, 2009, the SWRCB adopted an updated CGP (Order No. 2009-0009DWQ) that superseded the previous CGP on July 1, 2010. A summary of the differences between the previous CGP and the updated CGP follows (SWRCB 2009):

**Rainfall Erosivity Waiver:** *This General Permit includes the option allowing a small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R value) for their site's given location and time frame compute to be less than or equal to 5.*

**Technology-Based Numeric Action Levels:** *This General Permit includes NALs [numeric action levels] for pH and turbidity.*

**Technology-Based Numeric Effluent Limitations:** *This General Permit contains daily average NELs [numeric effluent limitations] for pH during any construction phase where there is a high risk of pH discharge and daily average NELs turbidity for all discharges in Risk Level 3. The daily average NEL for turbidity is set at 500 NTU [turbidity] to represent the minimum technology that sites need to employ (to meet the traditional Best Available Technology Economically Achievable (BAT)/Best Conventional Pollutant Control Technology (BCT) standard) and the traditional, numeric receiving water limitations for turbidity.*

**Risk-Based Permitting Approach:** This General Permit establishes three levels of risk possible for a construction site. Risk is calculated in two parts: (1) Project Sediment Risk and (2) Receiving Water Risk.

**Minimum Requirements Specified:** This General Permit imposes more minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance.

**Project Site Soil Characteristics Monitoring and Reporting:** This General Permit provides the option for dischargers to monitor and report the soil characteristics at their project location. The primary purpose of this requirement is to provide better risk determination and eventually better program evaluation.

**Effluent Monitoring and Reporting:** This General Permit requires effluent monitoring and reporting for pH and turbidity in stormwater discharges. The purpose of this monitoring is to determine compliance with the NELs and evaluate whether NALs included in this General Permit are exceeded.

**Receiving Water Monitoring and Reporting:** This General Permit requires some Risk Level 3 dischargers to monitor receiving waters and conduct bioassessments.

**Post-Construction Storm Water Performance Standards:** This General Permit specifies runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit, to avoid, minimize and/or mitigate post-construction stormwater runoff impacts.

**Rain Event Action Plan:** This General Permit requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.

**Annual Reporting:** This General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and public information.

**Certification/Training Requirements for Key Project Personnel:** This General Permit requires that key personnel (e.g., SWPPP preparers, inspectors) have specific training or certifications to ensure their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications that will comply with General Permit requirements.

**Linear Underground/Overhead Projects:** This General Permit includes requirements for all Linear Underground/Overhead Projects (LUPs).

Certain actions during construction may also need to conform to a General Permit (Water Quality Order No. 5-00-175) that requires that a permit be acquired for dewatering and other low threat discharges to surface waters, provided that they do not contain significant quantities of pollutants and either (1) are four months or less in duration, or (2) the average dry weather discharge does not exceed 0.25 million gallons per day (mgd). Examples of activities that may require the acquisition of such a permit include well development water, construction dewatering, pump/well testing, pipeline/tank pressure testing, pipeline/tank flushing or dewatering, condensate discharges, water supply system discharges, and other miscellaneous

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dewatering/low threat discharges. However, the actions applicable to site development may already be covered under the CGP, and therefore a separate permit may not be required.

#### Total Maximum Daily Loads

Under CWA Section 303(d) and California's Porter-Cologne Water Quality Control Act, the State of California is required to establish beneficial uses of state waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes the total maximum daily load process to assist in guiding the application of state water quality standards, requiring the states to identify waters whose water quality is impaired (affected by the presence of pollutants or contaminants) and to establish a TMDL or the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects on the beneficial use identified. TMDLs serve as a regulatory mechanism to identify and implement additional controls on both point and nonpoint source discharges in water bodies that are impaired from one or more pollutants and are not expected to be restored through normal point source controls. In California, the Regional Water Quality Control Boards generally prepare TMDLs for the impaired water bodies under their jurisdiction. Implementation of the TMDL is accomplished through amendments to the RWQCB Basin Plans, which are reviewed and if necessary, modified or amended triennially.

#### **Federal Emergency Management Agency**

##### National Flood Insurance Program

The City of Biggs is a participant in the National Flood Insurance Program (NFIP), a federal program administered by the Federal Emergency Management Agency. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted, as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year.

#### **Executive Order 11988**

Executive Order 11988 (Floodplain Management) is an order given by President Carter in 1977 to avoid the adverse impacts associated with the occupancy and modification of floodplains. The order addresses floodplain issues related to public safety, conservation, and economics. It generally requires federal agencies constructing, permitting, or funding a project in a floodplain to:

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

STATE

#### **Porter-Cologne Water Quality Act**

The Porter-Cologne Water Quality Act governs the coordination and control of water quality in the state and includes provisions relating to nonpoint source pollution. The California Coastal



Commission, pursuant to the Coastal Act, specifies duties regarding the federally approved California Coastal Management Program. This law required that the State Water Resources Control Board, along with the California Coastal Commission, regional boards, and other appropriate state agencies and advisory groups, prepare a detailed program to implement the state's nonpoint source management plan on or before February 1, 2001. The law also requires that the state board, in consultation with the California Coastal Commission and other agencies, submit copies of prescribed state and regional board reports containing information related to nonpoint source pollution, on or before August 1 of each year.

### **Senate Bill 5**

Senate Bill (SB) 5 was signed into law in October 2007 and required the State to develop a plan for flood protection by 2012. The bill prohibits counties and cities located in the Sacramento-San Joaquin Valley watershed from entering into development agreements or approving permits, entitlements, or subdivision maps in a flood zone unless there is an appropriate level of flood protection or the local flood management agency has determined that adequate progress toward that flood protection has been made. Also, the bill requires 200-year flood protection for proposed projects in urban and urbanizing areas (defined as 10,000 residents or more). The bill also authorizes cities and counties to develop and adopt local plans of flood protection that include a strategy to meet the 200-year level of flood protection, an emergency response plan, and a long-term funding strategy for improvement, maintenance, and operation of flood protection facilities.

In order to implement this bill, the Department of Water Resources was required to provide cities and counties within the Central Valley watershed with preliminary 100- and 200-year floodplain maps by July 1, 2008. The DWR has initiated several projects that will provide updated information about flood hazards in the watershed over the next two to four years (DWR 2012). Based on a review of this mapping, there are no land areas in the Biggs Planning Area within the 200-year floodplain.

### **Assembly Bill 162**

Assembly Bill (AB) 162 was signed into law in October 2007 and requires cities and counties in California to incorporate flood hazards in their general plans in order to minimize risk in flood-prone areas. The bill further requires that each city and county submit its draft safety element, or draft amendment to the safety element of its general plan, to the Central Valley Flood Protection Board (formerly the State Reclamation Board) for review and comment at least 90 days prior to adoption.

### **Department of Water Resources**

The Department of Water Resources' major responsibilities include preparing and updating the California Water Plan to guide development and management of the state's water resources, planning, designing, constructing, operating, and maintaining the State Water Resources Development System, protecting and restoring the Sacramento-San Joaquin Delta, regulating dams, providing flood protection, assisting in emergency management to safeguard life and property, educating the public, and serving local water needs by providing technical assistance. In addition, the DWR cooperates with local agencies on water resources investigations, supports watershed and river restoration programs, encourages water conservation, explores conjunctive use of groundwater and surface water, facilitates voluntary water transfers, and, when needed, operates a state drought water bank.

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### **State Water Resources Control Board**

The State Water Resources Control Board (SWRCB) is composed of nine Regional Water Quality Control Boards (RWQCB) that are responsible for preserving California's water quality. The Regional Water Quality Control Boards issue waste discharge permits, take enforcement action against violators, and monitor water quality. The SWRCB and the Regional Water Quality Control Boards jointly administer most of the federal clean water laws. However, the SWRCB retains oversight responsibility and, like the EPA, may intervene if it determines the proposed project is not in compliance with SWRCB regulations.

On December 8, 1999, the EPA promulgated the Phase II regulations covering small MS4s. The State Water Resources Control Board administers the Phase II regulations issued by the EPA in California. The federal regulations allow two permitting options for stormwater discharge: individual permits and general permits. The SWRCB has elected to adopt a statewide General Permit for small MS4s. This option allows the small MS4 to sign onto the General Permit in lieu of developing a fully individualized program and allows the State to efficiently regulate numerous stormwater dischargers under a single permit.

### **Central Valley Regional Water Quality Control Board**

The Central Valley Regional Water Quality Control Board (CVRWQCB) is responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters. In the Biggs area, the CVRWQCB is responsible for protecting surface water and groundwater from both point and nonpoint sources of pollution.

The Central Valley Regional Water Quality Control Plan (Basin Plan) covers all the drainage basin areas for the Sacramento and San Joaquin rivers. This plan describes the beneficial uses to be protected in these waterways, water quality objectives to protect those uses, and implementation measures to make sure those objectives are achieved.

#### **LOCAL**

### **Biggs Municipal Code**

The Biggs Municipal Code establishes design criteria and improvement standards for storm drain management and facilities (Title 9: Street Sidewalks and Public Spaces) and regulates the alteration of watercourses (Title 12: Environment).

### **City of Biggs Master Storm Drainage Plan**

The City of Biggs utilizes the 1998 City of Biggs Master Storm Drainage Plan completed by California Engineering Company to evaluate, plan, and manage storm drain facilities, infrastructure, and services in the city. The 1998 Master Storm Drainage Plan was prepared to assist the City in assessing its existing storm drainage system, in evaluating necessary improvements, and to assist the City in understanding the storm drainage environment in and around the city. The 1998 plan is the most comprehensive document detailing storm drainage in the city. The program comprises various activities designed to reduce stormwater pollution to the maximum extent practicable (MEP) and eliminate prohibited non-stormwater discharges in accordance with federal and state laws and regulations.

### 3.8.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

Pursuant to California Environmental Quality Act (CEQA) Guidelines Appendix G, a hydrologic or water quality impact of the proposed General Plan would be considered significant if it would result in any of the following actions:

- 1) Violate any water quality standards or waste discharge requirements.
- 2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- 3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- 4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- 5) 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.
- 6) Otherwise substantially degrade water quality.
- 7) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- 8) Place within a 100-year flood hazard area structures that would impede or redirect flood flows.
- 9) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a failure of a levee or dam.
- 10) Inundation by seiche, tsunami, or mudflow.

The Planning Area is not located in an area that would be affected by a seiche, tsunami, or mudflow. Therefore, the project would result in no issues regarding such impacts, which will not be discussed further in this Draft EIR. In addition, as stated previously, the city is located outside of the 100-year floodplain and is not classified as being within a flood hazard area (FEMA 2012). Therefore, such impacts will not be discussed further in this Draft EIR.

The reader is referred to Section 3.12, Public Services and Utilities, regarding analysis of potential groundwater/water supply impacts (depletion of groundwater resources, recharge impacts, and interference with groundwater recharge) of the proposed General Plan.

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#### METHODOLOGY

The hydrology and flood potential analysis is based on a review of published information, reports, and plans regarding regional hydrology, climate, geology, water quality, and regulations.

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-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.*
  
- 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.*
  
- Action PFS-4.1.3    *(Strom Drainage Infrastructure) – As funding allows, continue to install storm drainage infrastructure in underserved or deficient areas.*
  
- 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.
- 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.
- Policy PFS-3.2 (Wastewater Treatment) – Require all new development to connect to the City wastewater system. Septic tank systems will not be allowed except for special cases defined by City ordinance.

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that address hydrology and water quality and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

#### Surface Water Quality Impacts (Standards of Significance 1, 3, 5, and 6)

**Impact 3.8.1** Implementation of the proposed General Plan could result in a violation of water quality standards; substantial alteration of the existing drainage pattern, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, and/or environmental harm; polluted stormwater runoff; or otherwise degrade water quality. However, implementation of proposed General Plan policy provisions would ensure that water quality impacts are addressed. This impact is considered **less than significant**.

Direct and indirect surface water quality impacts could occur from general land use activities resulting from urban development:

- **Construction:** Grading and vegetation removal activities would result in the exposure of raw soil materials to the natural elements (wind, rain, etc.). During precipitation events, soil erosion can impact the surface runoff by increasing the amount of silt and debris carried by runoff. In addition, 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 city drainages. Improper handling, storage, or disposal of fuels

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and hazardous materials or improper cleaning of machinery close to area waterways could cause water quality degradation.

- **Urban Development:** Urban development often involves the conventional maintenance of yards, for example, using fertilizers, herbicides, pesticides, fungicides, and other chemicals in and around the home that can enter stormwater runoff. In addition, motor vehicle operation and maintenance introduces oil, antifreeze, and other petroleum-based products, heavy metals such as copper from brake linings, and surfactants from cleaners and waxes into residential runoff. Pet and animal waste from yards, trails, and stream corridors can enter stormwater runoff or flow directly into stream channels.
- **Recreation:** Parks and golf courses often practice conventional landscaping methods and maintain recreation areas using fertilizers, herbicides, pesticides, and algacides, which can enter stormwater runoff or flow directly into stream channels.

#### Construction Surface Water Quality Impacts

Construction associated with subsequent development under the proposed General Plan would consist of grading and vegetation removal activities that 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 Planning 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.

The State Water Resources Control Board is responsible for implementing elements of the Clean Water Act and has issued a statewide General Permit (Water Quality Order 99-08-DWQ) for construction activities within the state. The State General Construction Activity Storm Water Permit is implemented and enforced by Regional Water Quality Control Boards and applies to construction activities that disturb 1 acre or more. This permit also requires the preparation and implementation of a stormwater pollution prevention plan that identifies best management practices (BMPs) to minimize pollutants from discharging from construction sites to the maximum extent practicable. BMPs are effective, practical, structural, or nonstructural methods that prevent or reduce the movement of sediment, nutrients, pesticides, and other pollutants from the land to surface water or groundwater, or that otherwise protect water quality from potential adverse effects of development activities. The adoption and use of BMPs provide the mechanism for reducing the volume of surface runoff originating from an area of development disturbance and running directly into surface water. Standard BMPs are available in the California Stormwater Quality Association handbooks (2003).

In addition, Policy CR-5.3 requires the use of design techniques and best management practices to reduce pollutants close to their source. Associated Action CR-5.3.2 proposes to establish standards and fee programs to require and/or incentivize methods to manage and filter stormwater, such as reduced pavement, permeable pavement, and retention and filtration through vegetation. Similarly, Action PFS-4.1.1 proposes the adoption of best management practices for the discharge of stormwater that address water quality and water standards.

### Operational Surface Water Quality Impacts

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 within the city with implementation of the proposed General Plan 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.

The proposed 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 best management practices to reduce pollutants close to their source, and associated Action CR 5.3.1 proposes to revise improvement standards as necessary to encourage use of natural drainage systems and low impact development principles in order to improve water quality. 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 best management practices, as appropriate. 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 State General Construction Activity Storm Water Permit requirements (where applicable) and the proposed General Plan policy and actions described above would reduce surface water quality impacts associated with implementation of the proposed General Plan to a **less than significant** level. This impact is avoided through the use of effective construction-phase, source control, and treatment control BMPs that include site preparation, runoff control, sediment retention, and other similar features. The effectiveness of BMPs has been recognized in the California Stormwater Quality Association handbooks (2003).

### **Groundwater Quality Impacts (Standards of Significance 1 and 6)**

**Impact 3.8.2** Implementation of the proposed General Plan could result in the degradation of groundwater quality and may violate water quality standards and/or degrade water quality resulting from future land uses. However, implementation of proposed General Plan policy provisions would ensure that groundwater quality is protected. This impact is considered **less than significant**.

As discussed above in Impact 3.8.1, development of the Biggs Planning Area under the proposed General Plan could generate runoff containing oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), household pollutants, nutrients (i.e., fertilizers), and other chemicals from landscaped areas. Groundwater in the Planning Area is considered most vulnerable to the following activities associated with contaminants detected in the water supply: sewer collection systems, septic systems, improperly

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abandoned wells, parks, agricultural drainage, fertilizer and pesticide application, and grazing. The groundwater in the Biggs area is vulnerable to contamination from urban activity in this area, including construction, grading, use of equipment and automobiles, sewer leakage, and other potential contaminants. These pollutants could potentially contaminate groundwater conditions (if not properly treated with water quality controls). However, as mentioned above in the Regulatory Framework subsection, the NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. In addition, proposed General Plan Policy PFS-4.4 seeks to avoid impacts to groundwater through protecting the quality of water runoff that enters receiving surface waters and drainage facilities, as these features are the primary areas of groundwater recharge. Policy CR-5.3 requires the use of design techniques and best management practices such as the use of geotextiles, plastic covers, silt fences, and erosion control blankets, as well as construction site entrance/outlet tire washing in order to reduce pollutants close to their source, and Action PFS-4.4.1 would require development to prepare Storm Water Management Plans (SWMP) to address stormwater discharge quality issues.

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. In addition, proposed Policy PFS-1.2 would seek to ensure the development of quality infrastructure, including adequate drainage facilities, to meet community needs at the time they are needed. The California Stormwater Quality Association has prepared technical studies regarding water quality control feature impacts on groundwater in the Stormwater Best Management Practice Handbooks. These studies have identified that water quality control features (when inspected and monitored properly) such as infiltration basins have been successful in controlling water quality and avoiding groundwater quality impacts. (Metals and organic compounds associated with stormwater are typically captured or trapped within the first few feet of the soil of the basins.)

Compliance with the proposed General Plan policies and actions described above, as well as compliance with Chapter 9.05 of the Biggs Municipal Code, would reduce groundwater quality impacts to a **less than significant** level.

#### **Drainage Impacts (Standard of Significance 4)**

**Impact 3.8.3** Implementation of the proposed General Plan could result in a substantial alteration of an existing drainage pattern, including through the alteration of the course of a stream or river, that may substantially increase the rate of amount of surface runoff in a manner which would result in flooding on- or off-site or could result in the creation or contribution of runoff water which would exceed the capacity of the existing or planned stormwater drainage system. However, implementation of proposed General Plan policy provisions and continued implementation of City standards would ensure that drainage is adequately addressed. This impact is considered **less than significant**.

Stormwater runoff has, at times, created localized flooding problems in the City of Biggs. 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 for flood control purposes. While RD 833 owns and operates discharge lands within 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.



General Plan Action PFS-4.3.1 requires the City to 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 would coordinate efforts for developing short- and long-term flood protection strategies in consultation with Reclamation District 833. Until such issues are resolved, Policy PFS-4.2 restricts development in areas where significant drainage and flooding problems are known to exist, such as along Hamilton Slough and Lateral K, until adequate drainage and/or flood control facilities can be provided.

The City of Biggs has also adopted a Master Storm Drainage Plan. The 1998 Master Storm Drainage Plan was prepared to assist the City in assessing its existing storm drainage system, in evaluating necessary improvements, and to assist the City in understanding the storm drainage environment in and around the city. Major storm drainage system improvements occurring since the adoption of the Storm Water Master Plan in 1998 include:

- Installation of an additional stormwater lift station on Third Street to remove localized roadway floodwater.
- Installation of over 1 mile of curb and gutter in areas not previously having curb or gutter improvements.
- Connection of an existing storm drainage outfall pipe on E Street to RD 833 Lateral K allowing localized stormwater on the west side of the city (Area 3) to exit the city.
- Installation of \$1.5 million worth of storm drainage infrastructure on the west side of the city (Area 3) consisting of a new stormwater lift station at Hamilton Slough, installation of curb and gutter, and installation of underground storm drainage pipe and street-level drainage inlets allowing for the removal of stormwater from the city.

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 or drainage system. Also, proposed Policy PFS-1.2 would seek to ensure the development of quality infrastructure, including adequate drainage facilities, to meet community needs at the time that they are needed. Policy PFS-1.3 would sometimes require the construction of oversized or off-site facilities to provide capacity for future development.

Implementation of proposed General Plan policies and actions as well as continued adherence to the objectives of the Master Storm Drainage Plan and Chapter 9.05 of the Biggs Municipal Code would reduce this impact to **less than significant** by ensuring that adequate drainage facilities are provided.

### **Dam Failure Inundation (Standard of Significance 9)**

**Impact 3.8.4** The Biggs Planning Area is located within the dam failure inundation areas for Oroville Dam. Failure of this dam could result in inundation of portions of the project site. This impact is **less than significant**.

While the project site is not located within a 100-year floodplain, as previously described, the project site is located within the inundation area for the impoundment held behind Oroville Dam). No hazardous conditions exist at this dam. Oroville Dam is 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

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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**.

### 3.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

The cumulative setting consists of the Sacramento River Hydrologic Region. Additionally, the cumulative setting includes anticipated development described in **Table 3.0-2** that could contribute to cumulative water resource impacts.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Water Quality Impacts

**Impact 3.8.5** Land uses and growth under the proposed General Plan, in combination with current land uses in the surrounding region, could introduce substantial grading, site preparation, and an increase in urbanized development. Increased development would contribute to cumulative water quality impacts that are considered **less than cumulatively considerable**.

As described above, development under the proposed General Plan could contribute to water quality degradation from construction, operation, and alteration of drainage patterns. This could add to other potential development activities in the region. However, the proposed General Plan includes several policies and actions that address water quality. These policies and actions are described under Impacts 3.8.1 and 3.8.2. Implementation of the proposed General Plan policies and actions, as well as compliance with provisions of the City's Municipal Code, would ensure that the proposed General Plan's contribution to cumulative water quality impacts would be mitigated. Thus this impact would be **less than cumulatively considerable**.

##### Cumulative Drainage Impacts

**Impact 3.8.6** Implementation of the proposed General Plan could increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions downstream. This is considered a **less than cumulatively considerable** impact.

Urban development under the proposed General Plan would result in an increase in impervious surfaces in the Biggs Planning Area that would contribute (in combination with cumulative development in the watershed) to increases in flood conditions for area waterways. However, the proposed General Plan contains policies and actions that adequately address drainage issues at the Planning Area level.

The City of Biggs adopted a Master Storm Drainage Plan in 1998 that identifies the public storm drain improvements necessary to serve the city. The plan identifies specific projects to improve existing storm drainage and to provide drainage facilities for future development, many of which have already been implemented by the City. Proposed General Plan Policy PFS-4.1 ensures regular updates to the City's Storm Water Master Plan to address current and future storm drainage needs as the city grows. 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 or drainage system. Proposed Action PFS-4.1.3 seeks to continue to install storm drainage infrastructure in underserved or deficient areas as funding allows.

The proposed General Plan's contribution to the cumulative condition of drainage-related impacts in the area, as well as its potential incremental contribution to cumulative impacts, would be reduced to **less than cumulatively considerable**.

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#### REFERENCES

- Biggs, City of. 1998. *City of Biggs Master Storm Drainage Plan*.
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## **3.9 LAND USE**



This section describes existing land uses, proposed land use designations, and future potential development patterns, and evaluates land use impacts resulting from implementation of the proposed General Plan. Key issues addressed in this section include conflicts with land use plans/policies and incompatibilities between land uses. Refer to Section 3.2, Agricultural Resources, for discussions regarding agricultural land use.

### 3.9.1 EXISTING SETTING

#### LOCAL SETTING

The Planning Area includes the city boundaries, the City's Sphere of Influence (SOI), and the City's Planning Area. Definitions of these specialized terms used to describe geographic areas are included below.

- **City limits** are the current legal boundaries of the City of Biggs.
- **Sphere of Influence (SOI)** is the incorporated city limits plus the area intended for eventual annexation to the City of Biggs, to be developed at urban densities. It is typical to assign General Plan land use designations and rezoning districts to those lands outside the city limits but inside the Sphere of Influence.
- **Planning Area** is approximately 6.8 square miles of land in the south-central portion of Butte County. The Planning Area includes all land within the city limits, land within the City's designated SOI, and other land in unincorporated Butte County outside of these boundaries which, in the planning agency's judgment, relates to the City's planning efforts.

The existing City of Biggs 1998 General Plan and the Biggs Municipal Code govern the land uses in the city, while the Butte County General Plan and Zoning Ordinance apply to areas outside the city limits.

#### EXISTING LAND USE WITHIN AND ADJACENT TO THE CITY

By far the largest land use in Biggs is residential. Most of the housing consists of detached single-family dwellings. Of the 615 total dwelling units, only 35 (6 percent) are multi-family housing. There are no mobile home parks in the city, but the Department of Finance estimates that 17 mobile homes exist in Biggs. More details on the condition of the local housing stock are provided in Section 3.11, Population and Housing, of this DEIR.

Public uses include schools, utilities, and parks. Family Park is approximately 1 acre in size and is located just east of Biggs's downtown area. Rio Bonito Park is a 7.2-acre shared facility with the Biggs Unified School District located adjacent on the Biggs High School campus. Biggs High School and Elementary School occupy adjacent sites in northeastern Biggs, totaling approximately 40 acres. The City wastewater treatment plant occupies about 9 acres west of Biggs Gridley Road. Drainage facilities, including channels and detention basins, are also considered public land uses. The City of Biggs Public Works building is located on the eastern end of downtown, while the Corps Yard is located in the southwest corner of the city.

Public service facilities for city residents are concentrated in the downtown area, including City Hall, the Post Office, the Police Department office, the Fire Department, and the Biggs Branch of the Butte County Library.

## 3.9 LAND USE

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### 3.9.2 REGULATORY FRAMEWORK

#### LOCAL

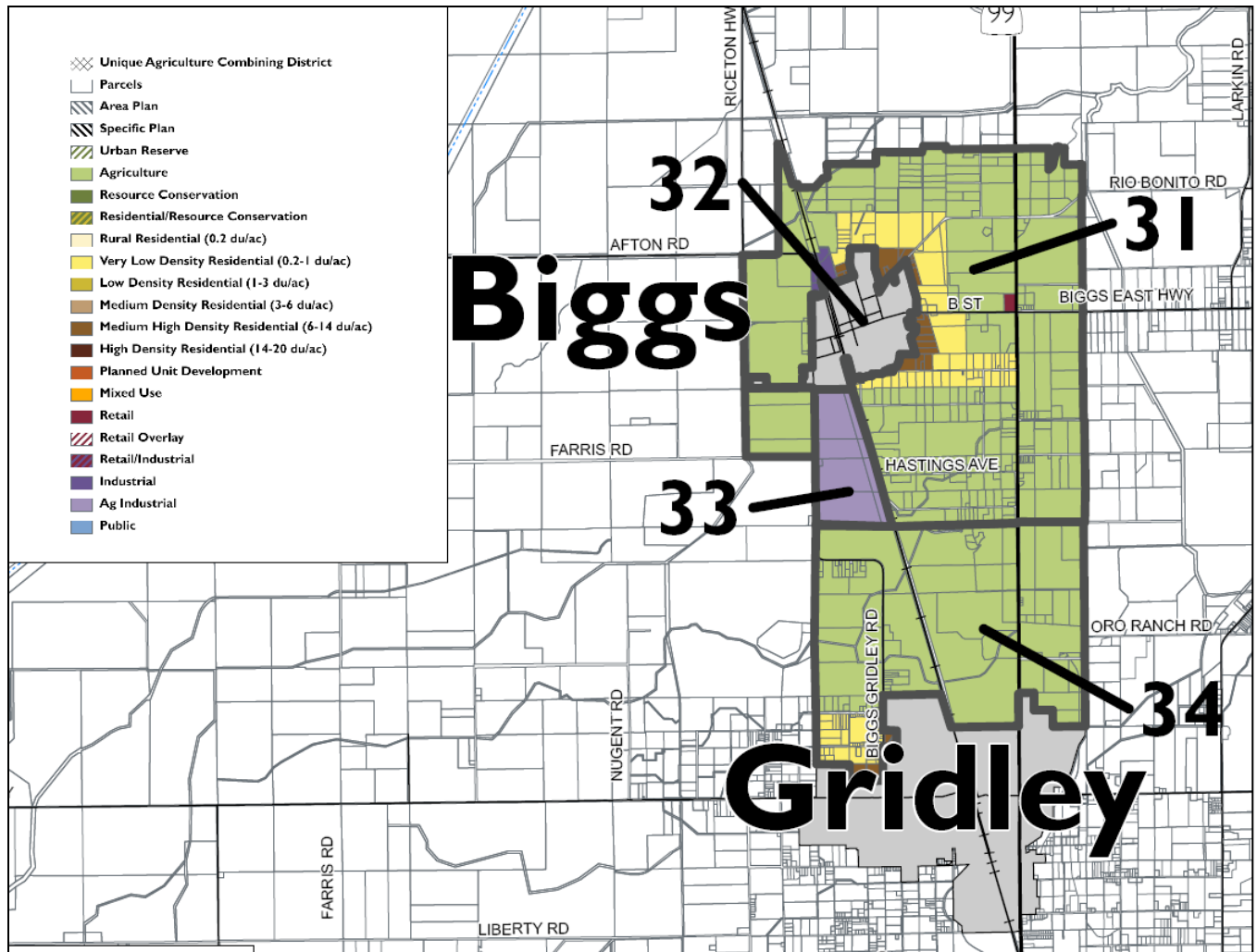
#### **Butte County General Plan 2030**

The Butte County General Plan 2030 includes land use planning of some areas that are also addressed in the City of Biggs's proposed General Plan. As shown on **Figure 3.9-1**, the Butte County 2030 General Plan designates a majority of the land to the west of Biggs as Agriculture. The land to the south of Biggs has also been designated as Agriculture, but there are also lands designated Agriculture Services by Butte County. To the north and east of Biggs, the majority of the land is designated by Butte County as Very Low Density Residential and Agriculture.

While the two general plans (Butte County and City of Biggs) have overlapping Planning Area boundaries, Butte County will have formal authority and jurisdiction over the land outside of the city boundaries unless a formal agreement is otherwise established.



FIGURE 3.9-1  
 BUTTE COUNTY GENERAL PLAN 2030 LAND USE DESIGNATIONS  
 WITHIN THE BIGGS PLANNING AREA



## 3.9 LAND USE

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### **Butte County Association of Governments**

The Butte County Association of Governments (BCAG) is an association of all the local governments within Butte County. Its members include Biggs, Chico, Gridley, Oroville, Paradise, and Butte County. BCAG's primary responsibility is to prepare all state and federally required transportation plans and programs that are necessary for securing transportation funding for highways, streets and roads, transit, bike and pedestrian facilities, and other transportation modes. BCAG is also a forum for the study/resolution of regional transportation issues and ensures that there is public participation in the transportation planning and decision-making process. BCAG also adopts the Regional Housing Needs Plan allocating affordable housing responsibilities. Additionally, BCAG is leading the habitat conservation plan process described in more detail below.

### **Butte Local Agency Formation Commission (Butte LAFCo)**

Butte LAFCo promotes efficient governmental organization and service delivery while protecting agricultural and open space lands, approves changes to local governmental boundaries (incorporations, annexations, etc.), and prepares spheres of influence designating the logical physical boundary and service areas for each city and special district. Under the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000, et seq.), Butte LAFCo is the agency responsible for coordinating, directing, and overseeing logical and timely changes to local governmental boundaries, incorporation of cities, reorganizations, and the formation of special districts. Under state law, Butte LAFCo is charged with ensuring orderly growth by the annexation of land within an adopted SOI; promoting logical and efficient public services for cities and special districts; streamlining governmental structure; and discouraging urban sprawl through the premature conversion of prime agricultural and open space lands to urban uses.

### **Butte Regional Conservation Plan and Natural Community Conservation Plan**

The Butte Regional Conservation Plan/Natural Community Conservation Plan is being coordinated by the Butte County Association of Governments (BCAG) on behalf of Biggs, Chico, Gridley, Oroville, and the County of Butte. It is a voluntary plan that would provide comprehensive species, wetlands, and ecosystem conservation and contribute to the recovery of endangered species within the plan area while also providing a more streamlined process for environmental permitting. The reader is referred to Section 3.4, Biological Resources, for additional information on the plan.

### **City of Biggs**

#### Biggs Municipal Code

The City of Biggs Zoning Regulations (Title 14, Biggs Municipal Code) implement the General Plan as it pertains to parcel-specific standards for development. All development must comply with the zoning regulations. The City's Municipal Code applies to the incorporated area of the city. By state law, the Municipal Code must be consistent with the adopted General Plan. The purpose of the code is to promote and protect the public health, safety, and general welfare through a Zoning Map and regulations that provide for:

- The classification of areas of the city into several zoning districts.

- The protection of the established character of the city and orderly development by regulating the uses of land, and the location, size, and character of structures or improvements erected or placed on the land, including alterations or additions to existing structures or improvements.
- The implementation of the policies and goals in the Biggs General Plan to achieve the arrangement of uses described in that plan that foster convenient, compatible, and workable relationships among these land uses.
- The promotion of economic stability of existing land uses consistent with the economic development policies of the General Plan.
- The preservation and enhancement of environmental resources and sensitive natural habitats, consistent with the resource management policies of the General Plan.
- The fostering of development patterns that promote energy conservation and efficient land use, and offer alternatives to automobile use by establishing densities and intensities that provide transit feasibility, and thereby also provide air quality benefits.

### 3.9.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

Based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, land use impacts are considered to be significant if the following could result from the implementation of the proposed General Plan:

- 1) Physically divide an established community.
- 2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- 3) Conflict with any applicable habitat conservation plan or natural community conservation plan.

#### METHODOLOGY

Evaluation of potential land use impacts within Biggs resulting from implementation of the proposed General Plan was based on a review of planning documents pertaining to the City of Biggs, including the existing 1998 City of Biggs General Plan and the City of Biggs Municipal Code; a field review of the city and surrounding areas; a review of planning documents pertaining to lands adjacent to the proposed project, including the Butte County General Plan 2030; and consultation with appropriate agencies.

The analysis herein is based on buildout conditions for the City of Biggs as provided in Section 3.0, Introduction to the Environmental Analysis. This analysis does not assess impacts associated with the phasing of projects or interim improvements.

### 3.9 LAND USE

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The focus of this land use analysis is on land use impacts that would result from the General Plan policy document and Land Use Diagram. Specific impacts and issues associated with population and housing, hazards, geology and soils, hydrology, aesthetics, recreation, cultural resources, biological resources, and public services and utilities are addressed in each technical section, and the reader is referred to other EIR sections for detailed analyses of other relevant environmental effects as a result of plan development.

The following proposed General Plan policies and actions address impacts to land use compatibility and land use consistency:

- Policy LU-1.1 (Land Use Implementation) – Ensure that individual development projects conform to the overall plan for the community and that consideration is given to the configuration of adjacent areas to be developed in the future.*
- Action LU-1.1.1 (Land Use Consistency) – Adopt guidelines providing direction for the processing and consideration of amendments to the City’s adopted Land Use Diagram.*
- Action LU-1.1.2 (Development Code Update) – Following the adoption of the General Plan, undertake a comprehensive update to the City Code to coordinate General Plan and Zoning requirements.*
- Action LU-1.1.3 (Zoning Implementation Program) – Following the adoption of the General Plan and upon completion of the update of the City Code, revise zoning designations for specific parcels as necessary to achieve consistency between the General Plan and zoning designations within the City.*
- Policy LU-1.2 (Design Considerations) – Ensure that individual development projects conform to the community design vision of the General Plan and enhance and reinforce the positive attributes of the City.*
- Action LU-1.2.1 (Design Review) – Following the adoption of the General Plan, adopt a formal Design Review process including design standards and guidelines.*
- Action LU-1.2.2 (Design Review-Interim Conditions) – Prior to the adoption of formal Design Review program, apply the Design Guidelines presented within the Community Enhancement Element when reviewing development projects.*
- Policy LU-1.3 (Small Town Character) – Require new development to promote the small town character of Biggs through the use of site and building design elements.*
- Policy LU-1.4 (High-Quality Development) – Promote high-quality, efficient and cohesive land utilization that minimizes negative impacts and environmental hazards on adjacent neighborhoods and infrastructure and which preserves existing neighborhoods from encroachment by incompatible land uses.*

- Action LU-1.4.1 *(Disclosure of Project Impacts) – Incorporate enhanced notification and public awareness requirements into the Zoning Ordinance to ensure that residents and land owners are aware of potential impacts to property as a result of new development.*
- Action LU-1.4.2 *(Mitigation of Environmental Hazards) – Actively work with land owners and project proponents to seek ways to minimize or mitigate project related environmental hazards.*
- 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.*
- Policy LU-4.1 *(Project Design) – New development shall incorporate planning and design elements that enhance the community character and integrate new development with existing developed areas of the City.*
- Action LU-5.2.1 *(Working Relationships) – Establish and maintain open working relationships with BCAG, Butte County and the City of Gridley to facilitate a coordinated approach to land use planning and environmental policy that affect each agency.*
- Policy LU-7.1 *(Compact Growth) – Promote compact city growth and phased extension of urban services to discourage sprawl and encourage development that improves agriculture and important public places.*
- Policy CR-2.1 *(Land Use Compatibility) – Direct urban development to vacant lands within the city or to undeveloped land directly adjacent to urban development.*
- 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 the City of Biggs and West Biggs-Gridley Road south of the City.*
- 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-1.4 *Ensure that new development is compatible with existing development through the integration of site design elements, building attributes, and/or community design features and patterns.*
- Action CE-1.4.1 *Incorporate building and development compatibility guidelines into the Design Review program.*
- Policy CE-2.4 *(Building Scale) – Ensure appropriate transitions between residential and nonresidential building scales and types.*

### 3.9 LAND USE

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- Policy CE-3.1 (Urban Edges) – Maintain a clear distinction between urban development and surrounding rural, agricultural, and open space lands.*
- Policy CR-3.2 (Butte HCP/NCCP) – Actively participate in and support regional conservation planning efforts such as the Butte Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) sponsored by the Butte County Association of Governments (BCAG) to protect habitats and species and streamline permitting requirements and timelines.*
- Policy CE-3.3 Utilize natural and physical buffering techniques as necessary and appropriate to minimize land use compatibility issues.*
- Action CE-3.3.1 Discourage the use of walls and physical barriers as a primary means of buffering unless necessary to address other environmental or site planning issues.*
- 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.*

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant land use impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that address land use and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

#### **Physically Divide an Established Community (Standard of Significance 1)**

**Impact 3.9.1** Implementation of the proposed General Plan would not result in the division of an existing community nor would it result in substantial land use compatibility issues. **No impact** would occur.

Division of an established community commonly occurs as a result of development and construction of physical features that constitute a barrier to easy and frequent travel between two or more constituent parts of a community. For example, a large freeway structure with few crossings could effectively split a community. Likewise, geographic features could similarly affect the community, such as the development of a large residential project on the opposite side of a river from the existing community.

No aspect of the proposed General Plan would divide the city. One of the objectives of the proposed General Plan is to balance growth and conservation by establishing urban growth limits and managing where and how growth and conservation would occur. For example, Policy LU-7.1 seeks to maintain compact city growth and the phased extension of urban services to discourage sprawl. Orderly development contiguous to existing developed areas that can be

efficiently served by the extension of infrastructure and municipal services in a fiscally responsible manner is a priority for Biggs. This objective is vital to addressing future growth as future expansion of the boundaries of the city is constrained by the Agriculture Protection Line (Action CR-2.2.5 proposes an Agricultural Protection Line that 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). Furthermore, Policy CE-1.1 seeks to 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.

Several of the proposed General Plan policies and actions would improve the connectivity and compatibility of existing and future residential areas of the city through development design, buffering, improved access, and establishment of desired development patterns. For example, proposed Policy CR-1.1 seeks to design Biggs to encourage walking, bicycling, and the use of transit, and associated Action CR-1.1.1 is intended to utilize mixed land uses and walkable neighborhoods to allow residents to meet daily needs on foot. Circulation Element Policy CIRC-4.2 requires that new development projects provide connections and facilities for bicycles, and Policy CIRC-4.3 proposes 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.

As previously mentioned, no aspect of the proposed General Plan would divide the city. In addition, the General Plan includes provisions that directly address land use compatibility and encroachment of new development on existing neighborhoods and land uses. Thus, the proposed General Plan would result in **no impact** regarding division of an established community or land use compatibility issues.

### **Consistency with Adopted Land Use Regulations (Standard of Significance 2)**

**Impact 3.9.2** Implementation of the proposed General Plan could lead to inconsistency with other land use plans and ordinances, including the City's land use plans and regulations that address physical effects to the environment. This is considered a **less than significant** impact given proposed policy provisions of the General Plan.

### Consistency with City Land Use Plans and Regulations

The proposed General Plan includes policies and actions that call for the update of the City's Municipal Code, Zoning Map, Design Guidelines, and other regulations to be consistent with the new General Plan and/or to address compatibility issues. For example, proposed General Plan Action LU-1.1.1 would require the adoption of guidelines providing direction for the processing and consideration of amendments to the City's adopted Land Use Diagram. In addition, Action LU-1.1.2 states that following the adoption of the General Plan, the City shall undertake a comprehensive update to the City Code to coordinate General Plan and zoning requirements. Action LU-1.1.3 states that following the adoption of the General Plan and upon completion of the update of the City Code, the City shall revise zoning designations for specific parcels as necessary to achieve consistency between the General Plan and zoning designations within the city. These changes are expected to improve the quality of development and better address compatibility issues and would not result in the loss of environmental protections or mitigation associated with existing policies and standards. This includes such provisions as ensuring that development is consistent with existing neighborhood character (see Policy CE-1.4, Action CE-1.4.1, Policy CE-2.4, Policy LU-1.4, and Policy LU-4.1).

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It is also important to note that one of the objectives of the proposed General Plan is for the City to balance growth and conservation by establishing urban growth limits and managing where and how growth and conservation would occur. Thus, inconsistency with City land use plans and regulations would be **less than significant**.

#### Consistency with Butte County Land Use Plans and Regulations

Butte County has several land use planning policy provisions such as County Municipal Code Chapter 26, Article IV, Flood Hazard Prevention, which adopted official maps to be used in determining those areas of special flood hazard, County Municipal Code Chapter 20, Article VI, Section 20-152, Street Lighting, which mandates lighting guidelines for functional and architecturally integrated lighting, and County Municipal Code Chapter 41A, Article II, Noise Regulations, which prohibits excessive, unnecessary or offensive noise levels. The proposed General Plan includes the provision to support existing Butte County policies and to coordinate with the County on land use planning in general (see Action LU-5.2.1). In addition, the general development pattern of the proposed General Plan for the Biggs Planning Area is generally consistent with the Butte County General Plan (see **Figure 3.9-1** above and **Figure 2.0-2** in Section 2.0). No conflicts that would trigger environmental effects with County policies and regulations are expected, and this impact would be **less than significant**.

#### **Conflict with Habitat Conservation Plan or Natural Community Conservation Plan (Standard of Significance 3)**

**Impact 3.9.3** The Butte Regional Conservation Plan/Natural Community Conservation Plan has not yet been adopted. However, the proposed General Plan would support the plan effort. Therefore, conflicts with an applicable habitat conservation plan or natural community conservation plan are considered to have **no impact**.

As described above, the Butte Regional Conservation Plan/Natural Community Conservation Plan is being coordinated by BCAG on behalf of the cities of Biggs, Chico, Gridley, and Oroville and the County of Butte. It is a voluntary plan that would provide comprehensive species, wetlands, and ecosystem conservation and contribute to the recovery of endangered species within the plan area while also providing a more streamlined process for environmental permitting. The proposed General Plan includes Policy CR-3.2 that calls for active participation in the Butte Regional Conservation Plan/Natural Community Conservation Plan.

The Land Use Element and Conservation and Recreation Element include policies that address conservation of natural habitats and the protection of wetlands and rare, threatened, and endangered species of both plants and animals. Policy CR-3.1 ensures that applicants for future development projects which 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. Proposed 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 impacts to special-status species and habitats.



The proposed General Plan policy provisions described above are included to preserve habitat in areas with significant environmental resources as identified in the Butte Regional Conservation Plan/Natural Community Conservation Plan. These actions would preserve and restore sensitive habitats and direct the City to participate in the regional conservation plan process. These actions would support the conservation plan. In addition, the City of Biggs would be subject to the plan as a participant. Therefore, conflicts with a habitat conservation plan or natural community conservation plan created by the implementation of the proposed General Plan would have **no impact**.

### 3.9.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

Land use impacts are typically isolated to a jurisdiction, except where land uses may interact or conflict with adjacent jurisdictions. The cumulative setting for land use includes existing, approved, proposed, and reasonably foreseeable development in the Biggs Planning Area and the region as described in Section 3.0, Introduction to the Environmental Analysis. This includes consideration of implementation of the Butte County General Plan.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Land Use Impacts

**Impact 3.9.4** Implementation of the proposed General Plan, in addition to existing, proposed, approved, and reasonably foreseeable development in the City of Biggs and Butte County, would contribute to cumulative land use impacts associated with the division of an established community or conflicts with land use plans and regulations that provide environmental protection. This would be a **less than cumulatively considerable** impact.

Under cumulative conditions, the proposed General Plan and subsequent development would not contribute to land use conflicts beyond those discussed in Impacts 3.9.1, 3.9.2, and 3.9.3. There would be no further contribution to the division of an established community or conflicts between planning documents and regulations. As identified under Impacts 3.9.1 through 3.9.3, proposed General Plan policies and actions provide for land use compatibility within the Biggs Planning Area and coordination with County land use planning as well as the Butte Regional Conservation Plan/Natural Community Conservation Plan. Thus, this impact is **less than cumulatively considerable**.

### 3.9 LAND USE

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Butte County. 2010. *Butte County General Plan 2030*.

## **3.10 NOISE**



This section describes terminology used to discuss noise and discusses and analyzes the ambient noise environment of the proposed City of Biggs General Plan Planning Area. Construction noise, traffic noise, operational noise, and other noise impacts associated with implementation of the proposed General Plan are analyzed.

### 3.10.1 EXISTING SETTING

#### TECHNICAL BACKGROUND

##### Acoustic Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound is mechanical energy transmitted in the form of a wave because of a disturbance or vibration. Sound levels are described in terms of both amplitude and frequency. Amplitude is defined as the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. 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). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

The frequency of a sound is defined as the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. For instance, the human ear is more sensitive to sound in the higher portion of this range than in the lower, and sound waves below 16 Hz or above 20,000 Hz cannot be heard at all. To approximate the sensitivity of the human ear to changes in frequency, environmental sound is usually measured in what is referred to as "A-weighted decibels" (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA (EPA 1971). Common community noise sources and associated noise levels, in dBA, are depicted in **Figure 3.10-1**.

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. Noise generated by mobile sources typically attenuates at a rate between 3.0 to 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources, such as highways, and hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source (EPA 1971).

##### Noise Descriptors

The intensity of environmental noise fluctuates over time, and several descriptors of time-averaged noise levels are used. The three most commonly used descriptors are  $L_{eq}$ ,  $L_{dn}$ , and CNEL. The energy-equivalent noise level,  $L_{eq}$ , is a measure of the average energy content (intensity) of noise over any given period. Many communities use 24-hour descriptors of noise levels to regulate noise. The day-night average noise level,  $L_{dn}$ , is the 24-hour average of the noise intensity, with a 10 dBA "penalty" added for nighttime noise (10:00 p.m. to 7:00 a.m.) to

### 3.10 NOISE

account for the greater sensitivity to noise during this period. CNEL, the community noise equivalent level, is similar to  $L_{dn}$  but adds an additional 5 dBA penalty for evening noise (7:00 p.m. to 10:00 p.m.). Another descriptor that is commonly discussed is the single-event noise exposure level (SENEL), also referred to as the sound exposure level (SEL). The SENEL/SEL describes a receiver's cumulative noise exposure from a single noise event, which is defined as an acoustical event of short duration (0.5 second), such as a backup beeper, the sound of an airplane traveling overhead, or a train whistle, and involves a change in sound pressure above a defined reference value (usually approximately 40 dBA). Noise analyses may also depend on measurements of  $L_{max}$ , the maximum instantaneous noise level during a specific period of time, and  $L_{min}$ , the minimum instantaneous noise level during a specific period. Common noise level descriptors are summarized in **Table 3.10-1**.

**TABLE 3.10-1  
COMMON ACOUSTICAL DESCRIPTORS**

Descriptor	Definition
Energy Equivalent Noise Level ( $L_{eq}$ )	The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.
Minimum Noise Level ( $L_{min}$ )	The minimum instantaneous noise level during a specific period of time.
Maximum Noise Level ( $L_{max}$ )	The maximum instantaneous noise level during a specific period of time.
Day-Night Average Level (DNL or $L_{dn}$ )	The 24-hour $L_{eq}$ with a 10 dBA "penalty" for noise events that occur during the noise-sensitive hours between 10:00 p.m. and 7:00 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours to account for increases sensitivity to noise during these hours.
Community Noise Equivalent Noise Level (CNEL)	The CNEL is similar to the $L_{dn}$ described above, but with an additional 5 dBA "penalty" added to noise events that occur between the hours of 7:00 p.m. to 10:00 p.m. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated $L_{dn}$ .
Single Event Noise Level (SEL)	The level of sound accumulated over a given time interval or event. Technically, the sound exposure level is the level of the time-integrated mean square A-weighted sound for a stated time interval or event, with a reference time of one second.
Percent Exceeded Noise Level ( $L_n$ )	The level exceeded for $n$ percent of the time. For instance, $L_{10}$ is the level exceeded for 10% of the time. The commonly used values of $n$ for the $n$ -percent exceeded level, $L_n$ , are 2, 10, 50, and 90.

#### 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. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
<u>Jet Fly-over at 300m (1000 ft)</u>	<b>110</b>	<u>Rock Band</u>
<u>Gas Lawn Mower at 1 m (3 ft)</u>	<b>100</b>	
<u>Diesel Truck at 15 m (50 ft), at 80 km (50 mph)</u>	<b>90</b>	<u>Food Blender at 1 m (3 ft)</u>
<u>Noisy Urban Area, Daytime</u>	<b>80</b>	<u>Garbage Disposal at 1 m (3 ft)</u>
<u>Gas Lawn Mower, 30 m (100 ft)</u>	<b>70</b>	<u>Vacuum Cleaner at 3 m (10 ft)</u>
<u>Commercial Area</u>		<u>Normal Speech at 1 m (3 ft)</u>
<u>Heavy Traffic at 90 m (300 ft)</u>	<b>60</b>	
<u>Quiet Urban Daytime</u>	<b>50</b>	<u>Large Business Office</u>
		<u>Dishwasher Next Room</u>
<u>Quiet Urban Nighttime</u>	<b>40</b>	<u>Theater, Large Conference Room (Background)</u>
<u>Quiet Suburban Nighttime</u>		<u>Library</u>
<u>Quiet Rural Nighttime</u>	<b>30</b>	<u>Bedroom at Night,</u>
		<u>Concert Hall (Background)</u>
	<b>20</b>	<u>Broadcast/Recording Studio</u>
	<b>10</b>	
<u>Lowest Threshold of Human Hearing</u>	<b>0</b>	<u>Lowest Threshold of Human Hearing</u>

**Figure 3.10-1**  
Common Noise Levels





Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted: the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis:

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

### **Noise Reduction**

Various methods can be employed to reduce noise levels, including enclosures, barriers, and sound-dampening materials. The methods employed are dependent on various factors, including source and receptor characteristics, as well as environmental conditions. With regard to typical community noise sources, noise-reduction techniques typically focus on the isolation or shielding of the noise source from nearby noise-sensitive receptors. The more common methods include the use of buffers, enclosures, and barriers. In general, these techniques contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers. Changes in design specifications and use of equipment noise control devices (e.g., mufflers and silencers) are also commonly employed to reduce stationary-source (i.e., non-transportation) noise levels. Additional noise control techniques commonly used for transportation noise sources include traffic control, such as prohibiting heavy-duty trucks and reducing speed limits along primarily affected corridors. However, an approximate 20 mile-per-hour reduction in speed would typically be required to achieve a noticeable decrease in noise levels. In some instances, noise-reducing pavements such as rubberized asphalt have also been used to reduce traffic noise.

### EXISTING CONDITIONS

#### **Ambient Noise Levels**

Several sources of noise that could affect local communities were identified within Biggs. These sources include noise generated from stationary activities (e.g., commercial and industrial uses), aircraft operations, and traffic on major roadways and highways. Short-term (10-minute) noise level measurements were conducted on September 19, 2008, and April 3, 2009 by Ambient Air Quality & Noise Consulting for the purpose of documenting and measuring the existing noise environment in various areas in and around Biggs. Due to the economic recession, Biggs

### 3.10 NOISE

experienced little to no developmental growth between 2007 and 2012. Therefore, the continued use of data collected in 2008 and 2009 to represent existing conditions is reasonable. Measurements were conducted using a Larson Davis model 820 sound level meter placed at a height of approximately 4.5 feet above the ground surface. Ambient noise measurement locations and corresponding measured values (i.e.,  $L_{eq}$  and  $L_{max}$ ) are summarized in **Table 3.10-2**. Based on the monitoring conducted, average-hourly daytime noise levels in the city generally range from the low 50s to the mid to upper 70s, dependent primarily on distance from major noise sources. Major stationary and transportation noise sources noted in Biggs are discussed separately below.

**TABLE 3.10-2  
AMBIENT NOISE LEVELS**

Location		Monitoring Period	Noise Level (dBA)	
			Leq	Lmax
1	Sunwest Milling Company 507 Bannock Street – Northern Boundary	9/19/2008, 12:10–12:20 p.m.	54.0	68.2
		4/3/2009, 9:30–9:40 a.m.	51.2	64.8
2	Sunwest Milling Company 507 Bannock Street – Eastern Boundary	9/19/2008, 12:40–12:50 p.m.	75.8	69.4
		4/3/2009, 9:50–10:00 a.m.	76.4	70.2
3	Sunwest Wild Rice 2875 8th Street – Eastern Boundary	9/19/2008, 13:00–13:10 p.m.	64.0	66.5
4	Red Top Rice 3200 8th Street – Western Boundary	9/19/2008, 13:35–13:45 p.m.	71.2	73.0
		4/3/2009, 11:00–11:10 a.m.	70.4	73.4
5	Red Top Rice 3200 8th Street – Eastern Boundary	4/3/2009, 10:25–10:40 a.m.	71.4	71.8
7	Corner of 7th and B Streets	9/19/2008, 14:35–14:45 p.m.	56.9	70.2
8	Corner of 4th and D Streets	9/19/2008, 15:00–15:15 p.m.	52.1	68.4

Source: Biggs 2010. Note: Ambient noise measurements were conducted using a Larson Davis model 820 sound level meter placed at a height of approximately 4.5 feet above the ground surface.

#### Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses that would result in noise exposure which could cause health-related risks to individuals. Places where quiet is essential are also considered noise-sensitive uses. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. School classrooms, places of assembly, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

#### Noise Sources

Noise issues associated with stationary and transportation sources in the Planning Area are discussed below.

## Transportation Sources

### Union Pacific Railroad

The Union Pacific Railroad (UPRR) tracks extend in a north-south direction, parallel to and just east of Eighth Street. The UPRR is used for both freight transport and Amtrak passenger service. Approximately 23 freight trains and two Amtrak passenger trains travel along this rail line on a daily basis. The number of freight trains traveling along this segment can vary from day to day, depending on demand, and there are currently no hourly limitations pertaining to freight train travel. Amtrak passenger trains typically run during the early morning hours.

Noise levels generated by trains can vary depending on numerous factors, including train speed, the number of engines used, track conditions (e.g., welded vs. jointed), the condition of train wheels, and shielding provided by intervening terrain. Additional factors, such as the sounding of the train horns as well as the operation of roadside signaling devices, can also contribute to overall noise levels. Depending on such factors, wayside noise levels associated with train passbys can reach levels of up to 110 dBA  $L_{max}$  at 50 feet from the track centerline (FTA 2006). Noise measurements of train noise levels were conducted on September 19, 2008, near the B Street crossing. Based on noise measurements conducted, wayside train noise levels, with roadside warning devices and train horns sounding, ranged from approximately 94 to 97 dBA  $L_{max}$  at 50 feet from the track centerline.

The Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Guidelines* (2006) were used for the calculation of wayside noise levels generated by the trains traveling along the UPRR corridor. Based on the modeling conducted, the predicted 60 dBA CNEL noise contour for the UPRR corridor would extend to approximately 463 feet from the track centerline without the sounding of train warning horns and to approximately 1,356 feet with the sounding of train horns. It is important to note that predicted noise levels do not include shielding or reflection of noise from intervening terrain or structures. Although these predicted noise contours are not considered site-specific, they are useful for determining potential land use conflicts.

### Roadways

Vehicle traffic on area roadways also contributes to the ambient noise environment in the city. Roadways with high levels of heavy-duty truck traffic are of particular concern. Major roadways in Biggs include B Street, Eighth Street, West Biggs Gridley Road, and West Rio Bonito Road.

### Stationary Sources

Stationary noise sources include industrial and commercial land uses. Many industrial processes produce noise, even when the best available noise control technology is applied. Noise exposures within industrial facilities are controlled by federal and state employee health and safety regulations (i.e., regulations of the Occupational Safety and Health Administration of the US Department of Labor [OSHA] and the California Division of Occupational Safety and Health [Cal/OSHA]). Exterior noise levels that affect neighboring parcels are typically subject to local standards. Commercial, recreational, and public facility activities can also produce noise that may affect adjacent noise-sensitive land uses. These noise sources can be continuous or intermittent and may contain tonal components that are annoying to individuals who live nearby. For instance, emergency-use sirens and backup alarms are often considered nuisance noise sources, but may not occur frequently enough to be considered incompatible with noise-

### 3.10 NOISE

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sensitive land uses. In addition, noise generation from fixed noise sources may vary based on climate conditions, time of day, and existing ambient noise levels.

From a land use planning perspective, fixed-source noise control issues focus on two goals: (1) preventing the introduction of new noise-producing uses in noise-sensitive areas; and (2) preventing encroachment of noise-sensitive uses upon existing noise-producing facilities. The first goal can be achieved by applying noise performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-sensitive uses near noise-producing facilities include mitigation measures to ensure compliance with noise performance standards. Each of these goals stresses the importance of avoiding the location of new uses that may be incompatible with adjoining uses.

#### Commercial and Industrial Uses

Noise sources commonly associated with commercial and industrial uses often include the operation of power tools, material handling equipment (e.g., forklifts), and stationary equipment (e.g., compressors, compactors), as well as noise associated with the loading and unloading of materials from delivery trucks. Noise levels from commercial and industrial uses are dependent on numerous factors and can vary substantially, depending on the specific activities conducted. For instance, noise associated with neighborhood commercial activities may be indiscernible from the ambient noise level, whereas noise levels associated with major industrial activities involving the use of heavy off-road equipment can generate high noise levels that may result in increased levels of annoyance and activity interference at nearby noise-sensitive land uses. For this reason, noise generated by commercial and industrial uses and impacts to nearby noise-sensitive land uses should be evaluated on a project-by-project and site-specific basis.

In Biggs, the primary fixed noise sources are the rice milling and drying operations located along the western edge of the city. Discussions of the two largest and most significant noise-producing rice milling/drying operations are presented below.

#### *Sunwest Milling Company*

The Sunwest Milling Company rice mill is located at 507 Bannock Street. Sunwest Milling Company also operates a wild rice mill located at 2875 Eighth Street. Significant noise-producing equipment at these facilities is predominantly associated with the operation of baghouse filters and heavy truck traffic, as well as rice milling and drying equipment. The plant operations are dictated by demand, and it is not unusual for the plants to operate 24 hours a day. The facilities typically generate approximately 45 truck trips per day, and the truck drivers are advised to avoid residential streets to the extent practical. The plant is also served by approximately three railroad operations per week (Williams 2009).

Noise measurements of the plant in operation were conducted on September 19, 2008, and April 3, 2009 (refer to **Table 3.10-2**). Noise measurements were conducted along the northern and eastern boundaries of the plant. Measured average-hourly noise levels along the northern boundary of the plant ranged from approximately 50 to 54 dB  $L_{eq}$ . Existing residential land uses located along the northern boundary of the plant are largely shielded from on-site noise sources by intervening structures. Along the eastern boundary of the plant, operational noise levels measured 64 to 76 dBA  $L_{eq}$ . The highest measured noise level of 76 dBA  $L_{eq}$  was associated with the simultaneous operation of three baghouses located near the eastern boundary of the Sunwest plant. Assuming an operational noise level of 76 dBA  $L_{eq}$  at 60 feet, the predicted 50 dBA  $L_{eq}$  noise contour would extend to approximately 699 feet from the plant at locations located within line of sight of the baghouses. The Sunwest wild rice plant operates two

baghouses located at the southwestern boundary of the plant. Based on the measurements conducted and assuming that both baghouse filters were operating simultaneously, the calculated 50 dBA  $L_{eq}$  noise contour would extend to a distance of approximately 595 feet at locations located within line of sight of the baghouses. Because of the directional aspects of on-site noise sources and shielding provided by on-site structures, operational noise levels at off-site locations are highly variable. Operational noise levels and distances to predicted noise contours will vary depending on these and various other factors, including the specific operational activities being conducted, on-site sources of primary concern and orientation to off-site receptors, and meteorological conditions.

#### *Red Top Rice*

The Red Top facility dries and stores rice. Primary noise sources consist of fans, motors, related drying equipment, and heavy truck traffic. The facility also operates three baghouse filters, which also contribute to on-site operational noise levels. There is no railroad activity associated with Red Top. Hours of operation vary according to demand. During the harvest season (September through mid-November), there are approximately 150 trucks per day bringing in rice. During this period, the plant reportedly operates 24 hours a day. Between November and August, there are reportedly about 4,500 truck loads out of the plant. The plant manager reports no current plans for expansion (Cribari 2009).

Noise measurements of the plant in operation were conducted on September 19, 2008, and April 3, 2009 (refer to **Table 3.10-2**). Noise measurements were conducted along the western and eastern boundaries of the plant. Measured average-hourly noise levels at the western and eastern plant boundaries measured approximately 71 dBA  $L_{eq}$ . Based on the measurements conducted, the predicted 50 dBA  $L_{eq}$  noise contour would extend to a maximum distance of approximately 1,542 feet from the plant at locations located within line of sight of major on-site noise sources. Because of the directional aspects of on-site noise sources and shielding provided by on-site structures, operational noise levels at off-site locations are highly variable. Operational noise levels and distances to predicted noise contours will vary depending on these and various other factors, including the specific operational activities being conducted, on-site sources of primary concern and orientation to off-site receptors, and meteorological conditions.

#### Construction Activities

Construction noise typically occurs intermittently and varies depending on the nature or phase (e.g., demolition/land clearing, grading and excavation, erection) of construction. Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. The US Environmental Protection Agency (EPA) has found that the noisiest equipment types operating at construction sites typically range from 88 dBA to 91 dBA  $L_{eq}$  at 50 feet. Typical operating cycles may involve 2 minutes of full power, followed by 3 or 4 minutes at lower settings. Although noise ranges were found to be similar for all construction phases, the building construction phase tended to be less noisy (i.e., 79 dBA to 88 dBA  $L_{eq}$  at 50 feet), when compared to the initial site preparation and grading phases (EPA 1971).

### **3.10.2 REGULATORY FRAMEWORK**

Federal, state, and local governments have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise. Those regulations most applicable to the community are summarized below.

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### FEDERAL

#### **US Environmental Protection Agency**

In 1974, the US Environmental Protection Agency Office of Noise Abatement and Control published a report entitled *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. Although this document does not constitute EPA regulations or standards, it is useful in identifying noise levels at which increased levels of annoyance would be anticipated. Based on an annual-average day-night noise level (expressed as  $L_{dn}$  or DNL), the document states that “undue interference with activity and annoyance” will not occur if outdoor noise levels in residential areas are below 55 dBA  $L_{dn}$  and indoor levels are below 45 dBA  $L_{dn}$  (EPA 1974).

#### **US Department of Housing and Urban Development**

The US Department of Housing and Urban Development (HUD) guidelines for the acceptability of residential land uses are set forth in the Code of Federal Regulations, Title 24, Part 51, Environmental Criteria and Standards. These guidelines identify an exterior noise exposure of 65 dBA  $L_{dn}$  or less as acceptable. Exterior noise levels of 65 to 75 dBA  $L_{dn}$  are considered normally acceptable, provided appropriate sound attenuation is provided to reduce interior noise levels to within acceptable levels. Noise levels above 75 dBA  $L_{dn}$  are considered unacceptable. The goal of the interior noise levels is 45 dBA  $L_{dn}$  for noise-sensitive land uses. These guidelines apply only to new construction supported by HUD grants and are not binding on local communities.

#### **Federal Railroad Administration**

The federal government, in response to safety concerns at at-grade railroad crossings, enacted the Swift Rail Development Act of 1994. This act mandated that the Secretary of Transportation issue regulations requiring the use of locomotive horns at public grade crossings, but gave the agency the authority to make reasonable exceptions. On January 13, 2000, the Federal Railroad Administration published a Notice of Proposed Rule Making in the Federal Register addressing the use of locomotive horns at public road-rail grade crossings. Accordingly, locomotive horns must be sounded on approach and while entering public grade crossings unless there is no significant risk of increased grade crossing collisions, the use of a locomotive horn is impractical, or where safety measures can be installed to fully compensate for the absence of the warning provided by the horn. The sounding of warning horns can greatly affect predicted noise contours within the community.

### STATE

#### **Government Code**

Government Code Section 65302(f) requires that a noise element be included as part of all general plans. A summary of the required contents of a noise element is presented below:

- 1) A noise element shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:
  - Highways and freeways.

- Primary arterials and major local streets.
- Passenger and freight railroad operations and ground rapid transit systems.
- Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
- Local industrial plants, including, but not limited to, railroad classification yards.
- Other ground stationary sources identified by local agencies as contributing to the community noise environment.

Noise contours must be shown for the above noise sources based on noise monitoring and accepted noise modeling techniques. The noise contours are to be used as a guide for designating land uses within the land use element that minimizes the exposure of community residents to excessive noise.

### **California Building Code**

Title 24 of the California Code of Regulations contains standards for allowable interior noise levels associated with exterior noise sources (California Building Code, 1998 edition, Volume 1, Appendix Chapter 12, Section 1208A). The standards apply to new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family residences. The standards state that the interior noise level attributable to exterior sources cannot exceed 45 dBA in any habitable room. Proposed residential structures to be located where the annual  $L_{dn}$  or CNEL exceeds 60 dBA require an acoustical analysis showing that the proposed building design would achieve the prescribed allowable interior noise standard. The noise metric (measurement period, such as hourly or daily) is either the day-night average sound level ( $L_{dn}$ ) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan. Worst-case noise levels, either existing or future, are used as the basis for determining compliance with these standards

### **State of California General Plan Guidelines**

The State of California General Plan Guidelines (OPR 2003), published by the Governor's Office of Planning and Research (OPR), provide guidance for the acceptability of projects within specific  $L_{dn}$ /CNEL contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards which reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

### LOCAL

#### **City of Biggs Municipal Code**

The City's Municipal Code (Chapter 7.40, Noise Regulation) regulates excessive, unnecessary, and unreasonable noise from various sources in the city. In accordance with the Municipal Code, it is unlawful for any person to willfully or negligently make or continue, or cause to be made or continued, any loud, unnecessary, or unusual noise which disturbs the peace and quiet of any neighborhood or which causes any discomfort or annoyance to any reasonable person

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of normal sensitiveness residing in the area. If a conflict occurs with another provision of this code, the most stringent provision applies.

### 3.10.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. A noise impact is considered significant if implementation of the proposed General Plan would:

- 1) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies.
- 2) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- 3) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- 4) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- 5) Expose people residing or working in the project area to excessive noise levels for a project located within an airport land use plan area or, where such a plan has not been adopted, or within 2 miles of a public airport or a public use airport.
- 6) Expose people residing or working in the project area to excessive noise levels for a project within the vicinity of a private airstrip.

Biggs is not located within 2 miles of a public airport nor is it located in the vicinity of a private airstrip. For these reasons, exposure to aircraft noise levels (Standards of Significance 5 and 6) are considered to have no impact and are not discussed further in this DEIR.

#### METHODOLOGY

A combination of existing literature and the noise measurements conducted by Ambient Air Quality & Noise Consulting was used to determine the impact of ambient noise levels resulting from and on development within the proposed General Plan Planning Area. Additionally, the following proposed General Plan policies and actions address noise-related impacts:

- 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 N-2, unless the project design includes measures to reduce exterior and interior noise levels to those specified in Table N-2 [Table 3.10-3 in this DEIR section].*



**TABLE 3.10-3  
MAXIMUM ALLOWABLE NOISE LEVELS FROM TRANSPORTATION NOISE SOURCES**

Land Use	Outdoor Activity Areas <sup>1</sup> L <sub>dn</sub> /CNEL, dB	Interior Spaces	
		L <sub>dn</sub> /CNEL, dB	Leq, dB <sup>2</sup>
Residential	65 <sup>3</sup>	45	--
Transient Lodging	--	45	--
Hospitals, Nursing Homes	65 <sup>3</sup>	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	65 <sup>3</sup>	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	65 <sup>3</sup>	--	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 L<sub>dn</sub>/CNEL or less using all feasible noise reduction measures, an exterior noise level of up to 70 dB L<sub>dn</sub>/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 N-3, unless the project design includes measures to reduce exterior noise levels to the unadjusted levels specified in Table N-3 [Table 3.10-4 in this DEIR section].*

**TABLE 3.10-4  
MAXIMUM ALLOWABLE EXTERIOR NOISE LEVELS FROM NON-TRANSPORTATION SOURCES**

Noise Level Descriptor (dBA)	Exterior Noise Level (dBA)	
	Daytime (7am to 10 pm)	Nighttime (10 pm to 7am)
Average-Hourly Noise Level (Leq)	55	50
Intermittent Noise Level (L <sub>2</sub> or L <sub>max</sub> )	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 L<sub>dn</sub>/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-1.3 (Acoustical Analysis) – Where proposed projects are likely to expose noise-sensitive land uses to noise levels exceeding the City's standards,*

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require an acoustical analysis as part of environmental review so that noise mitigation measures may be identified and included in the project design. The requirements for the content of an acoustical analysis are outlined in Table N-4 [Table 3.10-5 in this DEIR section].

**TABLE 3.10-5  
REQUIREMENTS FOR AN ACOUSTICAL ANALYSIS**

<b>An Acoustical Analysis Prepared Pursuant to the Noise Element Shall:</b>	
A.	Be the financial responsibility of the applicant.
B.	Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
C.	Include representative noise-level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sections.
D.	Estimate existing and projected cumulative (20 years) noise levels in terms of L <sub>dn</sub> , CNEL, and the standards of Table N-1 [Table 3.10-3 in this section] and Table N-2 [Table 3.10-4 in this section], as applicable, and compare those levels to the adopted policies of the Noise Element. Where the noise source consists of intermittent single events, address the impact on sleep disturbance.
E.	Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element, giving preference to site planning and design over mitigation measures that require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses.
F.	Estimate noise exposure after the prescribed mitigation measures have been implemented.
G.	Describe a post-project assessment program that could be used to evaluate the effectiveness of the proposed mitigation measures.

*Policy N-1.4 (Roadway Improvement Projects) – Where proposed roadway improvement projects are likely to expose noise-sensitive land uses to noise levels exceeding the standards in Table N-2 [Table 3.10-3 in this section] or an increase of 10 dB L<sub>dn</sub> 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-1.4.1 (Roadway Project Significance Criteria) – For roadway improvement projects where an acoustical analysis demonstrates that it is not practical to reduce traffic noise levels to be consistent with Table N-2 [Table 3.10-3 in this DEIR section], the following criteria will be used as a test of significance for the environmental review:*

- *Where existing traffic noise levels are less than 65 dB L<sub>dn</sub> in the outdoor activity areas of noise-sensitive uses, a +3 dB L<sub>dn</sub> increase in noise levels due to a roadway improvement project will be considered significant.*
- *Where existing traffic noise levels range between 65 and 70 dB L<sub>dn</sub> in the outdoor activity areas of noise-sensitive uses, a +4 dB L<sub>dn</sub> increase in noise levels due to a roadway improvement project will be considered significant.*

- Where existing traffic noise levels are greater than 70 dB  $L_{dn}$  in the outdoor activity areas of noise-sensitive uses, a +5 dB  $L_{dn}$  increase in noise levels due to a roadway improvement project will be considered significant.

Policy N-1.5	<i>(Proposed Projects Near Railroads) – Require site-specific noise studies for noise-sensitive projects which may be affected by railroad noise, and incorporate noise attenuation measures into the project design to reduce any impacts to the levels specified in Table N-2 [Table 3.10-3 in this DEIR section].</i>
Policy N-1.6	<i>(Construction Activity) – Utilize standards in the Municipal Code to address issues related to the timing and duration of construction activity.</i>
Action N-1.6.1	<i>(Construction Hours) – Consider the establishment of a construction noise ordinance or standards to regulate hours of construction to the hours of 7:00 am to 7:00 pm on weekdays and 8:00 am to 5:00 pm on weekends with exception for emergency repair work.</i>
Action N-1.6.2	<i>(Temporary Construction Noise) – Consider the effects of temporary construction related noise activities during the project review process and incorporate noise mitigation techniques to include movement of equipment staging areas, screening of portable noise sources, limits on amplified sound devices and use of noise baffling and reducing technologies.</i>
Policy N-2.1	<i>(Well-Designed Noise Mitigation) – Utilize effective noise attenuation measures that complement the Community Enhancement Element's goals.</i>
Action N-2.1.1	<i>(Noise Control Measures) – Limit noise exposure through the use of insulation, building design and orientation, staggered operating hours, and other techniques. Utilize physical barriers such as landscaped sound walls only when other solutions are unable to achieve the desired level of mitigation.</i>
Action N-2.1.2	<i>(Transportation Agencies) – As necessary, actively consult with local, state and regional transportation agencies to address noise concerns impacts the City and work to incorporate noise reduction elements in projects both inside and near the City.</i>
Policy N-2.2	<i>(Partners in Noise Reduction) – Consult with public and private organizations to encourage reduction of the noise levels of activities that impact large portions of the community.</i>
Action N-2.2.1	<i>(Railroad Warning Systems) – Consult with the Union Pacific Railroad to investigate the cost, safety, and feasibility of implementing alternative railroad warning systems and safety measures that reduce the use of train horns at City approaches while still meeting public safety objectives.</i>

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- Action N-2.2.2 (Biggs Unified School District) – Consult with the Biggs Unified School District to ensure that amplified sound and school activities does not unduly impact City residences.
- Action N-2.2.3 (Noise Generating Uses) – Maintain an active dialogue with Sunwest Milling, RedTop Mill and other large noise source generators to identify activities or time periods when noise may exceed normal volumes and utilize City resources to provide information of such events to the public.
- Policy N-3.1 (City Noise Control Program) – Maintain a noise enforcement program to identify and resolve problems concerning noise in the community.
- Action N-3.1.1 (Noise Program Duties) – Enforce the City's Noise Ordinance by processing complaints, conducting on-site testing of noise sources, and sharing information on the effects of noise issues in the community.
- 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.

The impact analysis provided below uses these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that address noise and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

#### Noise Impacts Associated with Development and Operation of Land Uses of the Proposed General Plan (Standards of Significance 1 and 3)

**Impact 3.10.1** The proposed General Plan could result in exposure of persons to or generation of noise levels in excess of City standards as well as a substantial permanent increase in ambient noise levels in the city. However, the proposed General Plan policy provisions would adequately address noise issues. Therefore, noise impacts associated with the subsequent development and operation of land uses of the proposed General Plan would be **less than significant**.

New development under the proposed General Plan includes the potential for noise conflicts resulting from adjacent land uses and their operational aspects. While generally addressed through the land use designation and zoning identification process, the potential exists for some development allowed under current land use designations and zoning to have operational aspects that could create noise impacts on other adjacent land uses, including increases in ambient noise levels that may be deemed incompatible with existing land uses. The City's

proposed noise policies and their associated actions provide expanded protection geared toward eliminating land use conflicts with respect to noise. Policies and actions include specific numeric noise level standards for new projects affected by or including both transportation and non-transportation noise sources, as well as guidance in evaluating noise impacts and for identification of noise mitigation measures. For example, Policy N-1.1 states that new development of noise-sensitive land uses will not be permitted in areas exposed to existing or planned transportation noise sources that exceed the levels specified in Table N-2 (**Table 3.10-3** in this DEIR section), unless the project design includes measures to reduce exterior and interior noise levels to those specified in the table. Similarly, Policy N-1.2 mandates that new development of noise-sensitive land uses will not be permitted in areas exposed to existing non-transportation noise sources that exceed the levels specified in Table N-3 (**Table 3.10-4** in this DEIR section), unless the project design includes measures to reduce exterior noise levels to the unadjusted levels specified in the table.

*Where proposed projects are likely to expose noise-sensitive land uses to noise levels exceeding the City's standards, Policy N-1.3 requires an acoustical analysis as part of environmental review so that noise mitigation measures may be identified and included in the project design. The requirements for the content of an acoustical analysis are outlined in Table N-4 (**Table 3.10-5** in this DEIR section). Policy N-1.5 requires site-specific noise studies for noise-sensitive projects that may be affected by railroad noise and the incorporation of noise attenuation measures into the project design to reduce any impacts to those specified in Table N-2 (**Table 3.10-3** in this DEIR section).*

The proposed General Plan includes policies by which the compatibility of sensitive land uses that would be exposed to noise sources would be reviewed and appropriate mitigation measures incorporated to achieve acceptable noise levels. Implementation of the applicable policies and standards contained in the General Plan would ensure that future development meets applicable noise criteria for land use compatibility and/or includes noise attenuation features to meet applicable noise standards. With incorporation of the proposed General Plan policies, this impact would be considered **less than significant**.

### **Exposure to Surface Transportation Noise (Standards of Significance 1 and 3)**

**Impact 3.10.2** Traffic conditions under the proposed General Plan could result in a substantial permanent increase in ambient noise levels that could adversely affect noise-sensitive land uses. This impact would be considered **significant**.

Surface transportation noise sources in the Biggs Planning Area include vehicle traffic on area roadways as well as trains traveling along the UPRR corridor. Noise-related impacts associated with roadway vehicle traffic and the UPRR are discussed in more detail below.

#### Roadway Vehicle Traffic

**Table 3.10-6** provides the forecast traffic volumes under existing conditions and with development allowed under the General Plan. As shown, traffic volumes are expected to increase in comparison to existing conditions and therefore would result in increases in traffic noise levels. Of the major roadways analyzed, implementation of the proposed General Plan would likely result in noticeable increases in traffic noise levels along most major roadway segments. Some of the roadway segments identified in **Table 3.10-6** would most likely exceed the maximum noise exposure for noise-sensitive land uses under proposed General Plan Policy N-1.1. It is important to note that the increases in traffic noise levels associated with the proposed General Plan would occur gradually over a period of approximately 20 years or more.

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Significant increases in traffic noise levels along some smaller local roadways could also potentially occur, particularly in areas located near proposed future development projects. For these reasons, implementation of the proposed General Plan would be considered to result in a substantial permanent increase in ambient noise levels in the Planning Area above levels existing without the project and result in exposure of persons to or generation of noise levels in excess of standards established in the proposed General Plan as a result of increased traffic noise levels. As a result, exposure to vehicular traffic noise on area roadways would be considered a **significant** impact.

**TABLE 3.10-6  
TRAFFIC INCREASE**

Roadway Segment	Existing Conditions		Cumulative Conditions with Project
	Classification	Volume	Volume
1. East Biggs Highway – SR 99 to Biggs Avenue	Arterial	2,342	2,350
2. B Street – First Street to SR 99	Arterial	2,315	3,580
3. B Street – First Street to Second Street	Arterial	2,264	3,010
4. B Street – Second Street to Seventh Street	Arterial	2,440	3,530
5. B Street – Eighth Street to Eleventh Street	Arterial	1,990	6,730
6. Dakota Avenue – Sixth Street to SR 99	Rural Collector/Local	291	550
7. Chatfield Avenue – Sixth Street to SR 99	Rural Collector/Local	203	630
8. West Rio Bonito Road – SR 99 to Milky Way	Arterial	1,159	7,520
9. E Street – Milky Way to Second Street	Arterial	1,093	4,370
10. E Street – Second Street to Fourth Street	Arterial	1,074	3,760
11. E Street – Fifth Street to Seventh Street	Arterial	901	3,900
12. Bannock Street – Eighth Street to West Biggs Gridley Road	Rural Collector/Local	170	560
13. Second Street – C Street to D Street	Rural Collector/Local	721	1,300
14. Second Street – Aleut Street to Bannock Street	Rural Collector/Local	448	500
15. Fourth Street – F Street to H Street	Rural Collector/Local	353	650
16. Eighth Street – B Street to Aleut Street	Rural Collector/Local	706	710
17. Sixth Street – Aleut Street to Bannock Street	Rural Collector/Local	1,113	1,160
18. Sixth Street – Dakota Street to Chatfield Avenue	Rural Collector/Local	1,025	1,110
19. Afton Road/Eighth Street – Riceton Highway to F Street	Arterial	1,153	1,830
20. Eighth Street – B Street to E Street	Arterial	1,269	4,550
21. West Biggs Gridley Road – Bannock Street to Farris Road	Arterial	1,890	5,500
22. West Biggs Gridley Road – Farris Road to Rudd Lane	Arterial	1,884	5,210
23. SR 99 – Hamilton Road to West Rio Bonito Road	Rural State Highway	11,500	22,560
24. SR 99 – West Rio Bonito Road to B Street/Biggs Highway	Rural State Highway	11,800	19,610
25. SR 99 – B Street/Biggs Highway to Dakota Avenue	Rural State Highway	14,200	21,360

Source: Appendix 3.13-1

## UPRR

As previously stated, the UPRR tracks extend in a north-south direction, parallel to and just east of Eighth Street. The UPRR is used for both freight transport and Amtrak passenger service. Approximately 23 freight trains and two Amtrak passenger trains travel along this rail line on a daily basis. The number of freight trains traveling along this segment can vary from day to day, depending on demand, and there are currently no hourly limitations pertaining to freight train travel. Amtrak passenger trains typically run during the early morning hours.

Projected volumes for future years are not currently available. Future train volumes would not be anticipated to increase substantially in comparison to existing conditions. However, as congestion on area roadways increases, it is conceivable that reliance on freight and Amtrak train service could increase.

In Biggs, railroad noise levels are highly influenced by the sounding of locomotive warning horns. The use of locomotive horns is typically required by law on approach to public at-grade crossings. The FTA's *Transit Noise and Vibration Impact Assessment Guidelines* (2006) were used to calculate wayside noise levels generated by the trains traveling along the UPRR corridor. Wayside noise levels were calculated based, in part, on average train speeds, train length, and the number of trains traveling during the daytime and nighttime hours. Predicted noise levels were calculated with and without the sounding of warning devices at grade crossings. With the sounding of train horns, the projected 60 and 65 dBA CNEL noise contour at signalized grade crossings would extend to approximately 810 and 375 feet from the track centerline, respectively. At track locations in excess of approximately 660 feet from grade crossings, the projected 60 and 65 dBA CNEL noise contour would extend to approximately 700 and 325 feet from the track centerline, respectively. The projected noise contours do not include shielding or reflection of noise from intervening terrain or structures, and actual noise levels will vary depending on site-specific conditions. Although these predicted noise contours are not considered site-specific, they are useful for determining potential land use conflicts.

Policy N-1.5 requires site-specific noise studies for noise-sensitive projects that may be affected by railroad noise and the incorporation of noise attenuation measures into project design to reduce any impacts to those specified in Table N-2 (**Table 3.10-3** in this DEIR section). Similarly, where proposed projects are likely to expose noise-sensitive land uses to noise levels exceeding the City's standards, Policy N-1.3 requires an acoustical analysis as part of environmental review so that noise mitigation measures may be identified and included in the project design. The requirements for the content of an acoustical analysis are outlined in Table N-4 (**Table 3.10-5** in this DEIR section).

Implementation of the proposed General Plan noise policies identified above would reduce potential transportation noise impacts. Future development projects would be required to analyze project-related noise impacts and incorporate necessary noise reduction measures sufficient to achieve the applicable noise standards of the proposed Noise Element. Implementation of these policies and actions will help to reduce impacts associated with proposed development. Noise reduction measures typically implemented to reduce traffic noise include increased insulation, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. The feasibility of these measures would be determined on a project-by-project basis. However, it may not be possible to fully mitigate traffic and/or railroad noise in all areas, particularly in existing developed areas constrained due to age, placement, or other factors that limit the feasibility of mitigation such as residences fronting the right-of-way which limit the placement of noise barriers. As a result, increases in transportation noise associated with the proposed General

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Plan could result in a permanent increase in ambient noise levels in Biggs above levels existing without the project and would result in exposure of persons to or generation of noise levels in excess of standards established in the proposed General Plan, which is considered to be a **significant and unavoidable** impact.

### Exposure to Groundborne Vibration (Standard of Significance 2)

**Impact 3.10.3** Subsequent development under the proposed General Plan could result in exposure of persons to or generation of excessive groundborne vibration levels. However, substantial sources of groundborne vibration that would result in significant vibration impacts are not expected in the Planning Area. As a result, this impact is considered **less than significant**.

The effects of ground vibration can vary from no perceptible effects at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. The effects of ground vibration are influenced by the duration of the vibration and the distance from the vibration source.

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 peak-particle velocity (ppv) threshold of 0.2 inches per second (in/sec) to be the level at which architectural damage (i.e., minor cracking of plaster walls and ceilings) to normal structures may occur. Below 0.10 in/sec, there is "virtually no risk of 'architectural' damage to normal buildings." Damage to historic or ancient buildings, however, could occur at levels of 0.08 in/sec ppv. In terms of human annoyance, continuous vibrations in excess of 0.1 in/sec ppv are identified by Caltrans as the minimum level perceptible level for ground vibration. Short periods of ground vibration in excess of 0.2 in/sec ppv can be expected to result in increased levels of annoyance to people within buildings (Caltrans 2002).

Groundborne vibration sources located in Biggs that could potentially affect future development would be primarily associated with railroad operations. Groundborne vibration levels and associated impacts as a result of trains traveling along the UPRR corridor are discussed in more detail below. (Construction activities could also result in short-term groundborne vibration levels that could affect sensitive land uses. Potential groundborne vibration impacts resulting from short-term construction activities are addressed under impact 3.10.3.)

### UPRR

Groundborne vibration levels associated with railroad operations are dependent on various factors, including track type and condition, train speeds, site conditions, and train characteristics, such as the number of engines, number of cars, weight, and wheel type and condition. Site and geologic conditions can also influence how vibration propagates at increasing distance from the track. Based on Caltrans vibration measurement data, the highest train vibration level measured was 0.36 in/sec at 10 feet. Based on this level, Caltrans prepared a "drop-off curve" used to estimate maximum train vibration levels at distance from the track centerline. The curve represents maximum expected vibration levels from trains and thus is considered by Caltrans to be "very conservative" (Caltrans 2002).



Based on the Caltrans drop-off curve for train vibration levels, predicted maximum groundborne vibrations levels along the UPRR corridor would not exceed 0.20 in/sec ppv beyond approximately 7.5 feet from the track centerline, the level above which architectural damage for typical building construction or increased levels of annoyance for individuals in buildings may occur (Caltrans 2002). The proposed General Plan would not result in the development of new land uses within 7.5 feet of railroad track centerlines; therefore, it would not result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels and this impact is **less than significant**.

#### Exposure to Construction and Agricultural Noise (Standard of Significance 4)

**Impact 3.10.4** Construction and agricultural activities associated with subsequent activities under the proposed General Plan could result in a substantial temporary or periodic increase in ambient noise levels. Therefore, such noise impacts would be **significant**.

Construction noise typically occurs intermittently and varies depending on the nature or phase (e.g., demolition/land clearing, grading and excavation, erection) of construction. Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Temporary increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption. Although noise ranges were found to be similar for all construction phases, the grading phase tends to involve the most equipment and resulted in slightly higher average-hourly noise levels. Typical noise levels for individual pieces of construction equipment and distances to predicted noise contours are summarized in **Table 3.10-7**. As depicted, individual equipment noise levels typically range from approximately 74 to 88 dBA  $L_{eq}$  at 50 feet. Typical operating cycles may involve 2 minutes of full power, followed by 3 or 4 minutes at lower settings. Intermittent noise levels can range from approximately 77 to 95 dBA  $L_{max}$ , the loudest of which include blasting and the use of pile drivers and impact devices (e.g., hoe rams, impact hammers).

**TABLE 3.10-7**  
**TYPICAL CONSTRUCTION EQUIPMENT NOISE**

Equipment	Typical Noise Level (dBA) 50 feet from Source		Distance (feet) to Noise Contours (dBA $L_{eq}$ )		
	$L_{max}$	$L_{eq}$	70	65	60
Air Compressor	80	76	105	187	334
Auger/Rock Drill	85	78	133	236	420
Backhoe/Front-End Loader	80	76	105	187	334
Blasting	94	74	83	149	265
Boring Hydraulic Jack/Power Unit	80	77	118	210	374
Compactor (Ground)	80	73	74	133	236
Concrete Batch Plant	83	75	94	167	297
Concrete Mixer Truck	85	81	187	334	594
Concrete Mixer (Vibratory)	80	73	74	133	236
Concrete Pump Truck	82	75	94	167	297

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Equipment	Typical Noise Level (dBA)		Distance (feet) to Noise Contours		
	50 feet from Source		(dBA Leq)		
Concrete Saw	90	83	236	420	748
Crane	85	77	118	210	374
Dozer/Grader/Excavator/Scraper	85	81	187	334	594
Drill Rig Truck	84	77	118	210	374
Generator	82	79	149	265	472
Gradall	85	81	187	334	594
Hydraulic Break Ram	90	80	167	297	529
Jack Hammer	85	78	133	236	420
Impact Hammer/Hoe Ram (Mounted)	90	83	236	420	748
Pavement Scarifier/Roller	85	78	133	236	420
Paver	85	82	210	374	667
Pile Driver (Impact/Vibratory)	95	88	420	748	1,330
Pneumatic Tools	85	82	210	374	667
Pumps	77	74	83	149	265
Truck (Dump/Flat Bed)	84	80	167	297	529

Note: Predicted noise contours associated with construction activities may vary depending on the type and number of pieces of equipment used, usage rates. Predicted noise contours do not include shielding provided by intervening terrain and structures.

Source: Biggs 2010

Depending on distances from nearby noise-sensitive land uses, construction activities associated with buildout of the Planning Area may result in temporary and periodic increases in ambient noise levels at nearby receptors. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption to occupants of nearby dwellings.

In addition, as an agricultural community, there are existing agricultural-related operations that can be perceived as inconveniences or discomforts in terms of noise. While not specifically construction activities, noise generated by agricultural operations are similar to construction activities in that they are often temporary, intermittent and vary, yet can result in increased levels of annoyance. Current residents have generally accepted such existing agricultural noise issues as a normal and necessary aspect of living in a community with an active agricultural sector.

#### Construction-Generated Groundborne Vibrations

With the exception of pavement breaking, blasting, and pile driving, construction activities and related equipment typically generate groundborne vibration levels of less than 0.20 in/sec, which is the architectural damage risk threshold recommended by Caltrans. Based on Caltrans measurement data, use of off-road tractors, dozers, earthmovers, and haul trucks generates groundborne vibration levels of less than 0.10 in/sec, or one-half of the architectural damage risk level, at 10 feet. The highest vibration level associated with a pavement breaker was 2.88 in/sec at 10 feet. During pile driving, vibration levels near the source depend mainly on the soil's penetration resistance as well as the type of pile driver used. Impact pile drivers tend to

generate higher vibration levels than vibratory or drilled piles. Groundborne vibration levels of pile drivers can range from approximately 0.17 to 1.5 in/sec ppv. Caltrans indicates that the distance to the 0.2 in/sec ppv criterion for pile driving activities would be approximately 50 feet. However, as with construction-generated noise levels, pile driving can result in a high potential for human annoyance from vibrations, and pile-driving activities are typically considered potentially significant if these activities are performed within 200 feet of occupied structures (Caltrans 2002). Vibration levels associated with blasting are highly variable, site-specific, and dependent on various factors, such as the amount of explosive used, soil conditions between the blast site and the receptor, and the depth where blasting would take place. Blasting that occurs below the surface would typically produce lower vibration levels due to additional attenuation provided by distance to the receptor and transmission through soil and rock.

The City's Municipal Code (Chapter 7.40, Noise Regulation) establishes hourly restrictions and noise standards that pertain to construction-related activities that would address vibration impacts. Section 7.40.160 states that it is unlawful for any person to operate or cause the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between the hours of 7:00 p.m. and 6:00 a.m. on weekdays or at any time on Sundays or holidays in such a manner that creates noise clearly audible across a residential zoned or a commercial zoned real property boundary, except for emergency work being performed by a public agency or a public utility.

Short-term noise and ground vibrations from construction activities are inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term construction noise and vibrations at levels that they would not accept for permanent vibration sources. A more severe approach would be impractical and might preclude the kind of construction activities that are inevitable from time to time in urban environments. Most residents of urban areas recognize this reality and expect to experience noise and vibration from construction activities on occasion. Similarly, Biggs residents have generally accepted existing agricultural noise issues as a normal and necessary aspect of living in a community with an active agricultural sector. Noise and groundborne vibration generated from construction and agricultural activities are considered to be temporary in the sense that once the activities cease, so too would the noise and vibration impacts. Construction noise and vibrations are considered to be intermittent due to the type, location, and duration of construction equipment being used. Additionally, while not specifically construction activities, noise generated by agricultural operations are similar to construction activities in that they are often temporary, intermittent and vary.

Proposed General Plan Policy N-1.2 sets an intermittent noise threshold of 75 dBA during daytime hours, which would apply to both construction and agricultural activities. As shown in **Table 3.10-7**, there are many types of equipment that would be anticipated to operate at a higher noise level than the 75 dBA threshold. Short-term noise and ground vibrations from construction and agricultural activities are inevitable and cannot be mitigated beyond a certain level. While proposed General Plan Action N-1.6.2 requires the incorporation of noise mitigation techniques such as the movement of equipment staging areas, screening of portable noise sources, limits on amplified sound devices and use of noise baffling and reducing technologies, these measures would not be guaranteed to reduce intermittent noise levels to below 75 dBA. Therefore, temporary noise impacts associated with construction and agricultural noise activities would be **significant and unavoidable**.

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### 3.10.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

The cumulative noise setting includes 2035 development anticipated within Butte County in addition to development allowed under the proposed General Plan (see Section 3.0, Introduction to the Environmental Analysis). The future (cumulative) ambient noise environment will be affected by future development allowed under the proposed General Plan. Cumulative development would alter the intensity of land uses in the region and increase housing, employment, shopping, and recreational opportunities. Such development would result in new noise generators and noise-sensitive land uses and potentially increase land use conflicts and hazards associated with noise. The primary factor for cumulative noise impact analysis is the consideration of future traffic volumes. Under future cumulative conditions, projected increases in population growth are anticipated to result in increased traffic volumes and associated noise levels on area roadways. The cumulative impact analysis herein focuses on the project's contribution to cumulative traffic noise impacts and whether that contribution is considered significant.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Noise Impacts

**Impact 3.10.5** Implementation of the proposed General Plan, in combination with other development in nearby unincorporated areas of the county, would increase transportation noise along area roadways and construction noise throughout the Planning Area. This would be a **cumulatively considerable** impact.

##### Transportation Noise

As identified in **Table 3.10-6**, implementation of the proposed General Plan, in combination with anticipated growth by the year 2035, would result in noticeable increases in traffic noise. In comparison to existing conditions, increases in traffic noise levels of up to approximately 5 dBA CNEL could occur along certain portions of area roadways. Of the major roadways analyzed, noticeable increases in traffic noise levels could occur along most major roadway segments. Increased traffic noise levels would also be experienced in the Planning Area outside of the urban development areas in the unincorporated area of Butte County.

The proposed General Plan policies include requirements that contain specific performance standards addressing transportation noise. These policies are listed under Impact 3.10.2. Implementation of the proposed General Plan noise policies identified under Impact 3.10.2 would reduce potential transportation noise impacts in the city. Additionally, future development projects would be required to analyze project-related noise impacts and incorporate necessary noise reduction measures sufficient to achieve applicable noise standards. Noise reduction measures typically implemented to reduce transportation noise include increased insulation and building requirements, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. The applicability of these measures would be determined on a project-by-project basis.

However, it may not be possible to fully mitigate transportation noise in all areas of the city, particularly for existing development that may be constrained due to age, placement, or other factors that limit the feasibility of mitigation, such as residences fronting on the roadway which limit the placement of noise barriers. In addition, the City does not have jurisdiction to implement noise mitigation outside of its boundaries (or may not be allowed to in Caltrans rights-of-way) to address potential noise impacts to the surrounding, nearby unincorporated areas of Butte County or along Caltrans facilities. It is important to note that the increases in traffic noise levels associated with buildout of the proposed General Plan would occur gradually over a period of approximately 20 years or more. Nonetheless, the proposed General Plan's contribution to cumulative traffic noise would be **cumulatively considerable** and a **significant and unavoidable** impact.

### Construction Noise

Short-term noise and ground vibrations from construction and agricultural activities are inevitable and cannot be mitigated beyond a certain level. While proposed General Plan Action N-1.6.2 requires the incorporation of noise mitigation techniques such as the movement of equipment staging areas, screening of portable noise sources, limits on amplified sound devices and use of noise baffling and reducing technologies, these measures would not be guaranteed to reduce intermittent noise levels to below 75 dBA. Therefore, temporary noise impacts associated with construction and agricultural noise activities would be **significant and unavoidable**.

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## **3.11 POPULATION AND HOUSING**





This section analyzes the socioeconomic conditions in Biggs, including population and housing characteristics. Multiple data sources from different years were used for this analysis in order to present existing population trends and to develop reasonable housing projections.

### 3.11.1 EXISTING SETTING

#### DEMOGRAPHICS

#### Population Trends

Between 1990 and 2000, the city's population increased by 13.4 percent, which equates to a 1.3 percent average annual increase. This growth rate was higher than that for Butte County overall during the same period, which was 1.1 percent. However, between 2000 and 2010, the city's population decreased from 1,793 to 1,707, or by 4.8 percent. The California Department of Finance (DOF) estimates that Biggs's 2013 population is 1,692, a further decrease. In contrast, the population of Butte County has grown steadily during the same period. **Table 3.11-1** details both city and county population trends since 2000. The decreasing rate at which Biggs's population has reduced can be attributed to a very slight numerical decline. As described in Section 2.0, Project Description, Biggs currently has limited infill and redevelopment opportunities within its existing city limits and Sphere of Influence (only 16 vacant residential parcels within the city boundary, totaling 10.2 acres). This lack of readily available land has limited the potential for growth and increased pressure for the City to annex land for development.

**TABLE 3.11-1  
CITY OF BIGGS AND BUTTE COUNTY POPULATION GROWTH**

Year	City of Biggs		Butte County	
	Population	Change	Population	Change
2000 <sup>1</sup>	1,793	N/A	203,171	N/A
2010 <sup>2</sup>	1,707	-86	220,000	+ 16,829
2011 <sup>2</sup>	1,707	0	220,465	+ 465
2012 <sup>2</sup>	1,689	-18	220,263	-202
2013 <sup>2</sup>	1,692	+3	221,485	+ 1,222

Source: <sup>1</sup>DOF 2011; <sup>2</sup>DOF 2013

In January 2011, the Butte County Association of Governments (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, which would result in the potential to double the current population size by the year 2035. It is noteworthy that the growth rates assumed within the BCAG projections are optimistic. Based on the city's historical growth rates and acknowledging the current market conditions, such growth rates may not be reflective of future growth trends. For instance, as just stated, from 2000 to 2010, the city experienced a slow decrease in population from 1,793 to 1,707. As shown in **Table 3.11-1**, the population of Biggs continued to decrease from 1,707 in 2010 to 1,689 in 2012. As shown, the 2013 population of the city is 1,692.

## 3.11 POPULATION AND HOUSING

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### Household Trends and Demographics

The household is the basic unit of analysis in most microeconomic and government reports. According to the US Census, a household includes all persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements. People not living in households are classified as living in group quarters (US Census Bureau 2000). Between 2010 and 2013, the average number of persons per household remained unchanged in the city at 3.0 persons per household (DOF 2013).

### Housing Units

In 2000, there were a total of 588 housing units in the city (Biggs 2010a). By 2008, the total number of units in the city grew by 8.5 percent to 638 units, which was a lower rate of growth than that experienced in the county at 11.8 percent (**Table 3.11-2**). From 2008 to 2012, the number of housing units decreased by 23 units.

**TABLE 3.11-2  
HOUSING TRENDS CITY OF BIGGS AND BUTTE COUNTY**

Year	Total Housing Units	
	City of Biggs	Butte County
2000	588	85,523
2008	638	95,692
2010	617	95,895
2011	617	96,116
2012	615	96,527
2013	615	96,884

Source: DOF 2013

### Tenure

Tenure describes the proportion of housing unit renters to owners. The majority of households in the city are owner-occupied (69.4 percent in 2010) (US Census Bureau 2010).

### Housing Unit Vacancy

Vacancy trends in housing are analyzed using a “vacancy rate,” which establishes the relationship between housing supply and demand. For example, if the demand for housing is greater than the supply, then the vacancy rate is low and the price of housing will most likely increase. According to the California Department of Housing and Community Development’s *Raising the Roof, California Housing Development Projections and Constraints, 1997–2020*, the desirable vacancy rate in a community is considered to be 5 percent. Generally, when the vacancy rate drops below 5 percent, the demand for housing exceeds the supply, and prospective buyers and renters may experience an increase in housing costs.

The City of Biggs had an overall vacancy rate of 8.5 percent in 2013, which is similar to the vacancy rate of 8.6 percent for the county (DOF 2013).

**Employment**

According to the US 2010 Census, the labor force for Biggs comprised 791 people in 2010 (US Census Bureau 2010). In the same year, the unemployment rate in Biggs was 16.6 percent, or 131 people (US Census Bureau 2010). Major employers in Biggs are concentrated in education and agriculture. **Table 3.11-3** shows the number and percentage of workers by work-type in the city.

**TABLE 3.11-3  
EMPLOYMENT BY OCCUPATIONAL GROUP, CITY OF BIGGS**

<b>Occupation</b>	<b>Employed Persons*</b>	<b>Percentage</b>
Agriculture, forestry, fishing, hunting, and mining	59	7.5
Construction	96	12.1
Manufacturing	36	4.6
Wholesale trade	7	0.9
Retail trade	94	11.9
Transportation and warehousing, and utilities	54	6.9
Information	0	0
Finance, insurance, real estate, and rental and leasing	48	6.0
Professional, scientific, management, administrative, and waste management services	62	7.8
Educational, health, and social services	204	25.8
Arts, entertainment, recreation, accommodation, and food services	72	9.1
Other services (except public administration)	26	3.3
Public administration	33	4.1
<b>Total</b>	<b>791</b>	<b>100</b>

Source: US Census Bureau 2010

**3.11.2 REGULATORY FRAMEWORK**

FEDERAL

**Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970**

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 is a federal law establishing minimum standards for federally funded programs and projects that include the acquisition of real property or displacement of persons from their homes, businesses, or farms. The act applies to the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects. Regulations implementing the act are found at 49 CFR 24.

Section 104(d) of the Housing and Community Development Act provides minimum requirements for federally funded programs or projects when units that are part of a community's low-income housing supply are demolished or converted to a use other than low- or moderate-income housing.

### 3.11 POPULATION AND HOUSING

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Section 104(d) requirements include:

- Replacement, on a one-for-one basis, of all occupied and vacant occupiable low- or moderate-income housing units that are demolished or converted to a use other than low- or moderate-income housing in connection with an activity assisted under the Housing and Community Development Act.
- Provision of certain relocation assistance to any lower-income person displaced as a direct result of the following activities in connection with federal assistance:
  - Demolition of any housing unit, or
  - Conversion of a low- or moderate-income housing unit to a use other than a low- or moderate-income residence.

STATE

#### **California Relocation Statute – Government Code Section 7260**

California Government Code Section 7260 et seq. establishes policies for the fair treatment of and relocation assistance for persons displaced as a result of programs or projects undertaken by a public agency. Regulations implementing these policies are found at 25 California Code of Regulations (CCR) Section 6000 et seq.

#### **Housing Element Law – Article 10.6 of the Government Code, Sections 65580–65589.8**

The California legislature has declared the attainment of affordable housing and a suitable living environment for every Californian to be of vital importance. Attaining the state's housing goals requires efforts from all sectors, including the private sector, and all levels of government. Each local government has power to facilitate the improvement and development of housing for all economic segments of the community accounting for economic, environmental, and fiscal factors as well as community goals and regional housing needs. One tool used by local governments to achieve these goals is the housing element of the general plan. The housing element identifies and analyzes existing and projected housing needs and presents goals, policies, quantified objectives, and programs to address those needs. Housing elements also provide implementation measures for these programs. Housing elements must be updated at least every five years. The current City of Biggs Housing Element was adopted by the City in 2010.

LOCAL

#### **Regional Housing Needs Plan**

California Government Code Section 65584 requires the California Department of Housing and Community Development, in consultation with local councils of governments, to determine each region's existing and projected housing needs. Each council of governments is then required to adopt a Regional Housing Needs Plan (RHNP) that allocates a share of the regional housing need to each city and county. The RHNP allocates fair share needs based on household income groupings over the five-year planning period for each specific jurisdiction's housing element. The intent of the RHNP is to ensure that local jurisdictions address the needs of their immediate areas and have the ability to provide their share of housing needed for the entire region.

Regional Housing Needs Plans are also intended to ensure that every community provides an opportunity for a mix of affordable housing to serve all economic segments of its population. Housing elements are required to demonstrate that there are adequate sites and appropriate zoning to address existing and anticipated housing demands during the planning period and that market forces are not inhibited in addressing the housing needs for all facets of a particular community.

The local RHNP, setting forth the allocation of the City of Biggs's fair share of regional housing, is developed by the Butte County Association of Governments (BCAG). BCAG assigned Biggs a Regional Housing Needs Assessment allocation of 155 units for the 2007–2014 planning period. According to Table 8.34 of the Biggs Housing Element, 2007 to 2014 Regional Housing Needs Plan, the allocations by income level were extremely low income – 26 units; very low income – 25 units; low income – 26 units; moderate income – 22 units; and above moderate income – 56 units (City of Biggs 2010b).

### City of Biggs General Plan Housing Element

The Housing Element was adopted in 2010 and serves as Biggs's primary policy document regarding the development, rehabilitation, and preservation of housing for all economic segments of the population within its jurisdiction. The Housing Element identifies and analyzes existing and projected housing needs in Biggs and states goals, policies, and actions for the preservation, improvement, and development of housing. The Housing Element also identifies sites for housing development that are adequate to accommodate the city's allocation of the regional housing need. The goals, policies, and programs are classified into categories as follows:

- Housing Quality
- Housing Quantity and Affordability
- Equal Housing Opportunity
- Natural Resources and Energy Conservation

### 3.11.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

According to California Environmental Quality Act (CEQA) Guidelines Section 15131(a), economic or social effects of a project are not treated as significant effects on the environment. If the proposed project were to cause physical changes as a result of economic or social changes, the physical effects (for example, the destruction of habitat resulting from housing construction to accommodate increased population) could be considered significant. This analysis evaluates the project's impacts on population and housing based on the standards of significance identified in State CEQA Guidelines Appendix G. A population and housing impact is considered significant if implementation of the project would:

- 1) Induce substantial 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).
- 2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

### 3.11 POPULATION AND HOUSING

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- 3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

#### METHODOLOGY

Demographic and housing conditions were determined utilizing existing documents and other information sources. Information was gathered and reviewed from the US Census Bureau, the California Department of Finance, and the Butte County Association of Governments. The City of Biggs Housing Element was an additional source of information on housing and socioeconomic conditions as well as on housing policy.

Future growth in Biggs is guided by the land uses identified in the proposed General Plan Land Use Diagram (see **Figure 2.0-2**). As described in Section 2.0, Project Description, the theoretical buildout scenario is analyzed to provide the reader with the ability to understand the worst-case scenario of a full, but theoretical development of the proposed General Plan. The theoretical buildout scenario demonstrates the maximum residential and nonresidential development levels that could theoretically be achieved under the proposed General Plan. To estimate the theoretical buildout condition for the proposed Land Use Diagram, development assumptions were established in keeping with the land use designations and policies in the proposed General Plan. Buildout under the proposed General Plan is not expected to occur within the 2035 time frame of the proposed General Plan. This is evidenced by the fact that between 1990 and 2000, the city's population experienced an average annual increase of just 1.3 percent and furthermore, Biggs actually diminished in population between 2000 and 2013. The city would actually need to grow by 724 residents each year for the next 22 years in order to achieve General Plan buildout. Therefore, due to historic growth trends in the city, regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely.

The following proposed General Plan policies and actions address population and housing:

- |                        |  |
|------------------------|--|
| <i>Policy LU-2.1</i>   | <i>(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.</i>       |
| <i>Policy LU-2.2</i>   | <i>(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.</i>  |
| <i>Action LU-2.4.1</i> | <i>(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.</i> |
| <i>Action LU-3.2.1</i> | <i>(Zoning) – The City shall zone an adequate supply and mix of developable residential land to accommodate future housing needs.</i>  |
| <i>Policy CE-1.1</i>   | <i>(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.</i>          |

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant population and housing impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that avoid or minimize significant impacts.

IMPACTS AND MITIGATION MEASURES

**Substantial Increase in Population and Housing (Standard of Significance 1)**

**Impact 3.11.1** Subsequent land use activities associated with implementation of the proposed General Plan could potentially induce population growth by the year 2035 beyond that currently anticipated. This is considered a **significant** impact.

In January 2011, 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, which would result in the potential to double the current population size by the year 2035. It is noteworthy that the growth rates assumed within the BCAG projections are optimistic. Based on the city's historical growth rates and acknowledging the current market conditions, such growth rates may not be reflective of future growth trends. For instance, from 2000 to 2010, the city experienced a slow decrease in population from 1,793 to 1,707. A review of the population and growth figures from the California Department of Finance (DOF 2013) suggests that the population of Biggs continued to decrease from 1,707 in 2010 to 1,689 in 2012. As stated above, the 2013 population of the city is 1,692.

Unless regional conditions change significantly in coming years, an average growth rate of 0 percent to 1 percent annually is more likely. However, planning for a slightly higher rate of growth ensures that the General Plan will accommodate development should economic conditions in the region improve and helps to ensure the availability of land to accommodate future conditions. A 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.

The land use concept in the General Plan has been developed to accommodate projected population increases and make sure Biggs is strategically positioned to manage future growth and to capture positive growth opportunities. The proposed Land Use Diagram and policy orientation of the proposed General Plan seek to accommodate the need for a strong and vibrant downtown core as well as additional commercial service and employment-generating land use locations along major transportation routes. Unlike a population forecast such as that produced by BCAG described above, the theoretical buildout scenario does not have a time horizon, such as 2035, nor does it include transportation, demographic, existing land use, or economic assumptions typically used by a forecast model to provide more realistic land use planning data. Therefore, due to historic growth trends, regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely.

Future growth opportunities in Biggs are constrained by the small size of the city and its Sphere of Influence as well as the highly developed nature of the existing city. The analysis undertaken as part of the preparation of the City's Housing Element identified only a limited number of urban infill opportunities remaining within the existing city limits for new residential development and only one undeveloped infill site for new commercial development. As a result of the limited options remaining in the city for new development, the City will need to look beyond its existing developed core for new opportunities. The outward development of the city presents numerous challenges related to the installation of municipal services and infrastructure to support new development, as well as procedural and policy issues related to updating municipal services plans and the City's Sphere of Influence, annexation of property, and the undertaking of the necessary environmental analysis documents. Undertaking the necessary efforts to achieve the vision of the proposed General Plan will take a focused commitment by the City.

### 3.11 POPULATION AND HOUSING

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A key goal of proposed 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 proposed General Plan seeks to avoid the growth effects of sprawl development patterns.

Nonetheless, realization of full theoretical buildout under the General Plan, while incredibly 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. Full theoretical buildout under the General Plan would result in an increase of 15,922 people and 5,744 units for a total of 17,614 residents living in 6,359 dwelling units in Biggs. Since full theoretical buildout under the General Plan would result in growth beyond that anticipated by BCAG this impact is considered to be **significant and unavoidable**.

#### **Displacement of a Substantial Number of Persons or Housing (Standards of Significance 2 and 3)**

**Impact 3.11.2** Subsequent land use activities associated with implementation of the proposed General Plan would not result in the displacement of substantial numbers of housing or persons. This is considered a **less than significant** impact.

The intent of the proposed General Plan is to accommodate anticipated growth through a compact urban form that seeks to make efficient use of existing infrastructure and public services, thus minimizing the need for new or significantly expanded infrastructure that could be the impetus for the removal of housing units and/or businesses.

Implementation of the proposed General Plan will not displace substantial numbers of housing units or people and will not necessitate the construction of replacement housing elsewhere. The areas designated for growth in the proposed General Plan are currently sparsely populated due to the prevalence of agricultural land uses and current Butte County zoning which limits the number of dwelling units. As stated under Impact 3.11.1, full theoretical buildout under the General Plan would result in an increase of 5,744 dwelling units for a total of 6,359 dwelling units in Biggs. Therefore, impacts associated with implementation of the proposed General Plan relative to displacement of a substantial number of persons or housing are considered **less than significant**.

#### **3.11.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES**

##### CUMULATIVE SETTING

The cumulative setting condition includes the unincorporated lands surrounding Biggs, as well as the larger Butte County region, including Chico, Gridley, Oroville, and Paradise. The cumulative setting also includes the proposed and approved large-scale development projects listed in **Table 3.0-2**.

The cumulative impact analysis herein focuses on whether the General Plan's contribution to projected regional population growth would result in a cumulatively considerable environmental impact. The project's impact would be cumulatively considerable if, when considered with other existing, approved, proposed, and reasonably foreseeable development in the cumulative setting,



it would contribute to substantial regional population growth. This is determined by identifying whether the amount of potential growth allowed under the proposed General Plan exceeds the regionally planned population.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

#### Cumulative Population and Housing Increases

**Impact 3.11.3** Subsequent land use activities associated with implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development, could result in a cumulative increase in population and housing growth in Biggs as well as in the surrounding Butte County region, along with associated environmental impacts. This cumulative increase in population and housing is beyond that projected by BCAG. Therefore, this is a **cumulatively considerable** impact.

The land use concept in the General Plan has been developed to accommodate projected population increases and make sure Biggs is strategically positioned to manage future growth and to capture positive growth opportunities. The proposed Land Use Diagram and policy orientation of the proposed General Plan seek to accommodate the need for a strong and vibrant downtown core as well as additional commercial service and employment-generating land use locations along major transportation routes. Unlike a population forecast such as that produced by BCAG described above, the theoretical buildout scenario does not have a time horizon, such as 2035, nor does it include transportation, demographic, existing land use, or economic assumptions typically used by a forecast model to provide more realistic land use planning data. Therefore, due to regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely.

Nonetheless, realization of full theoretical buildout under the General Plan 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. Full theoretical buildout under the General Plan would result in an increase of 15,922 people and 5,744 units for a total of 17,614 residents living in 6,359 dwelling units in Biggs. Since full theoretical buildout under the General Plan would result in growth beyond that anticipated by BCAG this impact is considered to be **cumulative considerable** and **significant and unavoidable**.

### 3.11 POPULATION AND HOUSING

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## **3.12 PUBLIC SERVICES AND UTILITIES**



## 3.12 PUBLIC SERVICES AND UTILITIES

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This section describes the public services that would serve Biggs at both the General Plan growth projection and theoretical buildout. Specifically, this section includes an examination of 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. Each subsection includes a description of existing facilities and infrastructure, applicable service goals, potential environmental impacts resulting from implementation of the proposed General Plan, and cumulative impacts.

The City uses staffing level goals for fire and police, and strives to attain and maintain these levels. Not achieving a staffing goal is not an environmental impact per se, but a reality of a changing fiscal and political environment that requires a balancing of priorities.

Impacts associated with the following public service and utility issues are addressed in other sections of this Draft EIR, as listed below.

- Storm drainage system, including potential overflow and downstream flooding impacts – Section 3.8, Hydrology and Water Quality
- Groundwater impacts, including water quality – Section 3.8, Hydrology and Water Quality
- Hazardous waste – Section 3.7, Hazards and Hazardous Materials

As previously described in Section 2.0, Project Description, the theoretical buildout scenario is analyzed to provide the reader with the ability to understand the worst-case scenario of full, but theoretical development of the proposed General Plan. The theoretical buildout scenario demonstrates the maximum residential and nonresidential development levels that could theoretically be achieved under the proposed General Plan. Buildout under the proposed General Plan is not expected to occur within the 2035 time frame of the proposed General Plan. This is evidenced by the fact that between 1990 and 2000, the city's population experienced an average annual increase of just 1.3 percent. Furthermore, Biggs actually diminished in population between 2000 and 2012 by an estimated 97 people. Therefore, due to regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely.

Nonetheless this EIR includes an analysis of theoretical buildout because the General Plan land use categories do provide the theoretical capacity for residential units and nonresidential building square feet to allow the buildout estimates presented in **Table 2.0-1** of Section 2.0, Project Description. (Theoretical buildout is also analyzed in order to be responsive to case law, as a 2003 court decision regarding the El Dorado County General Plan required that El Dorado County address theoretical buildout.) For purposes of the analysis in this EIR, it was assumed that theoretical buildout would occur by 2035.

### 3.12.1 FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

#### 3.12.1.1 EXISTING SETTING

##### BIGGS FIRE DEPARTMENT

The Biggs fire station at 454 B Street is staffed by two firefighters 24 hours a day year-round, assisted by seasonal firefighters when they respond. Fire protection services within the city have been augmented through a cooperative agreement with the Butte County Fire Department (BCFD) since 1989. This agreement is renewed on a three-year basis and is funded on an annual

### 3.12 PUBLIC SERVICES AND UTILITIES

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basis by the Biggs City Council and the Butte County Board of Supervisors. Agreements for mutual assistance have been established between the BCFD and various fire protection agencies. In the event of a major fire in Biggs, all County fire departments, the California Department of Forestry and Fire Protection (Cal-Fire), and, if necessary, Sutter County and Live Oak fire departments would respond.

The BCFD provides fire suppression, emergency medical, rescue, hazardous materials response, public assistance, and fire prevention/life safety services. The BCFD services Biggs with an average response time of less than 4 minutes and is an Insurance Services Office (ISO) Class 3 fire department with a minimum daily staffing of seven personnel (six firefighters and one chief officer per shift) (Butte LAFCo 2008). Beneath the fire chief are one deputy chief and five assistant chiefs. The BCFD is a combination fire department; the delivery of fire department services is accomplished using both career professional and citizen volunteer firefighters (Butte LAFCo 2008).

#### Facilities and Equipment

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. The Fire Department has the shared resources of 42 fire stations throughout the county. These resources include a modern, well-equipped and well-maintained fleet of fire engines and specialized fire apparatus, including 64 fire engines, 1 ladder truck, 2 heavy rescues, 17 water tenders, 2 dozers, 1 air attack unit, 1 air tanker, 2 hazardous materials units, 3 breathing support units, and 25 rescue squads.

Existing equipment consists of the one regular engine owned by Biggs, one reserve engine, and one water tender.

#### Incident Calls

The Biggs station of Cal-Fire-Butte County responded to 114 emergency incidents in 2007. The types of incidents are detailed in **Table 3.12.1-1**.

**TABLE 3.12.1-1  
FIRE DEPARTMENT 2007 EMERGENCY INCIDENTS**

Type of Incident	Number of Calls
Fire/Explosion	5
Medical	82
Hazard	2
Good Intent Call <sup>1</sup>	1
False Call	4
Other	20

<sup>1</sup> "Good Intent" calls are incidents reported to 911 that turn out to be false alarms.

Source: Biggs 2010

### Response Time

For structure fires, the National Fire Protection Association (NFPA) and the Insurance Services Office recommend a standard total response time not exceeding 5 minutes and 30 seconds from the receipt of call until the first response unit arrives at the emergency (30 seconds to dispatch the call, 60 seconds get-away time, and 4 minutes driving time from the fire station to the emergency). They recommend that this standard be met at least 90 percent of the time. The City of Biggs currently has a fire protection average response time of less than 4 minutes, according to the 2008 Biggs Municipal Service Review (Butte LAFCo 2008). This response time meets nationally recognized standards for fire services.

### **ISO Rating**

An Insurance Services Office (ISO) rating is a collection of information on a community's public fire protection, which is determined by using a Fire Suppression Rating Schedule (FSRS). The FSRS is the manual that the ISO uses in reviewing the firefighting capabilities of individual communities. The schedule measures the major elements of a community's fire suppression system and develops a numerical grading called a Public Protection Classification (PPC). The FSRS determines a PPC from 1 to 10. The primary factors evaluated are the fire department, dispatching, and the water system. The ISO rating takes into account the number of firefighting personnel and equipment available to an area and the average emergency response times. Protection Class 1 indicates excellent fire service and Protection Class 10 indicates minimal or no protection. ISO ratings, or the conditions they represent, influence the cost of fire insurance. The City of Biggs's current ISO rating is Protection Class 3, which is considered above average.

### **3.12.1.1 REGULATORY FRAMEWORK**

#### STATE

#### **California Fire Code**

The 2010 California Fire Code (Title 24, Part 9, of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the state of California (CBSC 2011). The Fire Code includes regulations regarding fire resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

#### **California Health and Safety Code**

Additional state fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which include regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and child-care facility standards, and fire suppression training.

## **3.12 PUBLIC SERVICES AND UTILITIES**

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### **California Occupational Safety and Health Administration**

In accordance with the California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Fighting Equipment, the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose-sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

LOCAL

### **State Master Mutual Aid Agreement**

The State Master Mutual Aid Agreement, signed by Butte County and the five incorporated cities in the county, establishes a framework that allows agencies to share resources when they have exhausted their own. The giving of mutual aid is voluntary, with the decision normally based on ability of the giving agency to maintain reasonable protection of its own jurisdiction. Federal firefighting resources are not a part of the California Master Mutual Aid Agreement.

The state is divided into six fire and rescue regions. Butte County is in Office of Emergency Services (OES) Region III, which encompasses the 13 counties of northeastern California from Sutter, Yuba, and Sierra counties to the Oregon and Nevada borders. California OES fire engines are requested through the mutual aid system, but are under the terms of bilateral agreements between the assignee and the state. Other Automatic Aid and Mutual Threat Zone agreements with Cal-Fire, the US Forest Service, and other surrounding local government agency fire departments exist to respond to emergencies in the city, other areas of the county, the state, and the nation.

### **3.12.1.3 IMPACTS AND MITIGATION MEASURES**

#### **STANDARD OF SIGNIFICANCE**

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. A fire protection impact is considered significant if implementation of the proposed General Plan would:

- 1) Create substantial adverse physical impacts associated with the provision of new or physically altered fire-related facilities or services, the construction and/or provision of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency services.

#### **METHODOLOGY**

Evaluation of potential fire protection service impacts was based on information provided by a review of the applicable fire codes and regulations and other relevant literature such as the 2008 City of Biggs Municipal Service Review (Butte LAFCo 2008). The analysis takes into account the density and type of existing and proposed land uses in the Biggs Planning Area, as well as proposed and anticipated development in Biggs and the surrounding areas.



The following proposed General Plan policies and actions 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:*

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- *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.*

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that address fire protection services.

### IMPACTS AND MITIGATION MEASURES

#### Increased Demand for Fire Protection Services (Standard of Significance 1)

**Impact 3.12.1.1** Implementation of the proposed General Plan could result in the need for additional fire protection facilities in order to maintain acceptable service ratios and response times. The provision of these facilities could cause environmental impacts. However, future fire protection facilities would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency. Therefore, this is a **less than significant** impact.

The proposed General Plan is intended 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). Fire protection services within the city would continue to be provided through a cooperative agreement with the Butte County Fire Department. As previously stated, the City currently has a fire protection average response time of less than 4 minutes, which meets nationally recognized standards for fire services, and the City's current ISO rating is Protection Class 3, which is considered above average.

Proposed General Plan Policy S-4.1 would ensure that both existing and future new development would be served by adequate fire protection services. Additional personnel and facilities could be needed in the future to meet the intent of the policy. Not achieving a staffing goal is not an environmental impact per se, but a reality of a changing fiscal and political environment that requires a balancing of priorities. Proposed Action S-4.5.1 would ensure 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. In addition, compliance with the 2010 California Fire Code would help to prevent and minimize the occurrence of fires. Proposed General Plan Policy S-4.6 would require the review of development and building applications for opportunities to ensure compliance with relevant codes. Action S-4.6.2 would mandate the incorporation of 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 for extra protection. Compliance with these policy provisions and the 2010 California Fire Code would enhance the ability to provide adequate fire protection services.

The provision of additional facilities in the future would be required to undergo project-specific environmental review at such time as an application for a project was submitted. The typical environmental effects regarding the construction and operation of a fire protection facility may involve issues with noise (sirens), air quality (during the construction of the facility), biological resources (depending on location), cultural resources (depending on location), public utilities (demand for electric, water, and wastewater service), and traffic on a local level due to the interruption of traffic light timing by fire engines.

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Policy PFS-1.1 will maintain 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. These fees would assist in funding the fire protection facilities and equipment necessary to adequately serve growth. Proposed Policy PFS-1.2 would require the guarantee of quality infrastructure to meet community needs at the time they are needed. Associated Action PFS-1.2.2 proposes to establish 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 fire protection facilities and equipment, are addressed and that new services do not place an unnecessary burden on existing residents and businesses.

Compliance with the 2010 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.

### Adequate Fire Flow (Standard of Significance 1)

**Impact 3.12.1.2** Implementation of the proposed General Plan would result in additional need for water supply and infrastructure to provide adequate fire flows for fire protection. The provision of these facilities could cause environmental impacts. However, future improvements would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency. Therefore, this is a **less than significant** impact.

In addition to the fire protection facilities discussed under Impact 3.12.1.1 above, adequate water supply and pressure for fire flows would be necessary to ensure fire protection for future development. Water supplies are discussed in detail under the Water Supply and Service subsection below and, as identified by Impact 3.12.5.1, adequate water supplies are or will be available through the construction of new facilities to serve theoretical buildout of the proposed General Plan. Furthermore, according to the Butte Local Agency Formation Commission (Butte LAFCo) (2008), there are currently no fire flow/water pressure problems in the city. Biggs has adequate pumping capacity to meet current demands for water, though as the city grows, more wells will need to be added to the system to maintain fire flows (Butte LAFCo 2008). Since the time of this determination by Butte LAFCo, the City has upgraded its potable water system, which has allowed for and resulted in increased water pressure in the city. These improvements included replacement of a significant percentage of the city's water extraction and delivery infrastructure. A new pressure system and ground tank was installed at Family Park, which has increased water pressures in the system. Prior to these improvements, water pressure within the system was below 40 pounds per square inch (psi). Improvements to this system have allowed an increase in water pressure to approximately 55 psi. The increased pressure will significantly assist fire safety services throughout the city.

Subsequent development 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. The impact analysis in each of the

technical sections of this DEIR, including temporary (i.e., construction-related), operational, direct, and indirect environmental effects, is based on development anticipated at theoretical buildout of the proposed Land Use Diagram.

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. Project-level CEQA review of future improvements necessary for fire flows would identify and mitigate any significant environmental impacts. Therefore, impacts are considered **less than significant**.

### 3.12.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

The cumulative setting for fire protection services includes the service area boundaries of the BCFD, which includes all of Butte County. The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development in the BCFD service area that currently places demand on fire protection services or is expected to place demand on services in the future. **Table 3.0-2** in Section 3.0 of this DEIR lists regional development projects that would be included in the cumulative setting.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Demand for Fire Protection Services

**Impact 3.12.1.3** Implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in Butte County, would increase the demand for fire protection services and thus require additional staffing, equipment, and related facilities under cumulative conditions. The provision of these facilities could result in environmental impacts. The project's contribution to the need for expanded fire protection services is considered **less than cumulatively considerable** given requirements for project-level CEQA review of future fire protection facilities, along with compliance with the California Fire Code.

Future regional growth would result in increased demand for fire protection services throughout Butte County. This cumulative regional demand could result in increased requests for mutual aid from the BCFD, and growth in the city could result in increased service requests from the BCFD. However, the need for additional fire protection facilities associated with the proposed General Plan would be limited to facilities needed to serve the city, as the BCFD's Biggs-related service area is limited to the city limits. It is not anticipated that increased BCFD services would result in the need for additional fire protection facilities because such services would be provided via existing facilities, equipment, and personnel at the time of the mutual aid request. In addition, future fire protection facilities projects would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency.

All new development in the county, including in Biggs, would be subject to the California Fire Code, which would help to prevent and minimize the occurrence of fires, thus increasing the ability of the BCFD and other fire service providers to provide adequate fire protection services.

Project-level CEQA review of future fire protection facilities, along with compliance with the California Fire Code, would ensure that cumulative environmental impacts associated with the

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continued provision of fire protection response services would be considered **less than cumulatively considerable**.

### 3.12.2 LAW ENFORCEMENT SERVICES

#### 3.12.2.1 EXISTING SETTING

##### GRIDLEY-BIGGS POLICE DEPARTMENT

The City of Gridley has provided contract service to the City of Biggs for police and animal control services since 2001, when it changed the name of its police department to the Gridley-Biggs Police Department (GBPD). The contract with the City of Gridley is based on a population percentage.

The GBPD is staffed with 18 sworn officers and 6 civilians in addition to reserve officers and part-time dispatchers (see **Table 3.12.2-1**). The police workload involves responding to 911 calls, burglar alarms, and non-emergency calls, in addition to patrol activities and traffic enforcement. In addition to law enforcement, the GBPD provides animal control services and a shelter located in downtown Gridley. Special assignments include a school resources officer to address school violence in both cities, a Butte Interagency Narcotics Task Force officer (full-time), and as-needed participation in the Butte County Anti-Gang Enforcement unit. Additional gang suppression services include community meetings directed at educating parents on gang issues, four to five gang sweeps annually, and a detective dedicated primarily to gang-related crime. Beginning in the 2011 fiscal year, the City began funding the Biggs Unified School District School Resource Officer (SRO) and a portion of the K-9 unit servicing the schools by separate contract (Biggs 2010).

**TABLE 3.12.2-1**  
**CURRENT STAFFING LEVELS OF THE GRIDLEY-BIGGS POLICE DEPARTMENT**

Title	Number of Staff
Chief of Police	1
Assistant Chief	1
Patrol Officers	14
Dispatch	5
School Resource Officer	1
Reserve Officers	6
Retired Senior Volunteer Patrol	8
Animal Control	1
Chaplains	2

Source: Biggs 2010

### Facilities and Equipment

The GBPD maintains one facility located at 685 Kentucky Street adjacent to Gridley City Hall. The facility does not have temporary holding facilities but does have interview rooms. The GBPD can also operate from the Biggs City Hall building at 3016 6<sup>th</sup> Street. The GBPD operates a full

dispatch center for 911 calls. The department operates a fleet of marked and unmarked police cars, as well as some specialized vehicles.

### Butte County Jail

Persons taken into custody by the GBPD are usually taken to the Butte County Jail. The Butte County Sheriff's Office operates the jail, which is located at 33 County Center Drive in Oroville. The jail houses both male and female populations and is approved by the California Corrections Standards Authority to house 614 inmates. The jail is operated 365 days a year, 24 hours a day, by 135 correctional staff and civilian employees, including a medical department and a kitchen facility (Butte County 2012).

### Calls for Service

Although police response times for serious crimes in progress are an important indicator of service adequacy, there are no clear standards established for the GBPD. Police response times are traditionally used to measure effectiveness, and the average response time for the GBPD in Biggs is 7–8 minutes (Butte LAFCo 2008). The GBPD receives approximately 1,500 911 calls per year and 13,000 calls for service (Gridley 2012).

The Uniform Crime Reporting Program provides nationally standardized criminal statistics for use in law enforcement. In California, this program is administered by the California Department of Justice (DOJ). The crimes, selected because of "seriousness, frequently of occurrence, and the likelihood of being reported to the police," are homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft over \$400, motor vehicle theft, and arson. The DOJ categorizes these crimes as either violent (homicide, forcible rape, aggravated assault, and robbery) or property (burglary, motor vehicle theft, and larceny-theft over \$400) crimes.

From 2005 to 2009, there was a general decrease in the city's crime rate, though the most recent year of data available, 2009, shows an 8 percent increase in Biggs's crime rate from the year prior (DOJ 2012).

### Response Times

The GBPD operates a full dispatch center from which 911 calls from land lines and cell phones in the city limits are initially dispatched. The dispatch center handles animal control calls and coordinates call-outs for after-hours public works and electric emergencies. The center is operated by a supervisor and five dispatchers. As previously stated, although police response times for serious crimes in progress are an important indicator of service adequacy, there are no clear standards established for the GBPD. Police response times are traditionally used to measure effectiveness, and the average response time for the GBPD in Biggs is 7-8 minutes (Butte LAFCo 2008).

### **Butte County Sheriff's Office**

The City relies on the Butte County Sheriff's Office for search and rescue, SWAT, bomb squad, and long-term holding facilities at the Butte County Jail. Crime laboratory services are provided by the California Department of Justice's Chico office. The Butte County Sheriff's Office provides law enforcement in unincorporated areas in the Biggs Planning Area. The sheriff assigns one deputy to the Gridley-Biggs area a minimum of 40 hours per week. The remainder of the time, the Sheriff's Office responds to incidents from its Oroville station 11 miles northeast of Biggs.

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### **California Highway Patrol**

The California Highway Patrol (CHP) is responsible for traffic enforcement in unincorporated areas.

### **Unincorporated Law Enforcement Responsibilities**

The Gridley-Biggs Police Department, Butte County Sheriff's Office, and California Highway Patrol exchange general law enforcement in unincorporated areas. The GBPD can often respond to calls faster than the Sheriff's Office, particularly when there is no deputy in the Gridley-Biggs area. According to Butte LAFCo (2008), the GBPD and the Sheriff's Office both reported the working collaboration to be effective.

### **3.12.2.2 REGULATORY FRAMEWORK**

STATE

#### **Emergency Response/Evacuation Plans**

Government Code Section 8607(a) directs the Governor's Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. The program is intended to provide effective management of multi-agency and multijurisdictional emergencies in California. SEMS consists of five organizational levels, which are activated as necessary: (1) Field Response, (2) Local Government, (3) Operational Area, (4) Regional, and (5) State. Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs.

### **3.12.2.3 IMPACTS AND MITIGATION MEASURES**

STANDARD OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A law enforcement services impact is considered significant if implementation of the proposed General Plan would:

- 1) Create substantial adverse physical impacts associated with the provision of 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 law enforcement services.

METHODOLOGY

Evaluation of potential law enforcement service impacts was based on information provided by a review of the applicable regulations and other relevant literature such as the 2008 City of Biggs Municipal Service Review (Butte LAFCo 2008). The analysis takes into account the density and type of existing and proposed land uses within the Biggs Planning Area, as well as proposed and anticipated development in Biggs and surrounding areas.



The following proposed General Plan policies and actions address 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-5.2.1        *(Service Provider) – Continue to work with the Gridley-Biggs Policy Department (GBPD) to ensure that the City's law enforcement dollars are utilized as efficiently and effectively as possible.*
- 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.*

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- 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.

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that address law enforcement services.

#### IMPACTS AND MITIGATION MEASURES

##### Increased Demand for Law Enforcement Services (Standard of Significance 1)

- Impact 3.12.2.1** Implementation of the proposed General Plan would result in increased demand for law enforcement services and could result in the need for new or physically altered law enforcement facilities, the construction of which could cause significant environmental impacts. However, future improvements would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency. Therefore, this is a **less than significant** impact.

Growth allowed under the proposed General Plan would result in increased demand for law enforcement services and associated law enforcement facilities that would be provided by the GBPD.

New or expanded facilities would be needed to accommodate this increase in GBPD personnel and equipment. According to Butte LAFCo (2008), the GBPD would need about 16 additional officers by 2025 in order to sustain existing service levels. In addition to staff increases, the City will need additional resources to fund equipment for new officers. Currently (2011), the City levies a development impact fee of \$116 per unit for residential development and \$51 per dwelling unit equivalent for commercial development to provide for future police equipment needs (Butte LAFCo 2008). According to Butte LAFCo (2008), the City's monitoring of development impact fees ensures that sufficient funds are collected to cover capital costs associated with increased demands for service generated by new development. The exact location and design for any future needed law enforcement facilities to accommodate increased police staffing would be determined at a future date based on the timing of development in Biggs.

Furthermore, proposed General Plan provisions are intended to prevent and minimize the occurrence of crime through community design and planning. For instance, Action S-5.2.2 seeks to explore and consider local law enforcement coverage options, including community services officers, law enforcement volunteers, and law enforcement partnership arrangements to ensure a maximum level of service coverage to the city. Policy S-6.1 proposes to utilize Crime Prevention Through Environmental Design (CPTED) principles in the design of projects and buildings, while associated Action S-6.1.2 is Intended to keep intruders easily observable through the concept of natural surveillance provisions, which maximize visibility of people, parking areas, 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). Compliance with these proposed provisions would increase the ability of the GBPD to provide adequate services using existing facilities and staffing.

The provision of additional personnel and facilities necessary in the future would be required to undergo project-specific environmental review at such time as an application for a project was submitted to the appropriate agency. Typical environmental effects regarding the construction and operation of law enforcement facilities can include issues with noise (sirens), air quality (during the construction of the facility), biological resources (depending on location), cultural resources (depending on location), and public utilities (demand for electric, water, and wastewater service).

All new development 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 would maintain 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. These fees would assist in funding the law enforcement facilities, staffing, and equipment necessary to adequately serve growth. Proposed Policy PFS-1.2 would require the guarantee of quality infrastructure to meet community needs at the time that they are needed, and associated Action PFS-1.2.2 proposes to establish 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.

Compliance with the proposed General Plan policies and actions and City fees and standards would ensure the provision of adequate law enforcement services. Project-level CEQA review of

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future police facilities would identify and mitigate significant environmental impacts. Therefore, impacts would be reduced to **less than significant**.

### 3.12.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

The cumulative setting for law enforcement services includes the service area boundaries of the Gridley-Biggs Police Department. The department provides services within the current Biggs city limits, as well as to Gridley. Therefore, the cumulative setting is limited to the vicinity of these two cities and does not extend to a regional level. The cumulative analysis includes all existing, planned, proposed, approved, and reasonably foreseeable development within the GBPD service area.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Demand for Law Enforcement Services

**Impact 3.12.2.2** Implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the GBPD service area, would increase the demand for law enforcement services and thus require additional staffing, equipment, and facilities, the construction of which could cause significant environmental impacts. The project's contribution to the need for expanded law enforcement services is considered **less than cumulatively considerable** given requirements for project-level CEQA review.

As discussed in Impact 3.12.2.1 above, the proposed General Plan would result in the need for additional law enforcement staffing, equipment, and facilities. Growth anticipated in association with the proposed General Plan would occur in the Biggs Planning Area. While areas outside of the city limits are not currently in the department's official service area, the GBPD regularly provides services to these areas. Furthermore, the GBPD service area would be expanded to cover areas of future development annexing into the city consistent with the proposed General Plan. Therefore, the proposed General Plan would not contribute to a cumulative demand for law enforcement services outside of the Biggs Planning Area.

Future law enforcement facilities projects would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency. Project-specific environmental review would identify and mitigate cumulative environmental impacts. Therefore, the proposed General Plan's contribution to the continued provision of law enforcement services in the cumulative setting would be considered **less than cumulatively considerable**.

## 3.12.3 PUBLIC SCHOOLS

### 3.12.3.1 EXISTING SETTING

#### BIGGS UNIFIED SCHOOL DISTRICT

The Biggs Unified School District (BUSD) was established in 1965. Before that time, schools in the Biggs area belonged to the Biggs Union School District (est. 1950). The BUSD now serves a 135.4-square-mile area, which includes the entire City of Biggs and surrounding areas.

The BUSD operates six schools in Biggs and adjacent unincorporated areas of Butte County. There are two elementary schools; one with classes from kindergarten through 5<sup>th</sup> grades (Biggs Elementary) and the other with classes from 1<sup>st</sup> through 6<sup>th</sup> grades (Richvale Elementary). There is one middle school with classes from 6<sup>th</sup> through 8<sup>th</sup> grades (Biggs Middle), and one high school with classes from 9<sup>th</sup> through 12<sup>th</sup> grades (Biggs High). Additionally, two community day schools have been established to assist “at-risk” students and students who need additional learning assistance (Biggs Intermediate Community Day [5<sup>th</sup> through 8<sup>th</sup> grades] and Biggs Secondary Community Day [9<sup>th</sup> through 12<sup>th</sup> grades]). The BUSD currently employs a total of 36 teachers (Biggs 2010).

**Existing and Historical Enrollment**

During the 2011–12 school year, the BUSD had an enrollment of 534 students. During the past ten years, the BUSD’s enrollments have fallen from 862 students in 2002 to 534 students in 2012, representing an overall decline of 38 percent. As shown in **Table 3.12.3-1**, district-wide enrollment has declined each year since 2002, with the exception of two years (the 2005–06 school year and the 2010–11 school year). The most significant decline occurred recently; from 2007 to 2008, the district lost 19 percent of its enrollment (147 students) (CDE 2012). The decline can be attributed to multiple factors, including:

- The emergence of separate options in neighboring communities (neighboring school districts, such as Durham Unified, draw enrollments away from the BUSD due to geography); and
- Recession-related outmigration of families with children.

It should be noted that the decline from 2007 to 2008 is considered an exceptional year and is not reflective of baseline historical enrollment trends.

**TABLE 3.12.3-1  
BIGGS UNIFIED SCHOOL DISTRICT  
ENROLLMENT TRENDS**

School Year	District Enrollment	Change from Previous Year
2002–03	862	--
2003–04	820	-42
2004–05	787	-33
2005–06	841	+ 54
2006–07	770	-71
2007–08	623	-147
2008–09	548	-75
2009–10	No Results	
2010–11	556	+ 8
2011–12	534	-22

Source: CDE 2012

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### **3.12.3.2 REGULATORY FRAMEWORK**

STATE

#### **Leroy F. Greene School Facilities Act of 1998 (SB 50)**

California voters approved Proposition 1A in November of 1998. Proposition 1A's companion legislation (Chapter 407, Statutes of 1998, SB 50) went into effect upon the measure's approval. Senate Bill (SB) 50 significantly altered the system of fees that can be placed on new development in order to pay for the construction of school facilities. Prior to the passage of Proposition 1A, school districts were limited in the amount of school facility developer fees they could charge. Also, as a result of the Mira, Hart, and Murietta decisions made in the years preceding the passage of Proposition 1A, cities and counties were able to impose additional school facility fees on development as a condition of obtaining land use approval. SB 50 and Proposition 1A provided a comprehensive school facilities financing and reform program by authorizing the \$9.2 billion school facilities bond issue, school construction cost containment provisions, and an eight-year suspension of the Mira, Hart, and Murietta court cases. SB 50 created different levels of developer fees and prohibited local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate. They also reinstated the school facility fee cap for legislative actions, which is adjusted biannually in January. According to Government Code Section 65996, the development fees authorized by SB 50 are deemed to be full and complete school facilities mitigation. These provisions were in effect until 2006 and will remain in place as long as subsequent state bonds are approved and available.

The three levels of developer fees established by SB 50 are described below.

- 1) Level 1 fees are base statutory fees. As of January 30, 2008, the maximum assessment for fees was \$2.97 per square foot of residential development and \$0.47 per square foot of commercial/industrial development (SAB 2008).
- 2) Level 2 fees allow the school district to impose developer fees above the statutory levels, up to 50 percent of certain costs under designated circumstances. The state would match the 50 percent funding if funds are available.
- 3) Level 3 fees apply if the state runs out of bond funds after 2006, allowing the school district to impose 100 percent of the cost of the school facility or mitigation minus any local dedicated school monies.

In order to levy the alternate (Level 2) fee and qualify for 50 percent state-matching funds, a school district must prepare and adopt a School Facilities Needs Analysis, apply and be eligible for state funding, and satisfy specified criteria. The ability of a city or county to impose fees is limited to the statutory and potential additional charges allowed by the act, as described above.

#### **California Department of Education**

The California Department of Education (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 (CDE 2000). Certain health and safety requirements for school site selection are governed by state regulations and the policies of the CDE School Facilities Planning Division (SFPD) relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

The SFPD prepared the *Guide to School Site Analysis and Development* in 1966. The guide assists school districts in determining the amount of land needed to support their educational programs in accord with their stated goals and in accord with CDE recommendations. Site size standards were updated in 1999–2000 to reflect significant changes in education, such as class size reduction in kindergarten through grade three, implementation of the (federal) Education Amendments of 1977, Title IX (gender equity), parental and community involvement, and technology. In addition to the educational reforms noted above, changes regarding the expanded use of buildings and grounds for community use and agency joint use and legislative changes in the site-selection process regarding environmental, toxic, and other student and staff safety issues were included in the updated standards. The guide contains specific recommendations for school size and suggests a ratio of 2:1 between the developed grounds and the building area (CDE 2000). The CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

### 3.12.3.3 IMPACTS AND MITIGATION MEASURES

#### STANDARD OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A public schools impact is considered significant if implementation of the proposed General Plan would:

- 1) Result in substantial adverse physical impacts associated with the provision of 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.

#### METHODOLOGY

The analysis of potential environmental impacts associated with public schools was based on information pertaining to the BUSD. This information was compared to the potential number of students that could be generated by the proposed General Plan in order to determine if the proposed General Plan would have a significant effect on the physical environment associated with the provision of public school services.

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The following proposed General Plan policies and actions address public school service:

- 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.*
- Action PFS-7.3.2 (Community Enhancement Activities) – Seek opportunities to partner with the Biggs Unified School District on facilities projects that will benefit the City and its residents to include the rehabilitation of the tennis courts, expansion of use options at Rio Bonito Park and the rehabilitation and enhancement of Schor's Pool.*

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that address school services.

#### IMPACTS AND MITIGATION MEASURES

##### **Increased Demand for Public Schools (Standard of Significance 1)**

**Impact 3.12.3.1** Implementation of the proposed General Plan would increase 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 under the proposed General Plan would be subject to school facility fees to pay for additional school facility needs. This is a **less than significant** impact.

Projected growth allowed under the proposed General Plan would increase student enrollment in the Biggs Unified School District and could result in the need for new or expanded public school facilities, the construction of which could cause significant environmental impacts. A 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 825 housing units for a total of 1,440 in Biggs in 2035. Full theoretical buildout of the proposed General Plan Land Use Diagram would accommodate an increase of 5,744 housing units.



Based on statewide student yield generation factors estimated by the California Department of General Services (2008), the BUSD district-wide student generation rate for new residential development is 0.5 elementary students per housing unit and 0.2 high school students per housing unit. Using the Department of General Services generation rate, increased development associated with the projected average growth rate of 3.3 percent annually would be expected to result in a total of 578 additional students that would need to be absorbed by the BUSD by 2035 (**Table 3.12.3-2**). Theoretical buildout of the proposed General Plan would be expected to result in a total of 4,021 additional students that would need to be absorbed by the BUSD (**Table 3.12.3-2**) sometime after the year 2035. (As discussed in the Existing Setting subsection, BUSD district-wide enrollment has declined steadily since 2002 due to the emergence of separate options in neighboring communities, and economic conditions. Given these factors, it is unlikely that theoretical buildout of the General Plan would result in the need for substantial new or expanded school facilities.)

**TABLE 3.12.3-2  
GENERAL PLAN STUDENT GENERATION**

<b>General Plan Projected Growth Potential (2035)</b>	
Residential Units	825
Generation Rate	0.7
Additional Students at 2035	<b>578</b>
<b>Theoretical Buildout (Beyond 2035)</b>	
Residential Units	5,744
Generation Rate	0.7
Additional Students at Theoretical Buildout	<b>4,021</b>

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. The City of Biggs has no direct control over the location and construction of schools. New schools, or the expansion of existing schools, would contribute environmental impacts such as increased traffic, increased noise, potential habitat loss, degradation of air quality, degradation of water quality, potential conversion of agricultural land, and increased demand for public services and utilities such as water, wastewater, and solid waste services.

Proposed 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. In addition, California Government Code Section 65995(h) states that "the payment or satisfaction of a fee, charge or other requirement levied or imposed . . . [is] deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." The BUSD currently levies fees of \$2.97 per square foot for residential units and \$0.47 per square foot for new commercial development.

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

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impact is considered **less than significant**. While it is noted that new schools are permitted in any land use designation, any new future school facilities would be located in areas of adequate infrastructure and access consistent with surrounding development.

### 3.12.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

The cumulative setting for public school impacts includes the district boundaries for the Biggs Unified School District. The BUSD service area includes the entire City of Biggs as well as the surrounding unincorporated areas of Butte County. Any existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting could result in cumulative impacts. **Table 3.0-2** in Section 3.0, Introduction to the Environmental Analysis, lists cumulative projects that could contribute to cumulative public school impacts.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Schools Impacts

**Impact 3.12.3.2** Population growth associated with implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, would result in a cumulative increase in student enrollment and require additional schools and related facilities to accommodate the growth. This is a **less than cumulatively considerable** impact.

As discussed under Impact 3.12.3.1 above, implementation of the proposed General Plan is expected to result in population growth that would increase student enrollment in the BUSD. As noted above, current state law requires that the environmental impact of new development on school facilities is considered fully mitigated through the payment of required development impact fees. All new development associated with the proposed General Plan would be required to pay the applicable development impact fees. Furthermore, any significant expansion of school facilities or development of new school facilities (grade school and post-secondary) would be subject to the appropriate CEQA environmental review, which would identify any site-specific impacts and provide mitigation to reduce those impacts. Therefore, cumulative impacts on school facilities are considered **less than cumulatively considerable**.

### 3.12.4 PARKS AND RECREATION

#### 3.12.4.1 EXISTING SETTING

Because of the compact nature of the city, most residential properties are located within half a mile of a park. The City of Biggs currently manages three parks and has one piece of property that is reserved for future playground development.

#### PARKS AND RECREATION FACILITIES

**Downtown Park:** Downtown Park is a 0.1-acre passive recreation area located on the north side of B Street between Sixth and Seventh streets. Downtown Park features turf areas and seating and is a gathering spot for public events.

**Family Park:** Family Park is located just east of Biggs's downtown area. The approximately 1-acre park contains a gazebo, picnic tables, and a small play structure and skate area.

**Rio Bonito Park:** Improved in 2007–2008 as a public-private partnership with SunWest Milling Co., Rio Bonito Park is a shared facility with the Biggs Unified School District located adjacent on the Biggs High School campus. The approximately 7.2-acre park includes a baseball diamond, picnic area, play structure area, and picnic area. Excluding the undeveloped area beyond the baseball diamond, the site is approximately 3 acres.

**Trent Area Lot:** The Trent Area Lot is a 0.28-acre site located on the south side of the city. The lot has been designated by the City as a future playground site.

**Schor's Pool (CSA 31):** County Service Area (CSA) 31 encompasses approximately 85 square miles in western Butte County. CSAs are often established by counties to provide authority and funding for recreational, infrastructure, and other improvements and services in unincorporated areas. CSA 31, which was formed in 1967 to provide swimming pool facilities to the area, maintains Schor's Pool. The pool is located near the Biggs elementary and secondary schools on the eastern side of the community.

**Cork Oak Park:** This small park is located on the high school campus, adjacent to the community swimming pool (Schor's Pool) and is owned and maintained by the BUSD. Approximately 1 acre in size, this park provides picnic tables, horseshoe pits, and turf amid a former cork oak orchard.

### PARKLAND STANDARDS

Recreation providers, along with other service providers, often use population growth to determine the need for facilities and services. Historically, the National Park and Recreation Association suggested that communities have 6 to 10 acres of developed parkland per 1,000 people to meet active recreation needs. More recently, parks and recreation organizations suggest that standards be adjusted to reflect climate, community preferences, and the types of recreational opportunities offered by national and state parks, schools, churches, and nonprofit groups.

The City's previous General Plan established a standard of 10 acres of accessible developed parkland for every 1,000 residents. Biggs currently has approximately 9.9 acres of combined developed and undeveloped parkland (6 acres developed and 3.9 acres undeveloped), translating into approximately 5.8 acres for every 1,000 people. Therefore, the City currently needs an additional 7 acres of parkland in order to meet the current park acreage standard [2013 population of 1,692 = (1.69 x 10.0 acres = 16.9)].

The proposed General Plan would establish a minimum park and recreation land standard of 5 acres of City-owned or joint-use park facilities per 1,000 city residents as the minimum standard for parks and recreation land, as well as for park and recreation land dedication requirements, if adopted.

#### 3.12.4.2 REGULATORY FRAMEWORK

##### STATE

##### Quimby Act

The goal of the 1975 Quimby Act (California Government Code Section 66477) was to require developers to help mitigate the impacts of property improvements by requiring them to set

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aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act gave authority for passage of land dedication ordinances only to cities and counties, thus requiring special districts to work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide parks and recreation services community-wide. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities (Westrup 2002).

Originally, act was designed to ensure "adequate" open space acreage in jurisdictions adopting Quimby Act standards (e.g., 5 acres per 1,000 residents). In some California communities, the acreage fee was very high where property values were high, and many local governments did not differentiate on their Quimby fees between infill projects and greenbelt developments. In 1982, the Quimby Act was substantially amended via Assembly Bill 1600. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project's impacts as identified through traffic studies required by CEQA. Agencies must show a reasonable relationship between the public need for the recreation facility or parkland and the type of development project upon which the fee is imposed (Westrup 2002).

### 3.12.4.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A park and recreation impact is significant if implementation of the proposed General Plan would:

- 1) 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.
- 2) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

#### METHODOLOGY

Evaluation of potential park and recreation service impacts was based on review of the most recent recreation and facilities guides and master plans and other relevant literature. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

The following proposed General Plan policies and actions address park and recreation service:

- |                        |   |
|------------------------|---|
| <i>Policy CR-1.1</i>   | <i>(Parkland Needs) – Provide adequate parkland acreage and facilities in both location and size to meet the recreational needs of existing and future residents.</i> |
| <i>Action CR-1.1.1</i> | <i>(Park Dedication Standard) – Adopt a minimum park dedication standard of 5.0 acres of active or passive recreation land per each 1,000 residents.</i>              |

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- Action CR-1.1.2 *(Park and Recreation Master Plan) – Prepare a park and recreation master plan to serve as a guide for future park development, review future park location options, establish park development criteria and standards, refine park and recreation policies and provide use guidelines for City park and recreation facilities.*
- 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-1.2.2 *(Recreation Partnerships) – Explore the possibility of partnering with the City of Gridley and Butte County to enhance recreation services to Biggs residents and to create a trail system in southern Butte County between the cities of Biggs and Gridley.*
- 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-1.3.1 *(Master Plan) – Prepare a Park and Recreation Master Plan that identifies facility requirements, defines facility costs, and outlines funding options and approaches. Explore funding options for current and future parklands.*
- 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-1.3.3 *(Park Development Standards) – Develop and adopt City park development standards to guide construction of new park 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.*
- Action CR-1.3.5 *(Parkland Dedication) – Revise Ordinance 211 requirements for the dedication of parkland and facilities to reflect a standard of 5.0 acres of parkland for each 1,000 residents and to outline the specific options for dedication requirements.*
- Action CR-1.3.6 *(Impact Fees) – Review impact fees every five years to determine whether they adequately provide funding.*

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The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that address park and recreation facilities/services and avoid or minimize significant impacts.

### IMPACTS AND MITIGATION MEASURES

#### Increased Demand for Parks and Recreation Facilities (Standards of Significance 1 and 2)

**Impact 3.12.4.1** Implementation of the proposed General Plan would 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 increased demand. This is considered to be a **less than significant** impact.

A 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 for a total of 4,059 in Biggs in 2035. Full theoretical buildout of the proposed General Plan Land Use would accommodate an increase of 15,922 people for a total population of 17,614. Full theoretical buildout is considered highly unlikely and if achieved, would almost certainly occur well beyond the year 2035.

As described above, the proposed General Plan directs a parkland standard of 5 acres per 1,000 residents for future parks (proposed General Plan Policy CR-1.1). Based on this standard, a projected population increase of 2,367 people for a total of 4,059 would need to add approximately 10.4 acres of parkland by the year 2035. (Theoretical buildout would require an additional 78.1 acres of parkland.) This growth would require the construction or expansion of park and recreational facilities and increase the use of existing parks such that physical deterioration of the facility could occur or be accelerated. The provision of these additional park and recreation areas could result in an adverse physical effect on the environment.

The specific environmental impacts resulting from the provision of park and recreational facilities would be identified by project-level environmental review in conjunction with individual development projects. The typical environmental effects regarding the construction and operation of parks and recreational facilities may involve issues with noise (during construction and playfields and playgrounds), air quality (during the construction of the facility), biological resources (depending on location), historic/cultural resources (depending on location), public services and utilities (demand for police and fire protection, electric, water, and wastewater service), and traffic on a local neighborhood level.

In addition, the policies and actions included in the proposed 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, would ensure that future development under the General Plan would provide adequate park, recreation, and greenway facilities consistent with parkland standards. Project-level environmental review would also ensure that site-specific environmental impacts associated

with the provision of such facilities would be identified and mitigated. Therefore, this impact is **less than significant**.

#### 3.12.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

##### CUMULATIVE SETTING

The cumulative setting for parks and recreation consists of the Biggs Planning Area. Under buildout conditions, the City will have ownership and maintenance responsibility for parks, greenways, and City-owned preserves. Any existing, planned, proposed, approved, and reasonably foreseeable development in the Biggs Planning Area could contribute to cumulative impacts. The reader is referred to Section 3.0 for a discussion of assumed land uses and development conditions associated with the proposed General Plan.

##### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Park and Recreation Demands

**Impact 3.12.4.2** Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would increase the use of existing parks and would require additional park and recreation facilities in the cumulative setting, the provision of which could have an adverse physical effect on the environment. This would be a **less than cumulatively considerable** impact.

Future development consistent with the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would increase the use of existing parks and would contribute to the cumulative demand for regional and local parks and recreational facilities and services in the Biggs Planning Area. As previously discussed, the specific environmental impacts resulting from the provision of park and recreational facilities would be identified by project-level environmental review in conjunction with individual development projects. The potential environmental effects of parks and recreational facilities in the cumulative setting would be similar to those described under Impact 3.12.4.1 above.

Individual development projects associated with the proposed General Plan would be subject to development impact fees to fund the provision of physical parkland, and the General Plan directs that the City collaborate with Butte County, the BUSD, and the City of Gridley to pursue other park funding sources and look for opportunities for joint use of facilities for community recreation and other public purposes. These fees and policy provisions would ensure that the City would adequately provide for park and recreation needs for residents, and environmental review of new development would mitigate any environmental impacts of park and recreational facilities. Therefore, the proposed General Plan would have a **less than cumulatively considerable** impact on parks and recreation services.

#### 3.12.5 WATER SUPPLY AND SERVICE

##### 3.12.5.1 EXISTING SETTING

The City of Biggs currently provides water services to approximately 670 residential, commercial, and municipal accounts in the Biggs Planning Area. The Biggs domestic water system has been serving the community since 1904 when two wells were drilled and the initial mains were

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constructed. There have been numerous improvements to the system since that time, including the addition of wells, pipeline replacement projects, capacity expansion, and water pressure enhancements. The City recently completed a major water system improvement project that replaced a significant portion of the City's water delivery system. Improvements included the replacement of water main and distribution lines, rehabilitation of the City's existing primary service well, installation of a water pressure booster system, installation of water meters, and upgrades to various fire protection and water control structures.

In November 2008, the City adopted a Water Master Plan that identified nine priority projects needed to bring the City's water system up to date. The City has since completed each of those improvements, resulting in the achievement of having sufficient capacity to accommodate the demands of existing residents along with making sufficient water resources available to address the potential growth of the community in the planning horizon. Additionally, the recent improvements to the City's water system have resulted in a significant increase in water pressure for domestic and fire flow purposes.

#### **Water Supply and Facilities**

The sole source of water supply for Biggs is groundwater extracted from the Sacramento Valley Groundwater Basin, more specifically the East Butte Subbasin, pumped through three wells (2 production and 1 emergency back-up). The most recent well—installed in 2005—is used as an emergency well for fire protection. The City has rehabilitated the other two wells and is adding a hydropneumatic tank to provide constant control of water pressures. Combined, the two wells currently in production are capable of delivering 2,500 gallons per minute (gpm) at 40 pounds per square inch (psi) or 2,000 gpm at 55 psi. With the completed upgrades to the City's wells, the combined capacity is approximately 3,500 gpm. The City pumps an average of approximately 700,000 gallons per day, which equates to an average daily demand of over 350 gallons per minute. The City has an elevated storage tank with a capacity of approximately 40,000 gallons, but is only used in cases of maintenance and construction as both of the City's production wells use variable speed pumps capable of accommodating variable demands on the system. The distribution network in the city consists of approximately 9 miles of pipeline. The City recently installed/replaced more than 60,000 feet of water line with the result being the single largest upgrade in the history of the City's water system. The upgrade has increased fire flows in some areas previously having constriction points or dead-end services by 500 percent. The upgrade also included installation of water meters on approximately 400 water services. This project will allow the City to better manage the system to detect and manage leaks, has improved system reliability and function, and greatly enhanced the City's ability to fight fires.

The East Butte Subbasin is a portion of the Sacramento Valley Groundwater Basin bounded on the west and northwest by Butte Creek, on the northeast by the Cascade Ranges, on the southeast by the Feather River, and the south by the Sutter Buttes (DWR 2004). The Sacramento Valley Groundwater Basin is currently unadjudicated and no safe yield has been determined. Water rights in unadjudicated groundwater basins are not clearly defined, as they are in adjudicated basins where groundwater pumping is managed and operated according to court settlements. Since no safe yield has been established for the groundwater basin, the theoretical supply for Biggs is unknown.

Historical data indicates that water level decreases in the groundwater basin are seasonal and that the groundwater basin typically recharges during the winter months. Therefore, although long-term historical data shows that well levels seasonally and annually fluctuate, there is no significant difference in the well levels over the long term (CDM 2005a). According to the California Department of Water Resources (2004), the portion of the East Butte Subbasin located



in Butte County was evaluated for seasonal and long-term changes in groundwater levels for confined and composite portions of the aquifer systems. In the portion of the subbasin located in the southern part of Butte County, which includes the Biggs Planning Area, groundwater level fluctuations for composite wells average about 4 feet during normal years and up to 10 feet during drought years (DWR 2004). The groundwater fluctuations for wells constructed in the confined and semiconfined aquifer system average 4 feet during normal years and up to 5 feet during drought years (DWR 2004).

Estimates of groundwater extraction for agricultural, municipal and industrial, and environmental wetland uses are 104,000, 75,500, and 1,300 acre-feet, respectively. Deep percolation of applied water is estimated to be 126,000 acre-feet. (An acre-foot is a unit of volume commonly used in reference to large-scale water resources. It is defined by the volume of 1 acre of surface area to a depth of 1 foot. In general, 1 acre-foot is considered to be the planned water usage of a suburban family household, annually.)

### 3.12.5.2 REGULATORY FRAMEWORK

#### FEDERAL

##### **Safe Drinking Water Act**

The Safe Drinking Water Act was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. The act applies to every public water system in the United States but does not regulate private wells that serve fewer than 25 individuals.

The act authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. Originally, the act focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments changed the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach is intended to ensure the quality of drinking water by protecting it from source to tap.

#### STATE

##### **California Water Plan Update 2009**

The California Water Plan is the state's blueprint for integrated water management and sustainability. The California Department of Water Resources (DWR) updates the Water Plan approximately every five years. California Water Plan Update 2009 is the latest edition of the water plan and provides statewide strategic plan for water management to the year 2050. The California Water Plan provides framework and resource management strategies promoting two major initiatives: integrated regional water management that enables regions to implement strategies appropriate for their own needs and helps them become more self-sufficient, and improved statewide water management systems that provide for upgrades to large physical facilities, such as the State Water Project, and statewide management programs essential to the California economy (DWR 2009a).

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### **Urban Water Management Planning Act**

In 1983, the California legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610–10656). The act states that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act describes the contents of the Urban Water Management Plans (UWMP) as well as how urban water suppliers should adopt and implement the plans. It is the intention of the act to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied (DWR 2009c).

### **Senate Bill 610**

Senate Bill (SB) 610 makes changes to the Urban Water Management Planning Act to require additional information in Urban Water Management Plans if groundwater is identified as a source available to the supplier. Required information includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if nonadjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current California DWR publication on that basin. If the basin is in overdraft, the plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that any project subject to CEQA supplied with water from a public water system be provided a specified water supply assessment, except as specified in the law (DWR 2009b).

### **Assembly Bill 901**

Assembly Bill 901 requires Urban Water Management Plans to include information relating to the quality of existing sources of water available to an urban water supplier over given time periods and the manner in which water quality affects water management strategies and supply (DWR 2009b).

### **Senate Bill 221**

SB 221 prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10 percent or more of service connections for public water systems with fewer than 500 service connections. The law defines criteria for determining “sufficient water supply” such as using normal, single-dry, and multiple-dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses. Rights to extract additional groundwater, if groundwater is to be used for a project, must be substantiated (DWR 2009b).

### **Governor’s 20x2020 Program**

On February 28, 2008, California Governor Schwarzenegger introduced a seven-part comprehensive plan for improving the Sacramento-San Joaquin Delta. As part of the plan, the Governor directed state agencies to prepare and implement a program to achieve a 20 percent reduction in statewide average per capita water use by year 2020 (20x2020 Program). Several state agencies involved in water planning and management have joined together to form an agency team to direct the development and implementation of the 20x2020 Program. The focus of the program is to understand the current urban water use patterns in order to

propose a practical and effective conservation strategy. The process of developing this program involves five steps: data analysis, baseline definition, preliminary targets development, conservation potential identification, and implementation planning.

Currently, the 20x2020 team is in the process of developing baseline definitions and preliminary targets (SWRCB 2012). The Governor's plan is being legislated in AB 2175, AB 49, and SB 261, each of which is at a different level of development.

### REGIONAL

#### **Sacramento Valley Integrated Regional Water Management Plan**

In December 2006, the Northern California Water Association published a draft Sacramento Valley Integrated Regional Water Management Plan covering much of the Sacramento River Hydrologic Region (as defined in the DWR's California Water Plan) from the Redding Groundwater Basin in the north to the Sacramento metropolitan area in the south. The plan area encompasses all of Butte, Sutter, Yuba, Yolo, Amador, Shasta, and Sacramento counties, as well as portions of Colusa, Lake, Napa, Solano, El Dorado, Sierra, Placer, Nevada, Sierra, Plumas, Lassen, Modoc, Siskiyou, and Shasta counties. The primary objectives of the plan are to:

- Improve the economic health of the region.
- Improve regional water supply reliability.
- Improve flood protection and floodplain management.
- Improve and protect water quality.
- Protect and enhance the ecosystem.

The plan also includes water management strategies and conservation strategies, as well as information regarding financing mechanisms, prioritization of projects, and performance and monitoring (Butte County 2007).

### LOCAL

#### **Butte County Department of Water and Resource Conservation**

The mission of the Butte County Department of Water and Resource Conservation (BCDWRC) is to manage and conserve water and other resources for the citizens of Butte County. The BCDWRC is involved in a wide range of activities focused on water resources monitoring and planning. The BCDWRC is responsible for developing some of the key water resource planning documents for the county. These documents are discussed below (Butte County 2007).

#### Butte County Groundwater Conservation Ordinance

In November 1996, Butte County voters approved the Groundwater Conservation Ordinance intended to provide groundwater conservation through local regulation of water transfers that move water outside of the county and have a groundwater component. A permit is now required for both exportation of groundwater outside the county and groundwater pumping as a substitute for surface water exported outside the county. A permit for this type of water transfer outside of the county would be denied if the proposed activity would adversely affect the

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groundwater resources in the county, including causing or increasing overdraft of the groundwater, causing or increasing saltwater intrusion, exceeding the safe yield of the aquifer or related subbasins in the county, causing subsidence, or resulting in uncompensated injury to overlying groundwater users or other users.

#### Butte County Groundwater Management Ordinance

The Butte County Groundwater Management Ordinance was adopted in February of 2007 and includes the development and monitoring of basin management objectives (BMOs) associated with groundwater levels, groundwater quality, and land subsidence. The BMO concept was developed to overcome some of the issues and uncertainties inherent in using terms such as "safe yield" and "overdraft." Briefly stated, the BMOs consist of locally developed guidelines for groundwater management that describe actions to be taken by well owners in response to well-monitoring data. Key concepts of the BMO approach include:

- Defining management areas and subareas within which the differing needs and goals of local users can be reflected.
- Creating a series of objectives or thresholds for critical parameters in the areas listed above.
- Obtaining public input into those parameters.
- Providing for monitoring to evaluate whether objectives are being met and evaluating data associated with that monitoring.
- Allowing for refinement and adaptive management in response to changing user needs, environmental conditions and monitoring data.
- Enforcing regulations if thresholds for basin health are exceeded.

A total of 15 sub-inventory units have been established with individual objectives, monitoring, and reporting parameters determined by local citizens. The Biggs/West Gridley Sub-Inventory Unit (SIU) covers an area of about 34,000 acres. The SIU is bordered by the Richvale SIU to the north, Sutter County to the south, the Thermalito and Butte SIUs to the east, and the Butte Sink SIU to the southwest. BMOs for the Biggs area include maintaining groundwater levels during the peak summer irrigation season (July and August) in all aquifer systems at a level that will assure an adequate and affordable irrigation groundwater supply. It is the intent of this management objective to assure a sustainable agricultural supply of good quality water now and into the future, and to assure the water supply can be utilized without injuring groundwater quality or inducing land subsidence. The management objective is also to assure an adequate groundwater supply of adequate quality from the alluvial aquifer system for all domestic users in the sub-inventory unit (BCDWRC 2012).

#### Butte County Integrated Water Resources Plan

The Butte County Integrated Water Resource Plan (IWRP) documents Butte County's integrated water resources planning process and presents policy recommendations developed through close collaboration with a diverse stakeholder group. The IWRP is intended to provide direction for resource protection and management into the future. Current and future water demands for agricultural, urban, and environmental water uses in the county are discussed, along with descriptions of water resource management options (CDM 2005b).

Butte County Groundwater Management Plan (AB 3030 Plan)

The Butte County Groundwater Management Plan summarizes groundwater level and land subsidence data collected by Butte County and the California Department of Water Resources up to and through October 2003. The report presents locations of wells and extensometers, information related to groundwater level trends, and hydrographs depicting groundwater levels over time. The plan also includes groundwater management objectives, including (CDM 2005a):

- Minimize the long-term drawdown of groundwater levels.
- Protect groundwater quality.
- Prevent inelastic land surface subsidence resulting from groundwater pumping.
- Minimize changes to surface water flows and quality that directly affect groundwater levels or quality.
- Minimize the effect of groundwater pumping on surface water flows and quality.
- Evaluate groundwater replenishment and cooperative management projects.
- Provide effective and efficient management of groundwater recharge projects and areas.

Drought Management Plan

The BCDWRC prepared a Drought Management Plan to reduce short- and long-term impacts of drought to Butte County. The plan includes a procedure for monitoring climatic conditions that may foreshadow drought and formalizes the institutional structure and associated responsibilities that the County will act under during drought. The Drought Management Plan is intended to assist the BCDWRC in minimizing the effect of drought on residents of Butte County through the early detection of drought conditions and the establishment of drought management procedures prior to experiencing the next drought (CDM 2005b).

**3.12.5.3 IMPACTS AND MITIGATION MEASURES**

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. A water service impact is considered significant if implementation of the project would:

- 1) Result in the need for new entitlements or a substantial expansion or alteration to local or regional water supplies that would result in a physical impact to the environment.
- 2) Result in the need for new systems or a substantial expansion or alteration to the local or regional water treatment or distribution facilities that would result in a physical impact to the environment.
- 3) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells

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would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

As previously mentioned, water quality impacts are discussed in Section 3.8, Hydrology and Water Quality.

#### METHODOLOGY

Evaluation of potential water service impacts was based primarily on Butte LAFCo's Municipal Service Review for the City of Biggs (2008), as well as consultation with City staff. A detailed list of reference material used in preparing this analysis can be found at this end of this section and in Section 3.8, Hydrology and Water Quality. This material was then compared to the proposed General Plan's specific water service-related impacts. The analysis includes a comparison of potential water demand and supplies at theoretical buildout of proposed land uses in the city, as well as proposed and anticipated development in the surrounding areas. The reader is referred to Section 3.0 for a discussion of assumed land uses and development conditions associated with the proposed General Plan.

The following proposed General Plan policies and actions address water service:

- Policy CR-6.1 (Water Use Analysis Studies) – Comply with portions of state law that require demonstration of adequate long-term water supply for large development projects (Senate Bills 610 and 221) and support local and regional water management objectives.*
- Policy CR-6.2 (New Development) – Ensure that development can provide water meeting City standards as part of the project approval process.*
- Policy CR-6.3 (Native Landscaping) – Encourage the use of native, drought-tolerant landscaping throughout the city to conserve water and filter runoff.*
- Action CR-6.3.1 (Landscaping Requirements) – Revise landscaping requirements to include drought-tolerant, low-maintenance plants.*
- Action CR-6.3.2 (AB 1881) – Adopt a locally acceptable water efficiency landscape ordinance to address the requirements of AB 1881.*
- Policy CR-6.4 Continue to implement the requirements of California Green Building Standards Code.*
- Action CR-6.4.1 Investigate and implement, as determined appropriate, programs to supply information, services, and equipment to homeowners and local businesses to conserve water resources within the city.*
- Policy CR-6.5 Participate in regional groundwater basin planning and regional water-management planning efforts to ensure future demand for water does not overdraft the groundwater supply.*
- Policy CR-6.6 Participate in local and regional discussions as to whether exportation of local water supplies to agencies or jurisdictions outside of the northern Sacramento Valley should be allowed or discouraged.*

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- 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 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-1.3.1 (Reimbursement Agreements) – Reimbursement agreements shall be established, consistent with the Subdivision Map Act, to ensure fair share costing.
- Action PFS-1.3.2 (Oversizing of Infrastructure) – Development projects benefitting from oversized facilities shall be required to pay reimbursement fees consistent with their fair share cost of improvements.
- 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 and project approval shall be granted only after capacity to provide required services is confirmed by the City.
- Action PFS-1.4.1 (Utility Sizing) – Establish procedures for requiring facilities to be designed and constructed to meet ultimate facility demands described within the City's facility master plans.
- Policy PFS-2.1 (Water System) – Provide a high-quality, cost-efficient municipal water supply and distribution system that meets State Department of Health guidelines and standards.
- Policy PFS-2.2 (Fire Suppression) – Ensure that water volumes and pressures are sufficient for emergency response and fire suppression demands.
- Action PFS-2.2.1 (Water System Capacity) – New developments shall provide for sufficient water supply capacity to serve the domestic and fire protection needs of the proposed use based upon approved City standards.
- Policy PFS-2.3 (Water System Connectivity) – Where possible, water systems shall be constructed to provide looped water systems to increase water system efficiency and reliability.

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- Action PFS-2.3.1 *(Water System Efficiency) – When possible, eliminate dead-end water service lines to enhance water system reliability and efficiency.*
- Policy PFS-2.4 *(Water Master Plan) – Periodically update the City's Water Master Plan to reflect changes to the General Plan Land Use Diagram, water use and regulatory changes, or other circumstances.*
- Action PFS-2.4.1 *(Water System Maintenance) – Develop and maintain a regular program for systematically replacing deteriorated or deficient water lines consistent with the adopted Water Master Plan.*
- Policy PFS-2.5 *(Aquifer Protection) – Work to protect the quality and capacity of the City's aquifer.*
- Action PFS-2.5.1 *(Groundwater Protection) – Oppose regional sales and transfers of local groundwater and actively participate in local and regional discussions for the protection of groundwater resources.*
- Action PFS-2.5.2 *(Groundwater Planning) – Support regional efforts to evaluate and quantify (where possible) the regional groundwater supply.*

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions provide enforceable requirements and/or performance standards that address water supply and groundwater and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

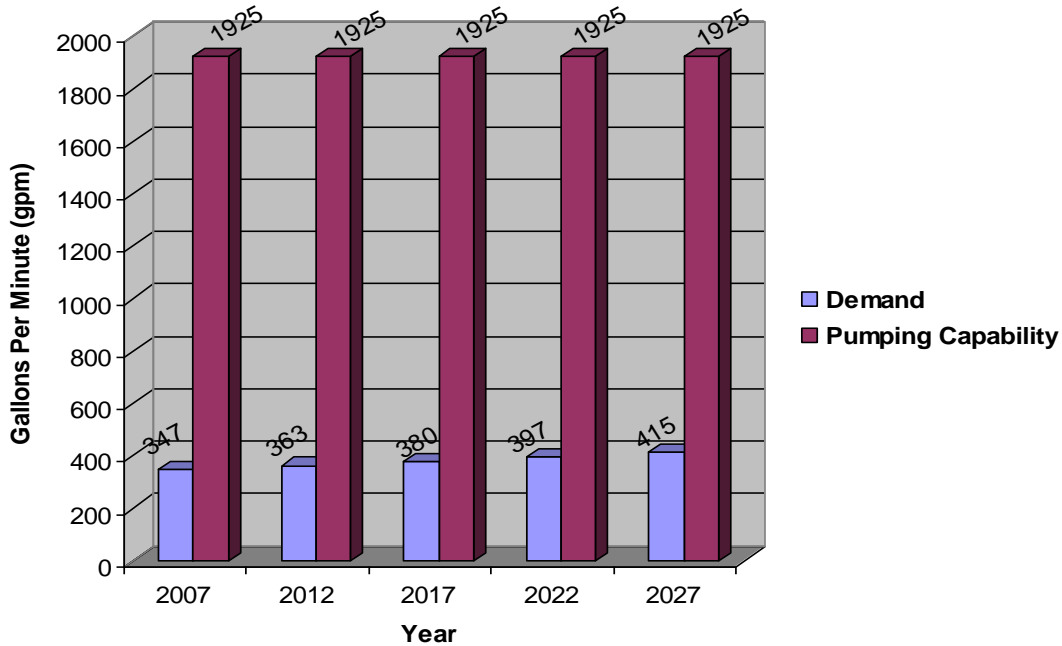
#### Water Supply Demand and Environmental Effects (Standards of Significance 1 and 3)

**Impact 3.12.5.1** Implementation of the proposed General Plan would increase demand for water supply and thus require increased groundwater production, which could result in significant effects on the physical environment. However, adequate groundwater supply sources exist, and proposed General Plan policy provisions would ensure adequate water service. This is considered a **less than significant** impact.

The Municipal Service Review for the City of Biggs (Butte LAFCo 2008) illustrates the expected growth in water demand based on a projected population growth rate of 0.9 percent annually through the year 2027 (see **Figure 3.12.5-1**). As shown in **Figure 3.12.5.1**, the City would have more than enough pumping capability to serve an increase in population assuming a 0.9 percent average annual growth rate, which would equate to 2,106 residents by 2035. Under this water demand assumption, the average resident of Biggs would require the delivery of 0.197 gallons per minute (gpm) ( $415 \text{ gpm} / 2,106 \text{ residents} = 0.197 \text{ gpm}$ ).



FIGURE 3.12.5-1  
PROJECTED WATER DEMAND 2007–2027



Source: Butte LAFCo 2008

A projected average growth rate of 3.3 percent annually would result in an estimated increase of 2,367 people for a total of 4,059 in Biggs in 2035. Full theoretical buildout of the proposed General Plan Land Use would accommodate an increase of 15,922 people for a total population of 17,614. Full theoretical buildout is considered highly unlikely and if achieved, would almost certainly occur well beyond the year 2035. While it is important to note that the proposed General Plan does not include any policy provisions that require that its growth rate projection of 3.3 percent annually or the theoretical buildout potential be attained, this impact analysis is based on the development anticipated at theoretical buildout of the proposed Land Use Diagram in order to account for the most conservative water demand scenario.

Realization of full theoretical buildout by 2035 would result in a projected annual average population growth rate of 11.5 percent. Applying the same projected water demand ratio employed by the Municipal Service Review (Butte LAFCo 2008) and its assumption of a 0.9 percent average annual growth rate to the full theoretical buildout scenario (11.5 percent average annual growth rate) would result in a projected water demand of 3,470 gpm (17,614 residents x 0.197 gpm = 3,470 gpm).

As previously stated, in November 2008, the City adopted a Water Master Plan that identified nine priority projects needed to bring the City's water system up to date. The City has since completed each of those improvements, resulting in the achievement of having sufficient capacity to accommodate the demands of existing residents along with making sufficient water resources available to address the potential growth of the community in the coming planning horizon. Additionally, the recent improvements to the City's water system have resulted in a significant increase in water pressure for domestic and fire flow purposes. For instance, with the completed upgrades to the three City-owned wells, the combined pumping capacity is 3,500 gpm (Butte LAFCo 2008). This pumping capacity would be just enough to accommodate full theoretical buildout of the proposed General Plan.

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However, it is possible that future growth in Biggs would require additional groundwater beyond that discussed above in order to account for adequate pressure for fire flows which would be necessary to ensure fire protection for future development. In this case, more wells would need to be added to the system. Proposed Action PFS-2.2.1 would require new developments to provide for sufficient water supply capacity to serve the domestic and fire protection needs of the proposed use based upon approved City standards. Similarly, Policy CR-6.2 would ensure that development can provide water meeting City standards as part of the project approval process.

#### **Environmental Effects Associated with Increased Groundwater Production**

Generally, increased groundwater production has the potential to result in a lowering of groundwater levels. As previously discussed, the city is located in an unadjudicated groundwater basin for which no safe yield has been established. However, according to well level records, in the portion of the subbasin located in the southern part of Butte County, which includes the Biggs Planning Area, groundwater level fluctuations for composite wells average about 4 feet during normal years and up to 10 feet during drought years (DWR 2004). The groundwater fluctuations for wells constructed in the confined and semiconfined aquifer system average 4 feet during normal years and up to 5 feet during drought years (DWR 2004). Despite seasonal variations, long-term groundwater levels of the East Butte Subbasin have remained relatively constant. The estimated storage capacity to a depth of 200 feet is approximately 3,128,959 acre-feet, and estimates of groundwater extraction for agricultural, municipal and industrial, and environmental wetland uses are 104,000, 75,500, and 1,300 acre-feet, respectively. Deep percolation of applied water is estimated to be 126,000 acre-feet (DWR 2004). The Department of Water Resources has not identified the East Butte Subbasin as overdrafted in its DWR Bulletin 118. Also, there has been no indication of any existing or anticipated overdraft condition in studies prepared by other entities.

Proposed General Plan Action PFS-2.5.2 requires the City to support regional efforts to evaluate and quantify (where possible) the regional groundwater supply. This effort could allow for the establishment of a water supply budget and define the specific measures that need to be implemented to ensure sustainable levels of groundwater quantity and quality. Since the sustainable yield of the basin is not currently known, this policy provides for continued regular evaluation of groundwater levels and availability. Furthermore, Policy CR-6.5 would require City participation in regional groundwater basin planning and regional water-management planning efforts to ensure future demand for water does not overdraft the groundwater supply.

In addition, future growth allowed under the proposed General Plan would not impact significant groundwater recharge areas and would result in increased water use efficiency. The DWR (2004) identifies the area just south of the Thermalito Afterbay, which is outside of the proposed Biggs Planning Area, as a significant recharge area for the East Butte subbasin. The proposed General Plan would result in increased water use efficiency because the proposed General Plan Land Use Diagram (see **Figure 2.0-2** in Section 2.0, Project Description) designates residential and nonresidential land uses in some areas that are currently in agricultural use. The conversion of irrigated farmland to residential and other urban land uses would serve to reduce water usage from current conditions. In addition, policies and development densities proposed in the General Plan promote compact infill and mixed-use development and the establishment of water conservation measures in building, landscaping, and municipal operations, all of which would improve water use efficiency over current conditions. For instance, proposed Action CR-6.3.1 would revise landscaping requirements to include drought-tolerant, low-maintenance plants, and Policy CR-6.4 proposes to continue to implement the requirements of California Green Building Standards Code, which requires new buildings to reduce water consumption by

20 percent. Also, Action PFS-2.3.1 states that when possible, dead-end water service lines will be eliminated to enhance water system reliability and efficiency.

For these reasons, a significant lowering of groundwater levels in association with the proposed General Plan is not anticipated. Water demand would increase during a single dry year and multiple dry years as compared to normal years due to maintenance of landscape and other high water uses that would normally be supplied by precipitation. Since Biggs is located in an unadjudicated groundwater basin and withdrawals are not limited, the City assumes the demand would be met by additional pumping from the groundwater wells. However, continued heavy pumping during drought conditions would result in lowering of groundwater levels. Therefore, conservation methods such as those described above are needed to reduce demand on the basin during multiple dry years.

As described, water supply demand for Biggs under the most conservative scenario can be met by the existing supply. Policies in the proposed General Plan provide for continued regular evaluation of groundwater levels. Theoretical buildout of the proposed General Plan would not impact significant groundwater recharge areas (lands south of the Thermalito Afterbay) and would result in increased water use efficiency. Thus, this impact is considered **less than significant**.

### Water Supply Infrastructure (Standard of Significance 2)

**Impact 3.12.5.2** Implementation of the proposed General Plan would increase demand for water supply and thus require additional water supply infrastructure that could result in a physical impact to the environment. This is considered a **less than significant** impact.

As stated under Impact 3.12.5.1, the highest potential growth scenario for Biggs would result in a projected water demand of 3,470 gpm, and with the completed upgrades to the three City-owned wells, the combined pumping capacity is 3,500 gpm. However, it is possible that future growth would require additional groundwater beyond 3,500 gpm in order to account for adequate pressure for fire flows that would be necessary to ensure fire protection for future development. In this case, more wells would need to be added to the system.

The provision of expanded water service to the city under the proposed General Plan would require the expansion and development of new water infrastructure facilities that could result in physical effects to the environment. Since groundwater withdrawals are not limited, the theoretical water supply for the City of Biggs is the total design capacity of all the active wells, which is currently 3,500 gpm. Future well additions could increase the total capacity in the future. However, in order to meet the average day and maximum day requirements of new customers under the proposed General Plan, new wells, booster stations, and surface storage facilities may need to be constructed.

Implementation of the proposed General Plan would also allow for development in areas currently not served by water supply transmission infrastructure. Development of these areas would require the extension of new water transmission pipelines and other associated infrastructure. Water supply infrastructure would be upsized and expanded in areas of new development as such development is proposed.

Proposed Action PFS-2.2.1 would require new developments to provide for sufficient water supply capacity to serve the domestic and fire protection needs of the proposed use based upon approved City standards. Similarly, Policy CR-6.2 would ensure that development can

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provide water meeting City standards as part of the project approval process. Implementation of these General Plan provisions would ensure that water supply and delivery systems would be available in time to meet the demand created by new development (prior to issuance of building permits). The site-specific environmental impacts associated with water supply infrastructure improvements needed to serve new development would be determined through project-level CEQA analysis at such time as they are proposed for development and their design and alignment are known. Potential environmental impacts associated with upgrades and improvements to water supply transmission facilities are shown in **Table 3.12.5-1** below.

**TABLE 3.12.5-1  
TYPES OF POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH  
NEW WATER SUPPLY FACILITIES**

Types of Potentially Affected Resources	Related and Potential Impacts
Geology and Soils	Increase in erosion and sedimentation from construction activities; geologic hazards could cause problems for new facilities and their operators if they are not sited carefully.
Water Quality	Changes in waterway temperature, dissolved oxygen, turbidity, total suspended solids, and other water quality parameters of concern during construction and operation of new facilities.
Wetlands	Changes in the amount or functions and values of various types of wetlands from the construction of new facilities.
Biological Resources Including Special-Status Species	Disturbance to rare plants and their habitat and other types of vegetation through disturbance by construction activities.
Wildlife Resources including Special-Status Species	Changes in the amount and quality of affected wildlife habitat from construction activities.
Visual Resources	Short- and long-term direct visual impacts associated with construction activities (distribution pipelines, storage tanks).
Agriculture	Permanent direct loss of agricultural productivity (disruption pipeline construction and operation).
Noise	Adverse noise impacts during the operation of expanded booster pump stations. Noise (direct) during construction (distribution pipelines, storage tanks).
Cultural Resources	Historic, prehistoric, and ethnographic resources could be affected by the construction and maintenance of new facilities.
Public Utilities	The routing and siting of new project facilities could interfere with the operation or maintenance of existing or planned public utilities, including communication and energy infrastructure.
Air Quality	Air quality emissions (direct) of oxides of nitrogen (NOx) during construction (distribution pipelines).
Transportation	Local roads would experience traffic increases during construction.
Public Health and Safety	Construction activities could create some safety hazards. Temporary direct disruption of property access during distribution pipeline construction.
Growth-Inducing Effects	New water infrastructure would likely cause growth-inducing impacts.

Project-level CEQA review of future water supply infrastructure would identify and mitigate significant environmental impacts. Implementation of the proposed General Plan would ensure that water supply and delivery systems would be available in time to meet the demand created

by new development. Therefore, impacts associated with increased demand for water supply infrastructure are considered **less than significant**.

### 3.12.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

The cumulative setting for water services, including supplies and related infrastructure, consists of the Biggs Planning Area, as well as all other areas obtaining water from the Sacramento Valley Groundwater Basin. The Sacramento Valley Groundwater Basin lies between the Coast Range to the west and the Cascade and Sierra Nevada ranges to the east, and extends from Red Bluff in the north to the Delta in the south, covering 4,900 square miles. It covers parts of Sacramento, Placer, Solano, Yolo, Yuba, Colusa, Tehama, Glenn, and Butte counties (CDM 2005a).

The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development in the Biggs Planning Area and the Sacramento Valley Groundwater Basin. Section 3.0 of this DEIR lists regional development projects that would be included in the cumulative setting.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Water Supply Impacts

**Impact 3.12.5.3** Implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, would increase the cumulative demand for water supplies and related infrastructure. The project's contribution to cumulative water supply and infrastructure impacts is considered **less than cumulatively considerable**.

As noted under Impact 3.12.5.1, it is anticipated that water supplies would be adequate to serve the most conservative growth scenario allowed under the proposed General Plan. Future growth in Butte County and the surrounding region would further contribute to the need for additional groundwater supply to be drawn from the Sacramento Valley Groundwater Basin. As previously discussed, the basin is an unadjudicated groundwater basin and no safe yield has been established. However, groundwater levels have remained consistent over time, and long-term historical data shows that well levels seasonally and annually fluctuate with no significant difference in the well levels over the long term. Therefore, it is assumed that an adequate supply will be available to meet cumulative demand, and it is not anticipated that growth in the cumulative setting would result in significant groundwater level declines.

Regional growth would also result in the need for new water supply infrastructure. However, it is anticipated that such infrastructure would be evaluated on a project-by-project basis and that any necessary improvements would be required to be installed by developers as part of individual developments. The potential environmental effects associated with additional water supply infrastructure include, but are not limited to, air quality, agricultural resources, temporary property access disruption, land use, noise, traffic, visual resources, and odor, as shown in **Table 3.12.5-1** above.

Implementation of the proposed General Plan, as well as future project-level CEQA review, would require the City to ensure that new development would not proceed without adequate water supply and necessary infrastructure. The maximum future growth allowed under the

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proposed General Plan would not impact significant groundwater recharge areas and would result in increased water use efficiency in the Biggs Planning Area. In addition, proposed General Plan policies and actions include extensive requirements for conservation measures that would further reduce the proposed General Plan's contribution to cumulative water supply impacts. The BCDWRC is actively working to manage and conserve groundwater and maintain groundwater levels in the cumulative setting. For example, the Butte County Groundwater Management Ordinance includes the development and monitoring of basin management objectives to maintain groundwater levels adequate to sustain municipal, agricultural, and domestic use. In addition, the Butte County Integrated Water Resource Plan discusses current and future water demands and water resource management options, and the Butte County Groundwater Management Plan includes groundwater management objectives. Therefore, as it is anticipated that groundwater supply would be available to serve cumulative development without overdraft of the basin, this impact is considered **less than cumulatively considerable**.

### 3.12.6 WASTEWATER SERVICES

#### 3.12.6.1 EXISTING SETTING

The City currently provides wastewater services to approximately 670 residential, commercial, and municipal accounts. The majority of the sewer connections in the city belong to residential users. The City collected and treated approximately 100 million gallons of wastewater in 2007. The current average daily dry weather (ADDW) demand is approximately 0.27 million gallons per day (mgd). The hydraulic capacity of the current wastewater treatment plant is 1.3 mgd peak wet weather flow and 0.38 mgd ADDW, the latter of which is the permitted discharge as reported by the State Water Resources Control Board (Biggs 2010).

#### WASTEWATER COLLECTION AND CONVEYANCE FACILITIES

A comprehensive Sewer Master Plan was developed by the City in 2003. This document states that most of the wastewater collection system was installed between 1920 and 1950 and is at or nearing the end of its planned life cycle. The plan indicates that the collection system occasionally experiences constraints due to infiltration/inflow issues in various locations, pipe deterioration due to age, root intrusion, and grease buildup. To address these issues, the City has undertaken numerous projects to address aging pipes and infiltration/inflow concerns which have resulted in a system that maintains its ability to responsibly collect and treat wastewater. Despite these projects, the Master Plan recommends the continual rehabilitation of the City's wastewater collection system (Biggs 2010).

The Sewer Master Plan also addressed the City's wastewater treatment plant. The treatment plant was originally built in the 1960s and is a Regional Water Quality Control Board (RWQCB) level 2 treatment facility. The Sewer Master Plan indicates that the treatment plant is in excellent condition following a major facility upgrade in 2000–2001. The plant currently has more than adequate capacity to serve the wastewater treatment needs of the city, as it is currently at about 65 percent capacity, 0.27 mgd average dry weather flow (ADDW) and can handle up to approximately 0.32 mgd ADDW (85 percent capacity) before the City will need to begin the process of an expansion (Biggs 2010). The City is currently exploring options to further modify the plant and its discharge methods to continue to meet and exceed state requirements while providing a high level of service to system users. Currently, the City is in the planning stages of preparing for a permit upgrade, which in all likelihood will require significant changes to the treatment plant processes and to the water quality of effluent.

In 2009, the City had the entire sewer main collection system camera-inspected, de-rooted as needed, and repaired where breaches were identified. At this time, infiltration and inflow into sewer laterals remains a concern for the City.

Also in 2009, the City submitted an application to the US Department of Agriculture (USDA) for a \$9 million wastewater treatment plan improvement project, which involves the installation of equipment to the City's existing wastewater treatment plant in an effort to meet all current and future wastewater standards, as well as the proposed replacement of aging and substandard sewer collection infrastructure. Additionally, the City has a pipeline replacement program that sets aside money for repairs of the collection system.

At the time of preparation of this DEIR, the City is examining the environmental effects of changing the waste discharge method from a direct discharge facility (into Lateral K) to a land discharge facility. This project, known as the Biggs Wastewater Treatment Plan Enhancement Project, involves the analysis of two potential effluent land application locations located immediately adjacent to the City's existing wastewater treatment plant site.

### 3.12.6.2 REGULATORY FRAMEWORK

#### FEDERAL

##### **Clean Water Act**

The Clean Water Act (CWA) is the primary federal legislation governing surface water quality protection. The act employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and pH; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. The CWA regulates both direct and indirect discharges (EPA 2009).

##### National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) program, Section 402 of the CWA, controls direct discharges into navigable waters. Direct discharges, or point source discharges, are from sources such as pipes and sewers. NPDES permits, issued by either the EPA or an authorized state/tribe contain industry-specific, technology-based, and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. (The EPA has authorized 40 states to administer the NPDES program.) A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent and the permit will then set forth the conditions and effluent limitations under which a facility may make a discharge (EPA 2009).

##### General Pretreatment Regulations

Another type of discharge that is regulated by the CWA is discharge that goes to a publicly owned treatment works (POTW). POTWs collect wastewater from homes, commercial buildings,

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and industrial facilities and transport it via a collection system to the treatment plant. Here, the POTW removes harmful organisms and other contaminants from the sewage so it can be discharged safely into the receiving stream. Generally, POTWs are designed to treat domestic sewage only. However, POTWs also receive wastewater from industrial (nondomestic) users. The General Pretreatment Regulations establish responsibilities of federal, state, and local government, industry, and the public to implement pretreatment standards to protect municipal wastewater treatment plants from damage that may occur when hazardous, toxic, or other wastes are discharged into a sewer system and to protect the quality of sludge generated by these plants. Discharges to a POTW are regulated primarily by the POTW itself, rather than the state/tribe or the EPA (EPA 2009).

STATE

#### **Porter-Cologne Water Quality Act**

In 1969, the California legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The act established the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the SWRCB to establish water quality principles and guidelines for long-range resource planning including groundwater and surface water management programs and control and use of recycled water.

#### State Water Resources Control Board

Created by the California legislature in 1967, the five-member State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine Regional Water Quality Control Boards located in the major watersheds of the state. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters (SWRCB 2012).

The SWRCB is responsible for implementing the Clean Water Act and issues NPDES permits to cities and counties through Regional Water Quality Control Boards (RWQCBs). The City of Biggs is located in a portion of the state that is regulated by the Central Valley.

#### Waste Discharge Requirements Program

In general, the Waste Discharge Requirements (WDR) Program (sometimes referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDR Program also includes the discharge of wastes classified as inert, pursuant to Section 20230 of Title 27. Several SWRCB programs are administered under the WDR Program, including the Sanitary Sewer Order and recycled water programs (SWRCB 2012).



### *Sanitary Sewer Overflow Program*

A sanitary sewer overflow (SSO) is any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease and can pollute surface water and groundwater, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters. To provide a consistent, statewide regulatory approach to address sanitary sewer overflows, the SWRCB adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Order) on May 2, 2006. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Resources Control Board's online SSO database. All public agencies that own or operate a sanitary sewer system that is comprised of more than 1 mile of pipes or sewer lines which conveys wastewater to a publicly owned treatment facility must apply for coverage under the Sanitary Sewer Order (SWRCB 2012).

### *Recycled Water Policy*

To establish uniform requirements for the use of recycled water, the SWRCB adopted a statewide Recycled Water Policy on February 3, 2009. The purpose of the policy is to increase the use of recycled water from municipal wastewater sources that meets the definition in Water Code Section 13050(n), in a manner that implements state and federal water quality laws. The policy describes permitting criteria that are intended to streamline the permitting of the vast majority of recycled water projects. The intent of this streamlined permit process is to expedite the implementation of recycled water projects in a manner that implements state and federal water quality laws while allowing the Regional Water Quality Control Boards to focus on projects that require substantial regulatory review due to unique site-specific conditions (SWRCB 2012).

### *Statewide General Permit for Landscape Irrigation Uses of Recycled Water*

The SWRCB is also developing a statewide general permit for landscape irrigation uses of recycled water (General Permit). The intent of the new law is to develop a uniform interpretation of state standards to ensure the safe, reliable use of recycled water for landscape irrigation uses, consistent with state and federal water quality law, and for which the California Department of Public Health has established uniform statewide standards. The new law is also intended to reduce costs to producers and users of recycled water by streamlining the permitting process for using recycled water for landscape irrigation.

## **Department of Public Health**

The California Department of Public Health (formerly Department of Health Services) is responsible for establishing criteria to protect public health in association with recycled water use. The criteria issued by this department are found in the California Code of Regulations, Title 22, Division 4, Chapter 3, entitled Water Recycling Criteria. Commonly referred to as Title 22 Criteria, the criteria contain treatment and effluent quality requirements that vary based on the proposed type of water reuse. Title 22 sets bacteriological water quality standards on the basis of the expected degree of public contact with recycled water. For water reuse applications with a high potential for the public to come into contact with the reclaimed water, Title 22 requires disinfected tertiary treatment. For applications with a lower potential for public contact, Title 22

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requires three levels of secondary treatment, basically differing by the amount of disinfectant required (SBWR 2010).

Title 22 also specifies the reliability and redundancy for each recycled water treatment and use operation. Treatment plant design must allow for efficiency and convenience in operation and maintenance and provide the highest possible degree of treatment under varying circumstances. For recycled water piping, the department has requirements for preventing backflow of recycled water into the public water system and for avoiding cross-connection between the recycled and potable water systems (SBWR 2010).

The Department of Public Health does not have enforcement authority for the Title 22 criteria; instead the RWQCBs enforce them through enforcement of their permits containing the applicable criteria.

#### REGIONAL

#### **Central Valley Regional Water Quality Control Board**

The Central Valley Regional Water Quality Control Board (CVRWQCB) provides planning, monitoring, and enforcement techniques for surface and groundwater quality in the Central Valley region, including Biggs and the surrounding area. The primary duty of the RWQCB is to protect the quality of the waters in the region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific groundwater or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic, and industrial waste discharges.

#### Water Reuse Requirements (Permits)

The CVRWQCB issues water reuse requirements (permits) for projects that reuse treated wastewater. These permits include water quality protections as well as public health protections by incorporating criteria established in Title 22. The CVRWQCB may also incorporate requirements into the permit in addition to those specified in Title 22. These typically include periodic inspection of recycled water systems, periodic cross-connection testing, periodic training of personnel that operate recycled water systems, maintaining a database and/or permitting individual use sites, periodic monitoring of recycled water and groundwater quality, and periodic reporting.

#### Waste Discharge Requirements

The CVRWQCB typically requires a Waste Discharge Requirement (WDR) permit for any facility or person discharging or proposing to discharge waste that could affect the quality of the waters of the State, other than into a community sewer system. Those discharging pollutants (or proposing to discharge pollutants) into surface waters must obtain an NPDES permit from the CVRWQCB. The NPDES permit serves as the WDR permit. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land) a Report of Waste Discharge must be filed with the RWQCB in order to obtain a WDR permit. For specific situations, the CVRWQCB may waive the requirement to obtain a WDR permit for discharges to land or may determine that a proposed discharge can be permitted more effectively through enrollment in a general NPDES permit or general WDR permit.

LOCAL

**Butte County Environmental Health Division**

In Butte County, septic systems are regulated by the Environmental Health Division. The County recently adopted the Butte County Individual On-Site Wastewater Ordinance, which applies to unincorporated portions of Butte County not served by municipal wastewater treatment and disposal facilities. The ordinance updates and replaces existing County regulations in order to be consistent with applicable requirements of the Central Valley RWQCB Basin Plan and to incorporate other changes based on the current state of knowledge and advances in practices and technologies for on-site wastewater treatment and disposal. Notably, the ordinance (a) implements more standardized procedures for soil and site evaluations; (b) incorporates new requirements pertaining to the vertical separation between the bottom of dispersal systems and groundwater or restrictive layers; (c) provides a broader range of treatment and dispersal designs; and (d) institutes a program to assure ongoing maintenance of certain types of systems.

There are currently less than half a dozen septic systems operating with Biggs and proposed General Plan Policy PFS-3.2 states that new septic tank systems will not be allowed except for special cases to be determined by City policy makers.

**3.12.6.3 IMPACTS AND MITIGATION MEASURES**

STANDARDS OF SIGNIFICANCE

The following standards are based on State CEQA Guidelines Appendix G. A significant impact to wastewater service would occur if implementation of the proposed General Plan would:

- 1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- 2) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- 3) Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

METHODOLOGY

Evaluation of potential impacts on wastewater facilities and services was based primarily on Butte LAFCo's Municipal Service Review for the City of Biggs, as well as consultation with City staff and review of other relevant literature. A detailed list of reference material used in preparing this analysis can be found at the end of this section. Wastewater demand projections, as well as infrastructure conditions and needs, discussed in these documents were compared to potential impacts resulting from growth anticipated in association with the proposed General Plan and whether those impacts would have a significant effect on the physical environment.

The following proposed General Plan policies and actions address wastewater service:

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- 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 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-1.3.1 (Reimbursement Agreements) – Reimbursement agreements shall be established, consistent with the Subdivision Map Act, to ensure fair share costing.
- Action PFS-1.3.2 (Oversizing of Infrastructure) – Development projects benefitting from oversized facilities shall be required to pay reimbursement fees consistent with their fair share cost of improvements.
- 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 and project approval shall be granted only after capacity to provide required services is confirmed by the City.
- Action PFS-1.4.1 (Utility Sizing) – Establish procedures for requiring facilities to be designed and constructed to meet ultimate facility demands described within the City's facility master plans.
- Policy PFS-3.1 (Wastewater System) – Maintain the City's wastewater collection and treatment system such that it meets the requirements of the Regional Water Quality Control Board (RWQCB).
- Policy PFS-3.2 (Wastewater Treatment) – Require all new development to connect to the City wastewater system. Septic tank systems will not be allowed except for special cases defined by City ordinance.
- Policy PFS-3.3 (Wastewater Master Plan) – Update the City's Wastewater Master Plan to identify infrastructure needs and establish a plan to construct the improvements. The Master Plan should include specific measures to reduce groundwater infiltration and the replacement of aging facilities.

- Action PFS-3.3.1 *(Wastewater System Monitoring)* – Actively monitor operation of the sewage collection and treatment system to determine when upgrading or expansion of the system is necessary to serve development demands.
- Action PFS-3.3.2 *(Wastewater System Maintenance)* – Develop and implement a regular program for inspecting, maintaining and replacing deteriorated or deficient sewer lines.
- Policy PFS-3.4 *(Wastewater Treatment Capacity)* – Increase wastewater treatment capacity by reducing wet weather and shallow groundwater inflow and infiltration.
- Action PFS-3.4.1 *(Infiltration and Inflow)* – Develop and implement a program to identify, monitor and address areas of excessive wet weather or shallow groundwater infiltration into the City's wastewater system.

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions provide enforceable requirements and/or performance standards that address wastewater service and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

#### **Wastewater Capacity, Conveyance, Treatment, and Discharge Requirements (Standards of Significance 1, 2, and 3)**

**Impact 3.12.6.1** Implementation of the proposed General Plan would substantially increase wastewater flows and require additional infrastructure and may require additional treatment capacity to accommodate anticipated demands that would result in a physical effect on the environment. Additionally, the General Plan could result in wastewater discharge that would exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board. This impact is considered **less than significant**.

Implementation of the proposed General Plan is expected to result in population growth that would increase wastewater flows which would need to be treated and ultimately disposed. Currently, treated wastewater flows are discharged into Lateral K, a constructed agricultural drainage channel. Lateral K traverses the Biggs Planning Area in a southwesterly direction until it reaches Butte Creek, to the west of Biggs. However, at the time of preparation of this DEIR, an alternative wastewater disposal method is under environmental review, briefly described above, which would involve land application disposal.

Certified operators in the City's Public Works Department maintain the system daily and take weekly samples to testing labs. In 2007, the City received a renewed five-year license to operate the treatment plant from the Central Valley Regional Water Quality Control Board. The treatment facility is currently in compliance with state regulations and operates under a waste discharge permit and NPDES permit and would be required by the CVRWQCB to remain in compliance after any future expansion of flow capacity. Therefore, the proposed General Plan is not expected to exceed wastewater treatment requirements or orders of the Central Valley Regional Water Quality Control Board.

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As stated above, the City's wastewater treatment plant currently has an average flow of 0.32 mgd ADDW (85 percent capacity) before the City will need to begin the process of an expansion, with a peak flow of 0.38 mgd ADDW and 1.3 mgd peak wet weather flow.

The Municipal Service Review for the City of Biggs describes the expected wastewater treatment capacity needed based on a projected population growth rate of 0.9 percent annually through the year 2027 as 0.31 mgd ADDW (Butte LAFCo 2008). Therefore, under the assumption of a 0.9 percent average annual growth rate, which would equate to 2,106 residents by 2035, the average resident of Biggs would require the treatment of 147.1 gallons per day (0.31 mgd/2,106 residents = 0.0001471 mgd = 147.1 gallons daily).

A projected average growth rate of 3.3 percent annually would result in an estimated increase of 2,367 people for a total of 4,059 in Biggs in 2035. Full theoretical buildout of the proposed General Plan Land Use would accommodate an increase of 15,922 people for a total population of 17,614. Full theoretical buildout is considered highly unlikely and if achieved, would almost certainly occur well beyond the year 2035. While it is important to note that the proposed General Plan does not include any policy provisions that require that its growth rate projection of 3.3 percent annually or the theoretical buildout potential be attained, this impact analysis is based on the development anticipated at theoretical buildout of the proposed Land Use Diagram in order to account for the most conservative wastewater disposal demand scenario.

Realization of full theoretical buildout by 2035 would result in a projected annual average population growth rate of 11.5 percent. Applying the same projected wastewater treatment demand ratio as employed by the Municipal Service Review and its assumption of a 0.9 percent average annual growth rate to the full theoretical buildout scenario (11.5 percent average annual growth rate) would result in a projected wastewater treatment demand of 2.6 mgd (17,614 residents x 147.1 gallons daily = 2,591,019 gallons daily (2.6 mgd)).

Therefore, accounting for the most conservation population growth scenario allowed under the proposed General Plan would require additional treatment capacity to serve anticipated development under the proposed General Plan, as currently (2013), the plant can handle up to approximately 0.32 mgd ADDW (85 percent capacity) before the City will need to begin the process of an expansion (Biggs 2010), which is less than the projected 2.6 mgd demand at full theoretical buildout. Additional treatment capacity would require expansion of the wastewater treatment plant.

Potential environmental effects associated with the expansion of the City's wastewater treatment plant include, but are not limited to, construction and operational air quality and noise effects, biological resource impacts to protected habitat, geologic and hydrologic impacts from construction and operation, and growth inducement. These environmental effects would likely occur at the existing wastewater treatment plant site as well as at off-site facilities such as reclamation facilities. However, no specific facility expansion designs have been developed to date that would further indicate the potential environmental effects.

In addition, increased wastewater flows would exacerbate existing deficiencies in the wastewater collection and conveyance system, which could result in inadequate wastewater conveyance. The costs to correct existing deficiencies would be fully funded from monthly service charges. All other buildout improvements would be fully funded by sewer connection fees or constructed as part of land development. In addition, wastewater conveyance infrastructure would need to be expanded to areas not currently served by the city's sanitary sewer system. The timing and specific location of these improvements is not yet known. Proposed General Plan Policy PFS-1.2 and associated Action PFS-1.2.1 would ensure the

development of quality infrastructure to meet community needs at the time it is needed. Action PFS-1.2.2 would establish a 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. In addition, proposed Policy PFS-1.4 mandates that prior to approval of new development projects, applicants shall specify project-related demands for sewer, water, and electrical services; project approval will be granted only after capacity to provide required services is confirmed by the City. Proposed Action PFS-1.3.1 requires the establishment of reimbursement agreements, consistent with the Subdivision Map Act, to ensure fair share costing.

The site-specific environmental impacts associated with the wastewater infrastructure improvements needed to serve new development would be determined through project-level CEQA analysis at such time as they are proposed for development and their design and alignment are known. **Table 3.12.6-1** identifies types of potential project-specific environmental impacts from further plant expansion of the wastewater treatment plant and the improvement and/or extension of wastewater conveyance infrastructure. However, the potential programmatic environmental impacts that could be associated with expansion of these facilities have been identified and disclosed in this Draft EIR as part of overall development of the Biggs Planning Area.

**TABLE 3.12.6-1  
TYPES OF POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH  
NEW WASTEWATER TREATMENT AND SUPPLY INFRASTRUCTURE**

Types of Potentially Affected Resources	Related and Potential Impacts
Geology and Soils	Increase in erosion and sedimentation from construction activities; geologic hazards could cause problems for new facilities and their operators if they are not sited carefully.
Wetlands	Changes in the amount or functions and values of various types of wetlands from the construction of new facilities.
Biological Resources Including Special-Status Species	Disturbance to rare plants and their habitat and other types of vegetation from construction activities.
Wildlife Resources Including Special-Status Species	Changes in the amount and quality of affected wildlife habitat from construction activities.
Visual Resources	Short-term direct visual impacts associated with construction activities (trunk sewers). Addition of new project facilities could affect the visual environment. New pipelines and pumping stations near or in residential areas or highly visited areas would cause negative impacts. Adverse visual impacts during the construction and operation of new or expanded wastewater infrastructure.
Agriculture	Permanent direct loss of agricultural productivity (trunk sewer construction, operation and percolation ponds) and potential indirect conversion of agricultural land by expansion of urban services through agricultural lands within the Biggs Planning Area (sewer mains). Some irrigated land or grazing land could be taken out of production where project conveyance facilities need to be located to accommodate growth.
Cultural Resources	Historic, prehistoric, and ethnographic resources could be affected by the construction and maintenance of new facilities.
Public Utilities	The routing and siting of new project facilities could interfere with the operation or maintenance of existing or planned public utilities, including communication and

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Types of Potentially Affected Resources	Related and Potential Impacts
	energy infrastructure.
Air Quality and Noise	Air quality emissions (direct) of oxides of nitrogen (NOx) during construction (trunk and sewer mains, wastewater treatment capacity expansion). Traffic and loud noises could occur during the construction phase of new projects. Short-term increases in noise during construction (trunk and sewer mains) as well as operational noise from new or expanded lift stations would likely impact nearby residents and recreationists. Adverse odor impacts during the construction and operation of new or expanded wastewater infrastructure.
Transportation	Local roads would experience traffic increases during construction. Property access would be temporarily disrupted during trunk sewer construction.
Public Health and Safety	Construction activities could create some safety hazards. Temporary direct disruption or property access (trunk sewer construction).
Water Quality	Degradation of water quality (surface and groundwater). Any expansion of the wastewater treatment plan would require a Waste Discharge Requirement (WDR) permit from the CVRWQCB. This would substantially reduce the possibility of significant water quality impacts.
Growth-Inducing Effects	New wastewater infrastructure would likely cause growth-inducing impacts.

The treatment facility is currently in compliance with state regulations, operates under a waste discharge permit and NPDES permit, and would be required by the CVRWQCB to remain in compliance after any future expansion of flow capacity. Therefore, the proposed General Plan is not expected to exceed wastewater treatment requirements or orders of the Central Valley Regional Water Quality Control Board. The existing wastewater treatment plant and the City's wastewater conveyance infrastructure would not be adequate to accommodate wastewater service demands resulting from the maximum population growth allowed under the proposed General Plan. However, implementation of proposed General Plan policies and actions direct future expansions to provide adequate capacity to serve new development. Furthermore, the proposed General Plan policies and actions include monitoring and conservation requirements that would serve to reduce demands placed on the sewer system capacity and ensure that capacity would not be exceeded (Policies PFS-3.1 and PFS-3.3, and Actions PFS-3.3.1 and PFS-3.3.2). Therefore, implementation of the proposed General Plan policies and associated actions would ensure that adequate wastewater services would be available, thus reducing wastewater service impacts to less than significant. Furthermore, new or expanded wastewater conveyance and treatment facilities needed to serve new development would undergo site-specific, project-level CEQA analysis at such time as they are proposed for development and when their design and alignment are known. Therefore, impacts associated with discharge requirements, wastewater conveyance, and treatment facilities would be considered **less than significant**.

#### 3.12.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

##### CUMULATIVE SETTING

As wastewater services are provided by the City, the cumulative setting for wastewater services includes the full theoretical buildout of the Planning Area. Growth associated with the proposed General Plan is projected to occur within the proposed Biggs Planning Area. The reader is referred to Section 3.0 regarding the cumulative setting and buildout under the proposed General Plan.



CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Cumulative Wastewater Service Impacts**

**Impact 3.12.6.2** Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, would contribute to the cumulative demand for wastewater service. However, implementation of proposed General Plan policy provisions would ensure adequate wastewater facilities are provided. This impact is considered to be a **less than cumulatively considerable** impact.

As identified, additional wastewater treatment and infrastructure capacity improvements would be needed to serve future development. The maximum growth allowed under the proposed General Plan would further increase the need for upgraded and expanded wastewater infrastructure to adequately serve the population and associated nonresidential development anticipated by 2035. Impacts associated with the maximum growth allowed under the proposed General Plan are discussed under Impact 3.12.6.1 above and were identified as less than significant. Since the cumulative setting is concurrent with the Biggs Planning Area, no cumulative impacts would be expected beyond those previously identified.

As described under Impact 3.12.6.1 above, proposed General Plan policies require that wastewater conveyance and treatment capacity and infrastructure be available in time to meet the demand created by new development. Proposed policies also require monitoring and conservation that would serve to reduce demands placed on the sewer system capacity and ensure that capacity would not be exceeded. Therefore, the proposed General Plan would not contribute to cumulative wastewater infrastructure impacts, and this impact is considered **less than cumulatively considerable**.

**3.12.7 SOLID WASTE**

**3.12.7.1 Existing Setting**

SOLID WASTE SERVICES

The City of Biggs regulates waste collection and recycling services in Biggs via an exclusive franchise agreement with Waste Management, Inc. The City of Biggs 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 at 1023 Neal Road, 1 mile east of State Route 99 in unincorporated Butte County north of Biggs. The facility is located on 229 acres. The Neal Road Recycling and Waste Facility is permitted to accept municipal solid waste, inert industrial waste, demolition materials, special wastes containing nonfriable asbestos, and septage (Butte County 2010). Hazardous wastes, including friable asbestos, are not accepted at the facility or at any other Butte County disposal facility. The facility is permitted to accept 1,500 tons per day; however, peak usage rarely exceeds 1,200 tons per day, and the average daily disposal into the landfill is approximately 500 tons (Butte County 2010).

The total capacity of the Neal Road Recycling and Waste Facility is approximately 20,217,600 cubic yards (13,141,300 tons). It is anticipated that the site will continue to receive solid waste until at least the year 2034 (Butte County 2010).

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### Household Hazardous Waste

Hazardous materials used in many household products (e.g., drain cleaners, cleaning fluids, waste oil, insecticides, and car batteries) are often improperly disposed of as part of normal household trash. These hazardous materials can interact with other chemicals, which can create risks to people and can also result in soil and groundwater contamination.

The California Department of Public Health (CCR Title 22) defines household hazardous waste as any substance that is characteristic of one of the following:

- Ignitability – flammable
- Corrosivity – eats away materials and can destroy human and animal tissue by chemical action
- Reactivity – creates an explosion or produces deadly vapors
- Toxicity – capable of producing injury, illness, or damage to human, domestic livestock, or wildlife through ingestion, inhalation, or absorption through any body surface

All Butte County residents are able to recycle and properly dispose of household hazardous waste for free at the Butte Regional Household Hazardous Waste Collection Facility, which is located at the Chico Airport Industrial Park at 1101 Marauder Street in Chico. The facility also accepts hazardous waste from small businesses which qualify as Conditionally Exempt Small Quantity Generators.

### Disposal and Diversion Rates

The California Department of Resources Recycling and Recovery (CalRecycle) tracked disposal and diversion rates for the BRWMA, of which Biggs is a member, until 2006. AB 939 (discussed in the Regulatory Framework subsection below) requires cities and counties to divert 50 percent of their waste stream from landfill disposal through source reduction, recycling, composting, and transformation programs. **Table 3.12.7-1** shows the available waste diversion data from CalRecycle for the BRWMA. As shown, the BRWMA has consistently diverted over 50 percent of its waste stream in the period from 2001 to 2006.

**TABLE 3.12.7-1  
BRWMA DIVERSION RATES**

Year	Percentage of Waste Diverted
2001	30%
2002	30%
2003	49%
2004	51%
2005	50%
2006	56%

*Source: CalRecycle 2012*

### 3.12.7.1 REGULATORY FRAMEWORK

#### FEDERAL

##### **Resource Conservation and Recovery Act**

The Resource Conservation and Recovery Act (RCRA), an amendment to the Solid Waste Disposal Act of 1965, was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. The RCRA gives the US Environmental Protection Agency (EPA) the authority to control hazardous waste from “cradle to grave.” This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid wastes. The Federal Hazardous and Solid Waste Amendments are the 1984 amendments to the RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. Amendments to the RCRA in 1986 enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

#### STATE

##### **California Integrated Waste Management Act**

The California Integrated Waste Management Act of 1989 (Public Resources Code Sections 42900–42927) required all California cities and counties to reduce the volume of waste deposited in landfills by 50 percent by the year 2000 and to continue to remain at 50 percent or higher for each subsequent year. The purpose of this act is to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible.

The California Integrated Waste Management Act requires each California city and county to prepare, adopt, and submit to CalRecycle a source reduction and recycling element (SRRE) that demonstrates how the jurisdiction will meet the act's mandated diversion goals. Each jurisdiction's SRRE must include specific components, as defined in Public Resources Code Sections 41003 and 41303. In addition, the SRRE must include a program for management of solid waste generated in the jurisdiction that is consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. Included in this hierarchy is the requirement to emphasize and maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste that must be disposed of by transformation and land disposal (Public Resources Code Sections 40051, 41002, and 41302) (CalRecycle 2009).

#### REGIONAL

##### **Butte County, Solid Waste Division**

The Solid Waste Division is responsible for operating the Neal Road Recycling and Waste Facility, regulating local waste collectors, providing safe disposal opportunities for household hazardous waste and universal waste, enforcing laws against illegal dumping, administering grant programs, coordinating solid waste and recycling education programs, and implementing programs that divert waste from landfills. The Solid Waste Division coordinates these activities

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with the cities in Butte County, as well as with other public agencies such as the Regional Water Quality Control Board, the Department of Toxic Substances Control, and CalRecycle.

### 3.12.7.2 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G. A solid waste impact is considered significant if implementation of the proposed General Plan would:

- 1) Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- 2) Fail to comply with federal, state, and local statutes and regulations related to solid waste.

#### METHODOLOGY

Evaluation of potential solid waste service impacts was based primarily on information from CalRecycle. The capacity of landfills and other solid waste facilities was evaluated, as well as compared to the proposed General Plan's specific solid waste service-related impacts. The impact analysis focuses on whether or not impacts would have a significant impact on the physical environment.

The following proposed General Plan policies and actions address solid waste service:

- |                         |  |
|-------------------------|--|
| <i>Policy PFS-6.1</i>   | <i>(Waste Diversion) – Make all reasonable efforts to achieve waste stream reduction goals established by the Integrated Solid Waste Management Act of 1989.</i>   |
| <i>Action PFS-6.1.1</i> | <i>(Source Reduction) – Continue to implement the City of Biggs Source Reduction and Recycling Element and expand identified programs, when feasible, in order to meet or exceed state mandated waste diversion goals.</i> |
| <i>Action PFS-6.1.2</i> | <i>(Cost Efficiency) – Periodically evaluate the cost/benefit ratio of various waste stream reduction programs.</i>  |
| <i>Action PFS-6.1.3</i> | <i>(Solid Waste Reduction Coordination) – Coordinate waste stream reduction programs with the City's local waste hauler and adjacent local agencies.</i>   |
| <i>Action PFS-6.1.4</i> | <i>(Solid Waste Reduction Documentation) – Document diversion/recycling efforts undertaken by local businesses to ensure that the City receives full credit for all waste diversion efforts.</i>                           |
| <i>Policy PFS-6.2</i>   | <i>(Solid Waste Coordination) – Continue to work cooperatively with Butte County to address regional issues related to solid waste disposal and waste reduction.</i>   |

*Policy PFS-6.3 (Recycled Materials) – Where fiscally beneficial, seek to utilize recycled products in City operations.*

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions that provide enforceable requirements and/or performance standards that address solid waste services.

### IMPACTS AND MITIGATION MEASURES

#### **Increased Solid Waste Disposal (Standard of Significance 1)**

**Impact 3.12.7.1** Implementation of the proposed General Plan would generate increased amounts of solid waste that would need to be disposed of in landfills or recycled. This would be a **less than significant** impact.

A projected average growth rate of 3.3 percent annually would result in an estimated increase of 2,367 people for a total of 4,059 in Biggs in 2035. Full theoretical buildout of the proposed General Plan Land Use would accommodate an increase of 15,922 people for a total population of 17,614. Full theoretical buildout is considered highly unlikely and if achieved, would almost certainly occur well beyond the year 2035.

Solid waste collection services would continue to be provided by Waste Management, Inc. Increased solid waste collection and recycling services are funded via waste hauler franchise fees.

The solid waste generated as a result of the proposed General Plan is expected to continue to be sent to the Neal Road Recycling and Waste Facility. Assuming that each person generates 0.36 tons of solid waste each year, as estimated by CalRecycle for Central Valley residents (CalRecycle 2009), a projected average growth rate of 3.3 percent annually would create an additional 852 tons of solid waste per year (2.3 tons per day) in 2035 ( $2,367 \times 0.36 = 852$ ). Full theoretical buildout would create an additional 5,732 tons of solid waste per year (15.7 tons per day) ( $15,922 \times 0.36 = 5,732$ ). The estimated amount of generated solid waste would not exceed the landfill's maximum permitted disposal of 1,500 tons per day under either the General Plan projected growth rate or theoretical buildout. Therefore, the Neal Road Recycling and Waste Facility would be able to accommodate waste generated under either the General Plan projected growth rate and at theoretical build-out of the proposed General Plan.

The General Plan includes policies and associated actions that would reduce the generation of solid waste in the city, which would further contribute to sustained capacity available at the Neal Road Recycling and Waste Facility and other regional landfills. The General Plan encourages recycling, waste diversion, and source reduction in City operations (Policy PFS-6.3 and Action PFS-6.1.1). In addition, proposed Policy PFS-6.1 requires that the City ensure solid waste collection services that meet or exceed state requirements for source reduction, diversion, and recycling.

As identified above, adequate landfill capacity is available to meet the needs of the City of Biggs beyond 2035 at the Neal Road Recycling and Waste Facility. Implementation of the proposed General Plan policies and associated actions listed above would further assist in solid waste reduction measures. This impact would be considered **less than significant**.

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### Compliance with Solid Waste Regulations (Standard of Significance 2)

**Impact 3.12.7.2** Implementation of the proposed General Plan would not be expected to result in conflicts with any federal, state, or local solid waste regulations. This impact would be considered **less than significant**.

Proposed General Plan Action PFS-6.1.1 would continue to implement the City Source Reduction and Recycling Element and expand identified programs, when feasible, in order to meet or exceed state-mandated waste diversion goals, consistent with Public Resources Code Sections 42900-42927. In addition, as part of the BRWMA, the City of Biggs has reliably diverted over 50 percent of its waste stream since 2004. Implementation of the proposed General Plan includes policies that would continue current recycling and waste reduction efforts (discussed under Impact 3.12.7.1 above). Therefore, implementation of the proposed General Plan would not be expected to conflict with Public Resources Code Sections 42900-42927, and current compliance with waste diversion rates and the City's Integrated Waste Management Plan would be expected to continue. Impacts would be considered **less than significant**.

### 3.12.7.3 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

The cumulative setting for solid waste includes Butte County and the surrounding region. The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development in these areas. **Table 3.0-2** in Section 3.0 of this Draft EIR lists regional development projects that would be included in the cumulative setting. Future development associated with the proposed General Plan, as well as in the surrounding region, would result in an incremental cumulative demand for solid waste collection and disposal in regional landfills.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Solid Waste Impacts

**Impact 3.12.7.3** Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would result in increased demand for solid waste services. This impact is **less than cumulatively considerable**.

Implementation of the proposed General Plan, in combination with other existing, approved, proposed, or reasonably foreseeable development, may significantly increase the amount of residential, commercial, and industrial development in the region. This growth would result in increased generation of solid waste that would need to be processed at the Neal Road Recycling and Waste Facility. The facility has capacity to accept waste from the entirety of its service area, including the City of Biggs, until 2034. In addition, other regional landfills would be available to accept cumulative solid waste.

Implementation of General Plan policies and actions as discussed under Impact 3.12.7.1 above would reduce the proposed General Plan's contribution to cumulative solid waste generation. Subsequent development in other areas of the region would also be subject to waste reduction programs consistent with Public Resources Code Sections 42900-42927. In addition, adequate landfill capacity would be available under cumulative conditions to meet the needs of the City of Biggs and the surrounding region. Therefore, the proposed General Plan would not contribute

significantly to cumulative solid waste impacts, and this impact is considered **less than cumulatively considerable**.

### 3.12.8 ELECTRICAL SERVICES

#### 3.12.8.1 EXISTING SETTING

##### ELECTRICAL SERVICES

Electric service in the Biggs Planning Area is provided by the City of Biggs itself. The City has provided electrical service within the community and to surrounding users since the early 1900s. This service has provided an important source of revenue to the City as well as allowing residents to receive power at favorable rates. The City owns and operates an electric substation and distributes electric power to the city. The City also owns, operates, and maintains the electrical distribution system in most of the city. Biggs has one of only 12 city-owned utility systems in Northern California.

Biggs does not directly generate its own power, but is a member of the Northern California Power Agency (NCPA) and the Western Area Power Administration (WAPA). The NCPA is a joint powers authority empowered to purchase, generate, transmit, distribute, and sell wholesale electrical energy. Members are public or publicly owned entities, including the City of Biggs and ten other municipal electric utilities, that participate in specific projects on an elective basis (Butte LAFCo 2008). WAPA is one of four power marketing administrations within the US Department of Energy. WAPA markets and transmits hydroelectric power within a 15-state region of the central and western United States.

The City has ownership interests in two generation facilities operated by the NCPA and has a long-term contract for a percentage in WAPA's base resources. The first of the NCPA interests is a two-unit geothermal generation facility in Lake County with a generation capacity of 220 megawatts (mw) of power. The City's ownership percentage is approximately 0.454 percent, or 4,235 megawatt-hours (mwh) per year (Butte LAFCo 2008). The second NCPA facility, in which the City has a 0.12 percent ownership interest, is a five-unit combustion turbine peaking project. This system has a capacity of 125 mw (Butte LAFCo 2008). This second system operates at peak usage times across NCPA member communities to insulate members from high prices of spot market power.

The City has a long-term contracted interest in WAPA base resources, generated by several dams in the Central Valley Project at very favorable price rates. The amount of power available to the City in any one year from this system is subject to gross production, which is dependent on water and energy demand in Biggs, but a wet year can generate over 30,000 mwh while a critically dry year could result in zero power generation. Total WAPA capacity is more than 2,000 mw (Butte LAFCo 2008).

The Biggs electrical system is linked to this generation mix through its interconnection with the Pacific Gas and Electric Company's (PG&E) transmission system.

#### **Distribution and Maintenance**

The Biggs Electric Department owns, operates, and maintains the electrical distribution system in the city. In addition, the City is a member of the California Joint Pole Association and shares common poles throughout the city with other utilities such as PG&E, Comcast, and AT&T. The Electrical Department provides operation and maintenance of the distribution system, including

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maintenance of their 60 kilovolt (kv) transmission system (from State Route 99 to the Biggs substation). Shutoffs are performed by Biggs Public Works staff when necessary. The City of Biggs contracts with Gridley-Biggs Electric to provide system maintenance exclusive of annual substation maintenance. Contracted services exclude maintenance of the Biggs substation. The City of Biggs reads its own electric meters using state-of-the-art automated meter reading, a significant cost-saving measure.

### **Service Demand**

Biggs has 611 residential, 55 commercial, and 3 industrial customers (Butte LAFCo 2008). The majority of accounts are residential, followed by commercial accounts. Transportation and industrial accounts are minimal.

Total energy usage in Biggs reached 18.2 gigawatt-hours (gwh) in Fiscal Year 2005–06 (Butte LAFCo 2008). Peak demand in July 2007 was 4 mw (Butte LAFCo 2008). Approximately 70 percent of total energy usage in Biggs is accounted for by a single customer (SunWest Milling Manufacturing Complex). Revenues from this one customer represent nearly 60 percent of the City's total electrical service revenue.

Peak demand indicates the maximum load in a system. The peak demand in Fiscal Year 2005–06 was 3.8 mw (Butte LAFCo 2008). By comparison, net peak demand for all of California in 2005 was 58,900 mw (Butte LAFCo 2008).

### **Service Standards and Adequacy**

The primary indication of adequate service is consistency or, in other words, lack of outages. The department is able to adequately serve the city. The department began tracking the main measure of reliability, power outages, in May 2007. There has only been one significant outage of five hours duration and several minor outages since then.

### **Infrastructure Needs and Deficiencies**

The Biggs substation usually operates at 50 percent of capacity, although peak demand can use up to 80 percent of capacity (Butte LAFCo 2008). The distribution system is currently under review by the Gridley-Biggs Electric Superintendent in order to assess system infrastructure needs and to propose a plan of action to the City based on findings. There are no known problems, but the department aims to shorten outages and prevent problems as possible.

#### **3.12.8.2 REGULATORY FRAMEWORK**

STATE

##### **California Public Utilities Commission**

The California Public Utilities Commission (CPUC) is the state agency that regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. The CPUC grants operating authority, regulates service standards, sets rates, and monitors utility operations for safety, environmental stewardship, and public interest (CPUC 2007).



Traditionally, general rate cases have been the major form of regulatory proceeding for the CPUC. General rate case applications may be filed every three years and take about a year to complete. The utility bases its revenue request on its estimated operating costs and revenue needs for a particular future year. Customer rates will be based on the CPUC's determination of how much revenue the utility reasonably requires to operate (CPUC 2007).

### California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. On January 1, 2010, the California Building Standards Commission adopted CALGreen and became the first state in the United States to adopt a statewide green building standards code. CALGreen requires new buildings to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials.

#### 3.12.8.3 IMPACTS AND MITIGATION MEASURES

##### STANDARD OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G. A utilities impact is considered significant if implementation of the project would:

- 1) Result in the need for new systems or supplies or a substantial expansion or alteration to electricity systems that result in a physical impact on the environment.

##### METHODOLOGY

Evaluation of potential electricity impacts was based on information from the California Energy Commission and the California Public Utilities Commissions. This material was compared to the proposed General Plan's specific electricity impacts. The impact analysis below focuses on whether or not the physical environment would be significantly affected.

The following proposed General Plan policies and actions address electricity, natural gas, or telecommunication services:

- |                         |  |
|-------------------------|--|
| <i>Policy PFS-5.1</i>   | <i>(Electric System Planning) – Prepare an Electric System Master Plan to address current and future electric service needs.</i>                                 |
| <i>Policy PFS-5.2</i>   | <i>(Electric System Upgrades) – Continue to upgrade the City's electrical service infrastructure to reduce line losses and increase the power factor ratios.</i> |
| <i>Action PFS-5.2.1</i> | <i>(Electric Service Type) – Explore options to construct a new 60 kv main feeder sub-station to improve efficiency and safety.</i>                              |
| <i>Action PFS-5.2.2</i> | <i>(Electric System Improvements) – Identify and address electric utility transformers and circuits that are strained or operating above desirable limits.</i>   |

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- Action PFS-5.2.3 *(Electric System Efficiency) – Implement an automated phase-balance program to distribute the loads equally among the three phases of the distribution system.*
- Action PFS-5.2.4 *(Electric System Safety) – Prepare a system protection study to determine the adequacy and co-ordination of the fuses and reclosers in the system.*
- Action PFS-5.2.5 *(Electric System Conversion) – As feasible, complete the current conversion program to change the City's electrical system to 12 Kv. Complete reconductoring as part of the conversion program to a 12 Kv system.*
- Action PFS-5.2.6 *(Electric System Inspection) – Regularly inspect overhead and underground electric facilities and continue established programs for systematically maintaining and replacing older electric facilities.*
- Policy PFS-5.3 *(Underground Electric Service) – Electric utility improvements for new development shall located underground where feasible.*
- Policy PFS-5.4 *(Electric Power Portfolio) – Continue to provide customers with a reliable energy source mix that is price competitive and which meets portfolio mix requirements.*
- Policy PFS-5.5 *(Electric System Interconnection) – Require main electric distribution lines to be interconnected wherever feasible to facilitate the reliable delivery of electricity within the City.*

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies and actions provide enforceable requirements and/or performance standards that address utility services.

#### IMPACTS AND MITIGATION MEASURES

##### Increased Demand for Electrical Services

**Impact 3.12.8.1** Implementation of the proposed General Plan would increased demand for electrical services, including associated infrastructure that could result in a physical impact on the environment. This is considered to be a **less than significant** impact.

The anticipated increase in population, housing units, and nonresidential land uses associated with the proposed General Plan would increase demand for electrical services and associated infrastructure.

The City of Biggs currently provides electrical service to Biggs and would continue to provide this service to future development resulting from implementation of the proposed General Plan. The City is required by the California Public Utilities Commission to update the existing systems to meet any additional demand and builds new infrastructure on an as-needed basis. All electrical distribution lines, substations, transmission lines, delivery facilities, and easements required to serve theoretical buildout of the proposed General Plan would be subject to CEQA review.

However, it is expected that much of the distribution infrastructure would be collocated with other utilities underground within roadway rights-of-way in order to minimize the extent of environmental effects. Potential environmental effects of obtaining more power through the development of power plants include, but are not limited to, air quality, biological resources, cultural resources (depending on location), hazardous materials, land use, noise and vibration, traffic, visual resources, waste management, water and soil resources, and health hazards. Potential environmental effects for the construction of transmission lines include, but are not limited to, air quality (during construction), biological resources (depending on location), cultural resources (depending on location), hazardous materials, land use, noise and vibration (during construction), traffic, visual resources, and health hazards.

While the environmental effects of necessary infrastructure to serve development accommodated by the proposed General Plan are addressed programmatically in this Draft EIR, the specific environmental impacts resulting from the provision of electrical services would be identified by project-level environmental review in conjunction with individual development projects.

In addition, subsequent development would be required to comply with energy efficiency standards in Title 24 of the California Code of Regulations intended to minimize impacts to peak energy usage periods and to reduce impacts on overall state energy needs. (See Section 3.14, Greenhouse Gases and Climate Change, for analysis of energy use impacts associated with greenhouse gases.)

As previously mentioned, infrastructure for electrical services is installed at the point of initial development and in accordance with service demand. The specific environmental impacts resulting from that infrastructure would be identified by project-level environmental review in conjunction with individual development projects. Therefore, impacts would be considered **less than significant**.

### 3.12.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

The cumulative setting for electrical service encompasses the service area of the Biggs Planning Area. The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development in the service area that currently places demand on electrical service or is expected to place demand on the service in the future. **Table 3.0-2** in Section 3.0 of this DEIR lists regional development projects that would be included in the cumulative setting.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Demand for Electrical Services

**Impact 3.12.8.2** Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would contribute to the cumulative demand for electrical services and associated infrastructure that could result in a physical impact on the environment. This is considered a **less than cumulatively considerable** impact.

Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development in areas served by the Biggs Electric Department would result in a cumulative increase in demand for electrical services and associated infrastructure and could result in increased infrastructure extensions to serve future

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development. The City of Biggs builds infrastructure on an as-needed basis. All electrical distribution lines, substations, transmission, delivery facilities, and easements required to serve the Biggs Planning Area would be subject to CEQA review as discussed under Impact 3.12.8.1 above. It is expected that much of the distribution infrastructure would be collocated with other utilities within roadway rights-of-way in order to minimize the extent of environmental effects.

In addition, subsequent development under the proposed General Plan would be required to comply with energy efficiency standards in Title 24 of the California Code of Regulations intended to minimize impacts to peak energy usage periods and to reduce impacts on overall state energy needs.

Since future energy-related projects would be reviewed for project-level environmental impacts and the majority of this infrastructure would be collocated and constructed concurrently with other utilities within roadway rights-of-way to lessen or eliminate potential environmental effects, the proposed General Plan's contributions to the continued provision of electrical service and infrastructure in the cumulative setting would be considered **less than cumulatively considerable**.

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## **3.13 TRANSPORTATION AND CIRCULATION**





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## 3.13 TRANSPORTATION AND CIRCULATION

This section is based on traffic analysis prepared for the proposed project by Fehr & Peers Transportation Consultants in 2013 (see **Appendix 3.13-1** for technical outputs), and describes potential impacts on the transportation system associated with adoption of the proposed City of Biggs General Plan. To provide context for the impact analysis, this section begins with a description of the existing environmental setting. The existing setting describes the existing physical and operational conditions for the transportation system components. Following the setting is the regulatory framework influencing the transportation system and providing the basis for impact significance thresholds used in the impact analysis. The section concludes with the impact analysis findings, which evaluate the local and regional roadway, transit, bicycle, pedestrian, goods movement, and aviation components of the overall transportation system.

### 3.13.1 EXISTING SETTING

#### TRAVEL BEHAVIOR

Both physical roadway environment and land use patterns play an important role in the way that residents travel within and around Biggs. The city's roadway network is a compact grid-based system that offers residents the convenience of short walking and biking trips within the city.

The US Census Bureau, American Community Survey (2007–2011) reports that approximately 89 percent of all working Biggs residents travel from home to work by automobile, of which 14 percent travel in a carpool of two or more people. Walking and public transit modes account for 4 percent of the total work trips by Biggs residents, while 7 percent of people work from home. The most significant change from the previous survey has been a shift of approximately 5 percent of workers from driving to working from home. This data set also reports an average commute time of 26 minutes, which suggests that many residents are likely commuting to job centers in Chico, Oroville, or Yuba City.

#### ROADWAY NETWORK

The proposed General Plan Planning Area includes roadway and transportation facilities within the city, the City's Sphere of Influence (SOI), and just beyond in the case of regionally significant roadways. Biggs's transportation system is typical for a small, rural city. Although the roadway network primarily serves general vehicle traffic, it also serves a variety of other modes: trucks (goods movement), buses, bicycles, and pedestrians. City roadways have relatively low volumes.

Railroad activity is the main circulation constraint within Biggs. Since the city preceded the construction of State Route (SR) 99, the majority of development has occurred near the downtown area close to the railroad corridor. Union Pacific Railroad tracks run north–south along the western portion of the city between Seventh and Eighth streets. As a result, east–west connectivity is directly impacted by railroad activity. Currently there are three at-grade crossings within the city limits: B Street (Crossing 753367L), E Street (Crossing 753366T), and F Street (Crossing 753367A). Consequently, there are periods during the day when vehicle traffic, pedestrians, and bicyclists are unable to travel across the tracks. Emergency vehicles are also subject to the same delays. According to the Federal Rail Administration, there are on average 25 trains per day that travel from 20 to 70 miles per hour. All three crossings have advanced warning signs, stop lines and pavement markings, crossing gates, warning bells, and concrete crossing surfaces. No accident data was available for the rail crossings.

### 3.13 TRANSPORTATION AND CIRCULATION

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A second constraint is the limited number of streets that move traffic to the south out of the city. Currently only Sixth Street and West Biggs Gridley Road extend south of the city and cross Hamilton Slough.

Both of these constraints are illustrated by the use of B Street as a designated truck route even though it is a primary access through downtown and is immediately adjacent to schools. The lack of an alternate route for heavy vehicles (i.e., commercial trucks, agricultural equipment, etc.) over the railroad tracks and around town to access SR 99 necessitates the use of local roadways with pedestrian traffic.

The roadway system within and surrounding the city is shown on **Figure 3.13-1**. The major roadways serving the city are described below.

#### State Highways

Highway serve regional and intercity travel but are typically not the optimum route for intracity trips. Access is controlled, grade crossings are separated, and medians separate lanes moving in opposite directions. Typical free-flow speeds exceed 55 miles per hour.

**State Route (SR) 99** is a north–south two-lane conventional rural highway approximately three-quarters of a mile east of the city limits. It is a major route for goods movement, especially agricultural products, through California's Central Valley. The city has two connections to SR 99 at B Street and at Rio Bonito Road. SR 99 is a Caltrans roadway facility.

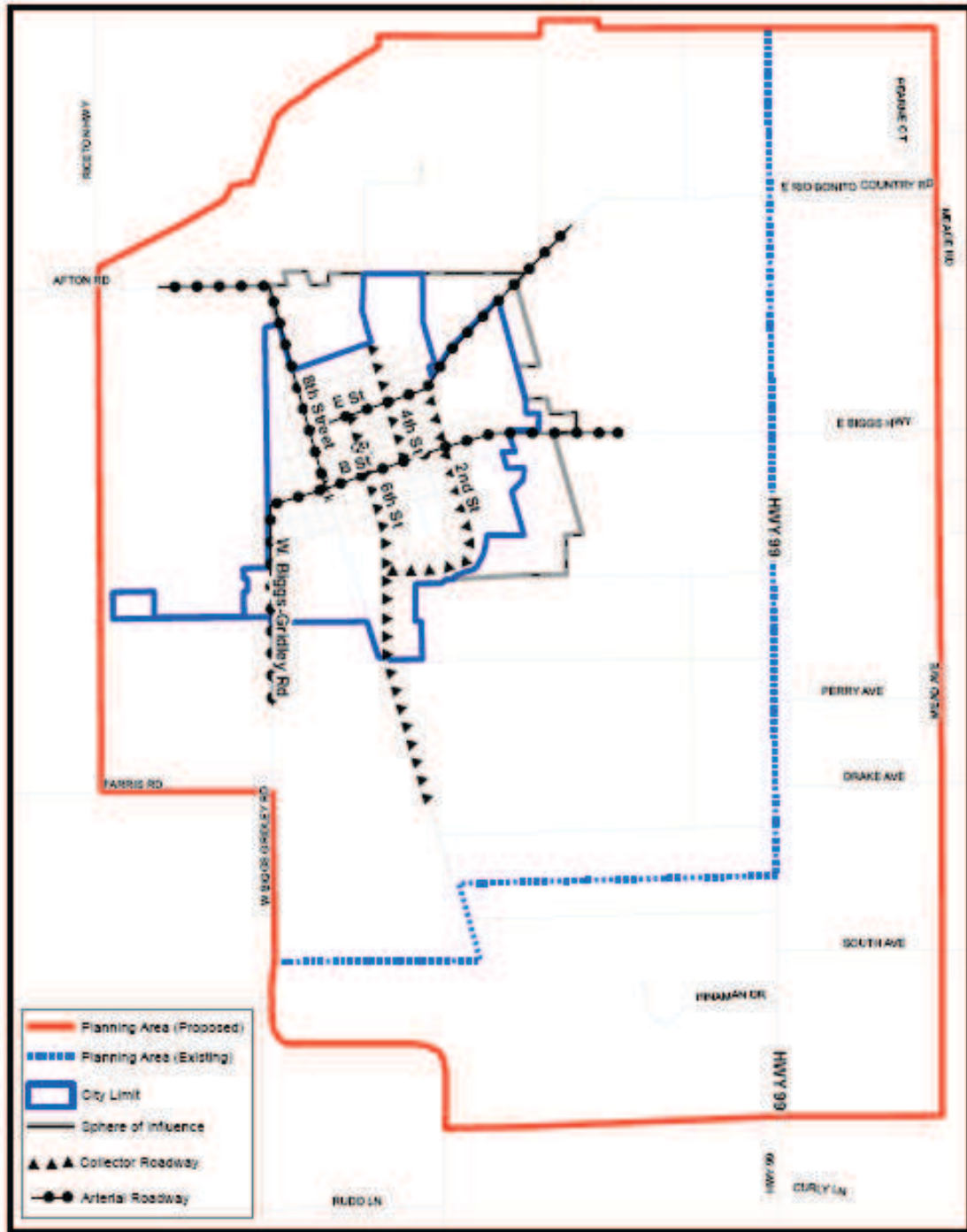
#### Arterials

The primary function of arterials is to move relatively high amounts of traffic between freeways and other arterials. Arterials generally provide four travel lanes, but may have fewer lanes. On street parking may be provided. Driveway access should be minimized, consistent with the primary function of arterials to move through traffic. Bike lanes, medians park strips, sidewalks, and transit facilities are also typically accommodated within the right-of-way.

**B Street** is designated as a two-lane arterial that runs east–west across the city limits from SR 99 to West Biggs Gridley Road. B Street also serves as one of two designated east–west truck routes through the city. On-street angled parking is provided between Seventh and Fourth streets through the main downtown commercial area. On-street parallel parking is available on the remaining portions of the street.

**E Street** is a two-lane east–west arterial that extends from West Rio Bonito Road to Ninth Street. It serves as the other east–west designated truck route through the city. Parallel on-street parking exists along the entire length of the street, except for the north side of the street between Sixth and Fifth streets where a combination of on-street angled and on-street perpendicular parking is provided. There is currently a Class II bicycle facility on both sides of the street from Sixth Street to Second Street.

**Eighth Street** runs parallel to and on the west side of the Union Pacific Railroad tracks and operates as a two-lane arterial from Afton Road to Bannock Street. It serves as the other north–south designated truck route. Eighth Street has a designated bike lane along its eastern edge from B Street to E Street.



Source: City of Biggs

Figure 3.13-1  
Existing Transportation System



### Collectors

Collectors are intended to “collect” traffic from local roadways and carry it to roadways higher in the street classification hierarchy. These roadways also serve adjacent properties and typically have one lane of traffic in each direction. Bike lanes may be present. The following is a list of collector streets in the City of Biggs.

**Fourth Street** is a two-lane north–south collector street extending northward from its current terminus south of Bannock Street to a point where it exits the city to the north and continues to Ditzler Road. Fourth Street is a designated collector roadway between B Street and its northern exit point from the city.

**Second Street/Trent Street** is a two-lane collector street having a north–south orientation until its transition to Trent Street north of Hamilton Slough where it becomes an east–west-oriented street connecting to Sixth Street. Second Street extends from the North Biggs Estates development project in the north to its transition to Trent Street south of Mary L. Court. Second Street becomes Trent Street and continues its connection to Sixth Street.

**Sixth Street** is a two-lane north–south collector through the center of Biggs that extends from H Street to south of the city limits. It serves as one of two north–south designated truck routes through the city. Sixth Street is a designated collector roadway south of E Street. Sixth Street continues to the south of the city where it connects to various county roadways accessing SR 99 to the east. Sixth Street is the only local street to extend in a southerly direction across Hamilton Slough. On-street parallel parking is provided from E Street to Bannock Street.

### TRAFFIC OPERATIONS

A traffic operations analysis was conducted for roadway segments representative of the General Plan Planning Area’s transportation network. Traffic volumes on the selected roadway segments were used to determine congestion levels. These roadway facilities were identified based on input from City staff.

### Local Roadways

- 1) East Biggs Highway – SR 99 to Biggs Avenue
- 2) B Street – First Street to SR 99
- 3) B Street – First Street to Second Street
- 4) B Street – Second Street to Seventh Street
- 5) B Street – Eighth Street to Eleventh Street
- 6) Dakota Avenue – Sixth Street to SR 99
- 7) Chatfield Avenue – Sixth Street to SR 99
- 8) West Rio Bonito Road – SR 99 to Milky Way
- 9) E Street – Milky Way to Second Street

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- 10) E Street – Second Street to Fourth Street
- 11) E Street – Fifth Street to Seventh Street
- 12) Bannock Street – Eighth Street to West Biggs Gridley Road
- 13) Second Street – C Street to D Street
- 14) Second Street – Aleut Street to Bannock Street
- 15) Fourth Street – F Street to H Street
- 16) Eighth Street – B Street to Aleut Street
- 17) Sixth Street – Aleut Street to Bannock Street
- 18) Sixth Street – Dakota Street to Chatfield Avenue
- 19) Afton Road/Eighth Street – Riceton Highway to F Street
- 20) Eighth Street – B Street to E Street
- 21) West Biggs Gridley Road – Bannock Street to Farris Road
- 22) West Biggs Gridley Road – Farris Road to Rudd Lane

#### State Highway Segments

- 1) SR 99 – Hamilton Road to West Rio Bonito Road
- 2) SR 99 – West Rio Bonito Road to B Street/Biggs Highway
- 3) SR 99 – B Street to Dakota Avenue

Roadway facilities were analyzed using level of service (LOS) as the primary measure of performance. LOS is a qualitative description of traffic flow from the perspective of motorists based on factors such as speed, travel time, delay, freedom to maneuver, volume, and capacity. LOS ranges from A through F, which represents driving conditions from least congested to most congested, respectively. In general, LOS A represents free-flow conditions, and LOS F represents severe delay caused by stop-and-go conditions.

The LOS grades are generally defined as follows:

**LOS A** represents free-flow travel with an excellent level of comfort and convenience and the freedom to maneuver.

**LOS B** has stable operating conditions, but the presence of other road users causes a noticeable, though slight, reduction in comfort, convenience, and maneuvering freedom.

**LOS C** has stable operating conditions, but the operation of individual users is substantially affected by the interaction with others in the traffic stream.

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**LOS D** represents high-density, but stable flow. Users experience severe restriction in speed and freedom to maneuver, with poor levels of comfort and convenience.

**LOS E** represents operating conditions at or near capacity. Speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult with users experiencing frustration and poor comfort and convenience. Unstable operation is frequent, and minor disturbances in traffic flow can cause breakdown conditions.

**LOS F** is used to define forced or breakdown conditions. This condition exists wherever the volume of traffic exceeds the capacity of the roadway. Long queues can form behind these bottleneck points with queued traffic traveling in a stop-and-go fashion.

This LOS methodology does not consider the potential impact on walking, bicycling, and transit. Pedestrians, bicyclists, and transit riders are all users of the roadway system but may not be fully recognized in the traffic operations analysis and the calculation of LOS. Identifying the need for roadway improvements based on the resulting roadway level of service can have unintended impacts to other modes such as increasing the walking time for pedestrians. In evaluating the roadway system, a lower vehicle LOS may be desired when balanced against other community values related to resource protection, social equity, economic development, and consideration of pedestrians, bicyclists, and transit users.

The existing LOS was calculated for 22 roadway segments. Existing roadway traffic volumes were compared to daily LOS capacity thresholds identified in **Table 3.13-1**. These thresholds were calculated based on the methodology contained in the *Highway Capacity Manual* (HCM) (Transportation Research Board 2010). The HCM is the prevailing measurement standard used throughout the United States. Traffic counts were collected in November 2008. Due to the economic recession, Northern California roadways experienced little to no traffic volume growth between 2007 and 2012. Therefore, the continued use of 2008 daily segment counts to represent existing conditions is reasonable.

The daily thresholds for city streets refer to the “environmental capacity” of the roadway that takes into account the vehicle friction of the roadways caused by on-street parking maneuvers, heavy vehicle traffic, and the residential nature of the city streets. The existing General Plan identifies LOS C as the minimum acceptable level of service for local roadways. The proposed General Plan also establishes LOS C or better (D or better during peak travel times) as the “final” threshold unless maintaining this level of service is determined to be infeasible, undesirable, or would conflict with other goals and policies of the General Plan. The *State Route 99 Transportation Concept Report 2000 through 2020* (Caltrans 2004) identifies that the concept level of service for State Route 99 near Biggs is LOS E.

**TABLE 3.13-1  
DAILY LEVEL OF SERVICE VOLUME THRESHOLD BY ROADWAY CLASSIFICATION**

Roadway Classification	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
<b>City of Biggs</b>						
Rural Collector/Local, Undivided (2-lane)	–	–	< 7,000	7,001 - 9,300	9,301 - 10,000	> 10,000
Rural Arterial, Undivided (2-lane)	–	–	< 5,700	5,701 - 12,300	12,301 - 13,100	> 13,100
Rural Arterial, Divided (4-lane)	–	–	< 19,500	19,501 - 35,800	35,801 - 37,800	> 37,800

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Roadway Classification	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Collector/Arterial, Undivided (4-lane)	-	-	< 13,200	13,201 - 25,000	25,001 - 26,400	> 26,400
Collector/Arterial, Two-way left-turn lane (2-lane)			< 8,100	8,101 - 16,800	16,801 - 17,900	> 17,900
Collector/Arterial, Two-way left-turn lane (4-lane)			< 18,400	18,401 - 34,000	34,001 - 35,900	> 35,900
Arterial, Raised Median (2-lane)			< 8,600	8,601 - 17,700	17,701 - 18,800	> 18,800
Arterial, Raised Median (3-lane)			< 14,000	14,001 - 26,700	26,701 - 28,300	> 28,300
Arterial, Raised Median (4-lane)			< 19,500	19,501 - 35,800	35,801 - 37,800	> 37,800
<b>SR 99</b>						
Rural State Highway, Undivided (2-lane)	< 3,100	3,101 - 5,700	5,701 - 10,200	10,201 - 17,300	17,301 - 24,700	> 24,700
State Expressway, Divided (4-lane)	15,100	15,101 - 25,000	25,001 - 36,000	36,001 - 46,800	46,801 - 53,100	> 53,100

Source: Transportation Research Board 2010

Most facilities within the proposed Planning Area operate at LOS C or better, which represents stable conditions for vehicle operations. SR 99 segments operate at LOS D. **Figure 3.13-2** shows existing daily roadway segment traffic volumes and LOS results for study segments within the General Plan Planning Area. **Table 3.13-2** also summarizes the existing conditions analysis with additional data regarding roadway classification and the number of lanes.







**TABLE 3.13-2  
ROADWAY LEVEL OF SERVICE - EXISTING CONDITIONS**

Roadway Segment	Existing Conditions			
	Classification	Lanes	Volume	LOS
1. East Biggs Highway – SR 99 to Biggs Avenue	Arterial	2	2,342	C or Better
2. B Street – First Street to SR 99	Arterial	2	2,315	C or Better
3. B Street – First Street to Second Street	Arterial	2	2,264	C or Better
4. B Street – Second Street to Seventh Street	Arterial	2	2,440	C or Better
5. B Street – Eighth Street to Eleventh Street	Arterial	2	1,990	C or Better
6. Dakota Avenue – Sixth Street to SR 99	Rural Collector/Local	2	291	C or Better
7. Chatfield Avenue – Sixth Street to SR 99	Rural Collector/Local	2	203	C or Better
8. West Rio Bonito Road – SR 99 to Milky Way	Arterial	2	1,159	C or Better
9. E Street – Milky Way to Second Street	Arterial	2	1,093	C or Better
10. E Street – Second Street to Fourth Street	Arterial	2	1,074	C or Better
11. E Street – Fifth Street to Seventh Street	Arterial	2	901	C or Better
12. Bannock Street – Eighth Street to West Biggs Gridley Road	Rural Collector/Local	2	170	C or Better
13. Second Street – C Street to D Street	Rural Collector/Local	2	721	C or Better
14. Second Street – Aleut Street to Bannock Street	Rural Collector/Local	2	448	C or Better
15. Fourth Street – F Street to H Street	Rural Collector/Local	2	353	C or Better
16. Eighth Street – B Street to Aleut Street	Rural Collector/Local	2	706	C or Better
17. Sixth Street – Aleut Street to Bannock Street	Rural Collector/Local	2	1,113	C or Better
18. Sixth Street – Dakota Street to Chatfield Avenue	Rural Collector/Local	2	1,025	C or Better
19. Afton Road/Eighth Street – Riceton Highway to F Street	Arterial	2	1,153	C or Better
20. Eighth Street – B Street to E Street	Arterial	2	1,269	C or Better
21. West Biggs Gridley Road – Bannock Street to Farris Road	Arterial	2	1,890	C or Better
22. West Biggs Gridley Road – Farris Road to Rudd Lane	Arterial	2	1,884	C or Better
23. SR 99 – Hamilton Road to West Rio Bonito Road	Rural State Highway	2	11,500	D
24. SR 99 – West Rio Bonito Road to B Street/Biggs Highway	Rural State Highway	2	11,800	D
25. SR 99 – B Street/Biggs Highway to Dakota Avenue	Rural State Highway	2	14,200	D

Source: Fehr & Peers 2013

**TRAFFIC SAFETY**

Recent three-year collision history (January 2008–December 2010) was reviewed to determine if any trends were apparent within the proposed Planning Area. Collision data can be helpful to determine locations where the combination of physical geometrics, traffic controls, and driver behavior may contribute to a safety issue. Jurisdictions may use collision data to determine necessary roadway or intersection modifications to improve traffic safety. In some cases, collisions are caused by driver behavior and cannot be corrected solely by roadway safety improvements.

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**Table 3.13-3** summarizes data from the Statewide Integrated Traffic Records System (SWITRS) database maintained by the California Highway Patrol between January 2008 and December 2010. A total of 42 collisions were reported within the Planning Area over this time period. The majority of collisions resulted in either a fatality or injury (there were a total of three fatalities and 60 injuries). Two of the fatalities occurred on SR 99 and the third occurred on Riceton Highway and involved a pedestrian.

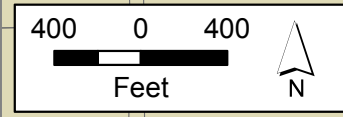
The *State Route 99 Transportation Corridor Concept Report 2000 through 2020* (TCCR) prepared by Caltrans also contains collision data for the stretch of SR 99 within the General Plan Planning Area. Segment 16 of the TCCR refers to SR 99 from Ord Ranch Road in Gridley to SR 149. The reported collision rate comparison to the state average on comparable facilities is -0.4 percent, which does not substantiate a significant safety issue. This information is based on the Caltrans Traffic Accident Surveillance and Analysis System (TASA) Summary data (2005–2008) and reflects the percentage above, or below, the statewide average rate for fatal, injury, and property damage only collisions on comparable facilities.

**TABLE 3.13-3  
COLLISION DATA BY PRIMARY ROADWAY (JANUARY 2008–DECEMBER 2010)**

Primary Roadway	Total Collisions	Pedestrian/Bicycle Related	Notes
Fourth Street	1	–	
Fifth Street	1	–	
B Street	4	-	Three of the four reported collisions occurred at downtown intersections
West Biggs Gridley Road	6	–	Four of the six reported collisions occurred within a half mile north of Rudd Lane near the southern extent of the Planning Area
Hastings Avenue	1	–	
Riceton Highway	1	1	
West Rio Bonito Road	2	–	
SR 99	26	1	Three collisions occurred at or near West Rio Bonito Road; three collisions occurred at or near the B Street intersection; two collisions occurred at or near Dakota Avenue; three collisions occurred approximately 1000 feet south of Hamilton Road

Source: CHP 2013 Bicycle/Pedestrian 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. There are three different classifications of bicycle facilities: Class I (off-street facilities), Class II (on-street bicycle lanes identified with signage and markings), and Class III (on-street bicycle routes identified by signage and markings). The BTP identified two issues impacting the quality and feasibility of cycling in Biggs. The first is the physical barrier that the railroad presents and the second is inconsistent pavement conditions. **Figure 3.13-3** identifies existing bicycle facilities in Biggs described in the BTP.



Source: Butte County GIS, 2011



**Legend**

- Class I
- — — — Class II
- — — — Class III
- ⛵ Pool
- 🏃 Park
- 🚲 Bike Parking
- City Limit
- +— Railroad
- — — — Proposed Multi-Modal Trail

Source: City of Biggs



**Figure 3.13-3**  
Existing Bicycle Facilities





For pedestrians, sidewalks exist on the majority of streets in the city. Class I bike paths also provide pedestrian access.

### TRANSIT SYSTEM

Butte Regional Transit's B-Line offers fixed-route bus service in Chico, Oroville, and Paradise. B-Line also offers connecting services to other Butte County communities including Biggs. B-Line is managed and operated by the Butte County Association of Governments (BCAG).

As indicated in **Figure 3.13-4**, Routes 30 and 32 serve Biggs. Route 30 begins in Oroville and travels southbound through Palermo and Gridley before arriving in Biggs. On weekdays, Route 30 makes a total of three daily trips to Biggs between approximately 8:30 a.m. and 4:30 p.m. On Saturdays, service is provided with a total of four daily trips from 9:30 a.m. to 4:00 p.m. Sunday service is not provided. Route 32 is a peak period weekday service between Biggs and Chico with stops in Gridley and Durham. The northbound bus leaves Biggs around 6:30 a.m., arriving in Chico at 7:40 a.m. The southbound bus leaves Chico at 5:20 p.m., arriving in Biggs at 6:30 p.m.

B-Line also offers paratransit service in Biggs to any destination within three-quarters of a mile of a route alignment. B-Line paratransit is a shared ride service designed to meet the needs of seniors and persons with qualifying disabilities who are unable to use B-Line fixed-route services.

### GOODS MOVEMENT

The railroad system and state highway system combine to provide the major transportation network for the movement of goods in California and the region. **Figure 3.13-5** identifies the truck routes in the proposed General Plan Planning Area.

#### Rail Freight Transportation

Biggs is served by the Union Pacific Railroad that parallels Eighth Street. Commonly transported commodities include chemicals, food and food products, truck trailers and containers, forest products, grain and grain products, metals and minerals, and automobiles and commodities. The Sunwest Mill has the only off-track rail siding in the city.

#### Highway Freight Transportation

All interstates and some roadway segments of the state highway system are included in the National Network for Service Transportation Assistance Act of 1982. State Route 99 and B Street are designated as terminal access routes by the act, while E Street is a locally designated truck route.

### AVIATION

The Oroville Municipal Airport is located approximately 10 miles northeast of the city. The airport covers a total of 920 acres and includes two runways. The City of Oroville owns the airport but it is privately operated. This facility serves general aviation aircraft.

The Chico Municipal Airport is the largest airport in Butte County and is the only one with regularly scheduled commercial service. Charter services and cargo carriers also operate out of this airport. Chico Municipal Airport is approximately 30 miles north of Biggs.

Sacramento International Airport, which is located 60 miles south of Biggs, is the closest major airport.

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### 3.13.2 REGULATORY FRAMEWORK

Transportation plans, policies, and regulations that apply to the General Plan are summarized below. This information provides a context for the impact discussion related to the General Plan's consistency with applicable regulatory conditions.

#### STATE

##### **SR 99 Transportation Concept Report**

Caltrans prepared the *State Route 99 Transportation Concept Report 2000 through 2020 (TCCR)*, which is a long-term planning document. A TCCR identifies long-range improvements for specific state freeway and highway corridors and establish the "concept," or desired, LOS for specific corridor segments. The report also identifies long-range improvements needed to bring an existing facility up to expected standards needed to adequately serve 20-year traffic forecasts. Additionally, the report identifies the ultimate design concept for conditions beyond the immediate 20-year design period. A TCCR does not consider funding availability. The portion of SR 99 within the proposed General Plan Planning Area requires a two-lane conventional highway with passing lanes to achieve a route concept level of LOS E. The ultimate concept facility for SR 99 is a four-lane conventional highway from Ord Ranch Road in Gridley to B Street/East Biggs Highway. A four-lane expressway is desired between B Street/East Biggs Highway and SR 149.

#### LOCAL

##### **Metropolitan Transportation Plan/Sustainable Communities Strategy**

The Butte County Association of Governments (BCAG) is responsible for regional planning in Butte County. BCAG is required to adopt a Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) every four years to identify the region's long-range transportation plan for a 20-year minimum horizon. The 2012 MTP covers the years from 2012 to 2035.

The MTP serves as the foundation for the development of the short-range Regional Transportation Improvement Program (RTIP) and the Federal Transportation Improvement Program (FTIP).

##### Regional Transportation Improvement Program (RTIP)

BCAG is required to prepare a Regional Transportation Improvement Program (RTIP) every two years. The purpose of the RTIP is to identify programming recommendations for the State Transportation Improvement Program (STIP). The STIP comprises two components—the RIP for projects nominated by regional agencies in California, such as BCAG, and the Interregional Improvement Program (IIP) for projects nominated by Caltrans. The STIP is adopted by the California Transportation Commission. The 2012 RTIP does not include any physical improvement projects within the city.

##### Federal Transportation Improvement Program (FTIP)

BCAG is responsible for preparing, adopting, and submitting a Federal Transportation Improvement Program to Caltrans, the Federal Highway Administration (FHWA), and the Federal



Legend

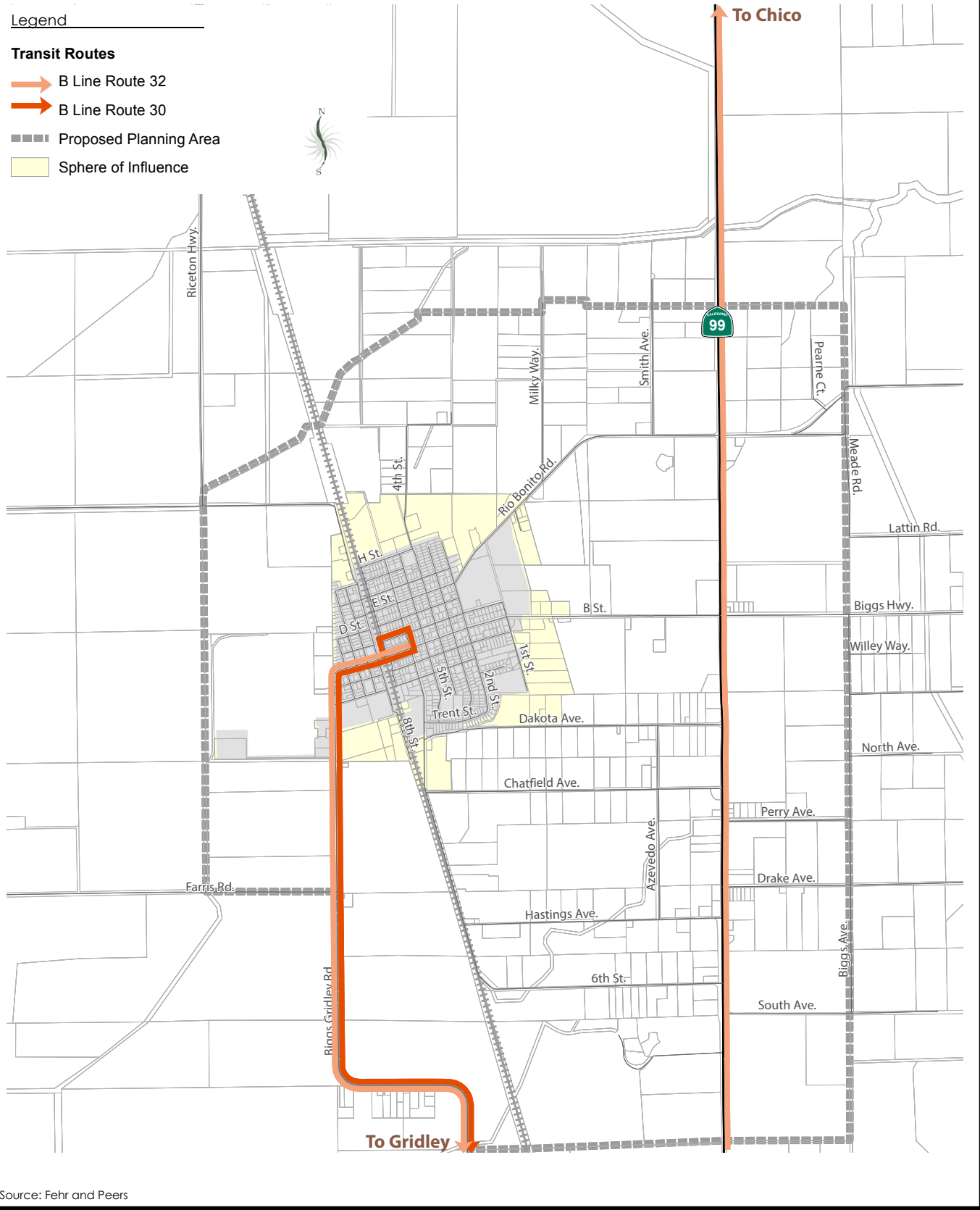
Transit Routes

→ B Line Route 32

→ B Line Route 30

▬ Proposed Planning Area

■ Sphere of Influence



Source: Fehr and Peers

Figure 3.13-4 Existing Transit Facilities







Source: City of Biggs

Figure 3.13-5  
Existing Truck Routes





Transit Administration (FTA). The FTIP is a programming document that identifies all regionally significant transportation projects and programs for Butte County that will be funded by federal, state, and local funding sources within the short-term horizon. The 2013 FTIP identifies three Highway Bridge Program projects within or near the General Plan Planning Area. None of these projects increase roadway capacity.

#### **Coordinated Public Transit-Human Services Transportation Plan**

BCAG produced a Coordinated Public Transit-Human Services Transportation Plan for Butte County in 2008, which identifies existing public transit services in the county, unmet transit needs, and recommendations for providing future services. This plan meets the requirements for coordinated planning efforts as described in SAFETEA-LU and enables federal funding.

#### **Unmet Transit Needs Assessment (2012/2013)**

The unmet transit needs process is led by BCAG annually and addresses all of the transit-related needs that are currently not provided and are not scheduled to be provided for people living in Butte County to maintain a minimum standard of living. This process is undertaken to ensure that all reasonable transit needs are met before funds are distributed for non-transit uses. Once input from the public is received, a Transportation Needs Assessment (TNA) report is produced with descriptions of unmet and reasonable transit needs. Based on the most recent unmet transit needs document adopted in February 2012, BCAG determined that there are no unmet transit needs which are reasonable to meet. Further, none of the public comments reviewed were specific to Biggs.

#### **2011 Butte County Bicycle Plan**

The former Countywide Bikeway Master Plan was updated in 2011 for the unincorporated areas of the county and included emphasis on regional connectivity between the local cities. Existing bicycle facility conditions were evaluated, the goals and policies for bicycle transportation were reviewed and confirmed, and practical projects to implement the network were identified. The updated plan contains the overall recommended programs and support facilities that will help improve bicycling as a viable and practical mode of transportation and recreation for Butte County.

#### **Biggs Area Bicycle Transportation Plan**

The 2011 *Biggs Area Bicycle Transportation Plan* (BTP) provides the long-term framework to improve and encourage bicycle transportation throughout the city. In order to receive Bicycle Transportation Account (BTA) funding, the City is required to adopt a Bicycle Transportation Plan. The BTP identifies the current and future needs of bicyclists and establishes goals and policies for planning and implementing bicycle facilities within the city.

### **3.13.3 IMPACTS AND MITIGATION MEASURES**

#### STANDARDS OF SIGNIFICANCE

Based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the following criteria have been established to determine whether or not the General Plan would have a significant impact on transportation and circulation. The intent of Section CEQA Section 15064 is that the responsible agency establish the thresholds in the context of its specific values

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toward environmental resources or impacts. This allows a rural jurisdiction to have a different threshold than an urban jurisdiction because each may value the resource differently.

Implementation of the General Plan would have a significant impact on transportation and circulation if it causes any of the following outcomes:

- 1) Conflict with an applicable plan (i.e., City Level of Service Standards), ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- 2) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- 3) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- 4) Result in inadequate emergency access.
- 5) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

#### TRANSPORTATION ANALYSIS METHODOLOGY

The transportation analysis for the roadway system follows the methodology described below. For other components of the transportation system, the policy framework and implementation program for the proposed General Plan were evaluated against the significance criteria by Fehr & Peers Transportation Consultants.

BCAG maintains a countywide travel demand forecasting (TDF) model. In response to the requirements and recommendations of the *2010 California Regional Transportation Plan Guidelines*, adopted by the California Transportation Commission, BCAG conducted a comprehensive update of the regional model for use in developing and evaluating the transportation impacts of the MTP/SCS. The BCAG travel demand forecasting model encompasses Butte County.

As part of the General Plan update, a series of static and dynamic validation tests were conducted, consistent with recommendations in the 2010 RTP Guidelines. Model validation describes a model's performance in terms of how closely the model's output matches existing travel data in the base year. During the model development process, these outputs are used to further calibrate model inputs. The extent to which model outputs match existing travel data validates the assumptions of the inputs. Traditionally, most model validation guidelines have focused on the performance of the trip assignment function in accurately assigning trips to the street network. This metric is called static validation, and it remains the most common means of measuring model accuracy. While reproducing existing conditions is important, it is also important to know that the model will produce stable and reasonable results when various inputs such as land use are changed. This type of testing is referred to as dynamic validation.

A modified version of the BCAG MTP/SCS model was used by Fehr & Peers to forecast future traffic volumes for the proposed General Plan. The modifications were specific to Biggs to ensure

that the model accurately estimated traffic volumes and could be used in the analysis process to determine the number of lanes necessary for major roadway segments based on anticipated future population and employment growth. **Appendix 3.13-1** includes a detailed summary of the model validation. The Butte County MTP/SCS includes development of year 2035 land use growth projections. These land use forecasts, which were developed with input from City of Biggs staff, were used directly without modification.

#### **Proposed Draft General Plan Circulation Network**

The City of Biggs desires a multimodal circulation system through the development of new key roadway connections, which are consistent with proposed land uses and community values reflected in proposed General Plan goals and policies. **Figure 3.13-6** illustrates the circulation network of the proposed General Plan. Both **Figure 3.13-6** and the descriptions below are not intended to depict the actual alignment of new roadways, but rather indicate the general concept that may be refined through further analysis as development applications are reviewed.

The proposed roadway network includes the following circulation concepts:

- Continuation of B Street west of West Biggs Gridley Road as an arterial roadway with a direct connection to a new collector “ring” roadway.
- Development of a new collector “ring” roadway west of the city limits, which connects West Rio Bonito Road on the north to Chatfield Avenue on the south.
- Improved connectivity through the extension of existing roadways to create a more robust grid roadway network outside of the downtown area. Proposed collectors include:
  - Extension of First Street and Azevedo Avenue to provide continuous north–south connections through the Planning Area.
  - Continuation of Milky Way south and then east to connect directly to a new north–south roadway to support proposed higher-density land uses around the West Rio Bonito Road corridor.
  - Extension of Hastings Avenue from Sixth Street to the west across the railroad tracks to provide a direct connection to West Biggs Road.
- Consideration of grade-separated crossings to eliminate conflicts between the existing railroad tracks and surface roadways.

All roadways are proposed as multimodal links connecting complementary land uses. As the impact analysis indicates, proposed roadways are expected to operate well within acceptable levels based on volume thresholds by facility type. The proposed grade separations are primarily driven by the desire to provide continuous east–west mobility, ensure emergency access, and improve safety for all users; they are not due to exceeding roadway capacity. The completion of the entire proposed circulation network exceeds what is likely needed to support 2035 land use projections. As previously described in Section 2.0, Project Description, growth projections are higher than historical growth rates, resulting in a conservative (i.e., greater than likely) development scenario. Likewise, the transportation network is also conservative, as it proposes facility concepts that may exceed the need based on land projections. It’s envisioned that as

### 3.13 TRANSPORTATION AND CIRCULATION

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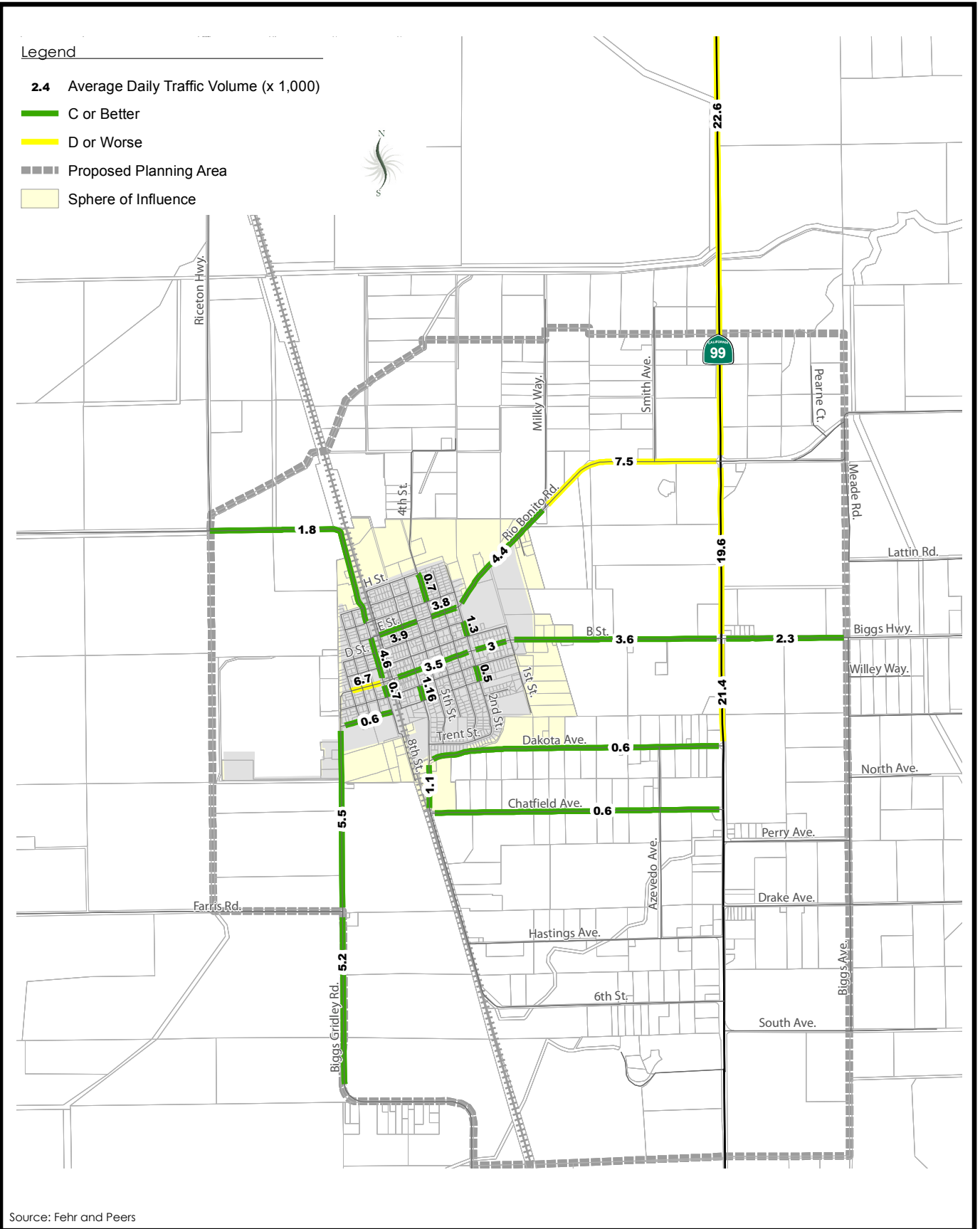
details of the seven Special Planning Districts emerge and development takes hold, circulation concepts consistent with the proposed General Plan will be addressed on a localized basis.

As described in Section 2.0, Project Description, a projected average growth rate of 3 percent annually (double the historic growth rate average) is realistic, though still a higher rate of growth than the historic average and therefore a conservative assumption. The impact discussion below evaluates both the potential impacts associated with the projected growth conditions in 2035 with implementation of the proposed General Plan (Impact 3.13.1) and the potential impacts associated with theoretical buildout of the proposed General Plan Land Use Diagram (Impact 3.13.7).

The following proposed General Plan policies and actions address transportation and circulation.

- Policy LU-4.1 (Project Design) – New development shall incorporate planning and design elements that enhance the community character and integrate new development with existing developed areas of the City.*
- Action LU 4.1.1 (Traditional Neighborhood Design) – Utilize traditional neighborhood design elements in the design and layout of new residential developments.*
- 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.*
- Action CE-1.1.1 Update street design standards to support the goals and policies of the General Plan, discouraging street patterns that are not based on the basic concepts of a grid street pattern.*
- 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.*





**Figure 3.13-6**  
Average Daily Traffic Volumes and Level of Service - General Plan Buildout



### 3.13 TRANSPORTATION AND CIRCULATION

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- Action CE-6.2.2 *Prepare and adopt street design standards that accommodate pedestrian and bicycle transportation modes.*
- Action CE-6.2.3 *Continue to pursue grant funding opportunities to enhance the pedestrian and bicycle amenities in the city.*
- 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.*
- 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 S-6.1 *(Railroad Crossing) – Enhance the safety of railroad crossings in the city.*
- Action S-6.1.1 *(Coordinate with UPRR) – Request Union Pacific Railroad to verify that relevant safety measures for at-grade crossings are implemented and maintained, and assess the feasibility of improving safety features, including enhanced crossing gate practices and warning devices.*
- Action S-6.1.2 *(Education on Railroad Crossing) – Consider potential rail-related hazards prior to approval of new development projects and roadway improvements in the immediate vicinity of the Union Pacific Railroad tracks.*
- Action S-6.1.3 *(Grade-Separated Crossings) – For improved emergency response and traffic circulation, support interagency studies to identify the best possible locations and feasibility for funding and developing grade-separated (vehicle and pedestrian/bicycle) railroad crossings within the city.*
- Action S-6.1.5 *(Pedestrian / Bicycle Railroad Crossing) – In cooperation with UPRR, work to ensure pedestrian and bicycle crossing safety as appropriate.*
- Policy CIRC-1.1 *(Circulation Diagram) – New development shall generally conform to the alignments depicted in Figure Circ-3 – Circulation Diagram.*

### 3.13 TRANSPORTATION AND CIRCULATION

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- 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.
- Action CIRC-1.2.1 *(Street Improvement Standards)* – Prepare and adopt street design standards that address right-of-way width, materials and street design and construction standards and include guidelines for roadway phasing and off-site improvements.
- 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.
- Action CIRC-1.3.1 *(Development Impact Fees)* – Periodically review the City's Development Impact Fee program to ensure that fees associated with the program are adequately supporting the City's current street design criteria and Capital Improvement Program.
- Action CIRC-1.3.2 Establish a City funding mechanism to fund the planned roadway capacity expansion projects identified in the Circulation Element.
- 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.
- Action CIRC-1.6.1 *(Level of Service Standards)* – Prepare and adopt enhanced Level of Service (LOS) standards for the City's circulation system consistent with the Transportation Research Board's Highway Capacity Manual and local goals, policies and objectives. The standards should also address multi-modal transportation measurement thresholds.

### 3.13 TRANSPORTATION AND CIRCULATION

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- 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.
- Action CIRC-2.1.1 *(Roadway Impact Studies)* – Develop transportation impact study (TIS) guidelines, which provide criteria for when a TIS is required, define methodology, and give guidance on report content.
- Policy CIRC-3.1 *(Efficiency and Cost-Effectiveness)* – The City shall establish a comprehensive and cost effective strategy for identification of road maintenance and improvement projects.
- Action CIRC-3.1.1 *(Pavement Management System)* – Continue to utilize and implement an updated Pavement Management System to address roadway maintenance activities and to allocate resources as necessary to cost-effectively manage the City's circulation network.
- Policy CIRC-3.2 *(Maintenance Prioritization)* – Road maintenance and improvement projects shall generally be prioritized in the following manner:
- Conditions which represent a safety hazard shall receive highest priority.
  - Conditions which, if not corrected, will result in increasingly costly repairs in the future shall receive secondary priority.
  - Conditions which result in nuisance or inconvenience shall receive third priority.
- Policy CIRC-4.1 *(Bicycle System)* – Pursue the development of a comprehensive and interconnected bicycle route system 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.
- Action CIRC-4.1.3 *(Bicycle Transportation Plan)* – Update the City's Bicycle Transportation Plan every five (5) years to maintain eligibility for grant funding from Caltrans' Bicycle Transportation Account.
- Action CIRC-4.1.4 *(Regional Partners)* – Pursue regional partnerships to leverage opportunities for improvements to the regional bicycle system and to enhance the City and regions competitiveness for grant funded programs.
- Action CIRC-4.1.5 *(Street Improvements)* – Ensure that new street improvement projects consider potential impacts to rider safety and convenience.

### 3.13 TRANSPORTATION AND CIRCULATION

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- Policy CIRC-4.2 (Construction and Maintenance) – Require that new development projects provide connections and facilities for bicycles.
- Action CIRC-4.2.1 (Bicycle Facilities) – Consider an implementation of a program to install bicycle parking facilities within the street right-of-way at key locations in the Downtown, near transit stops and near municipal and community buildings.
- 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.
- Action CIRC-4.4.2 (Pedestrian Impediment Survey) – Periodically update the City existing pedestrian impediment survey to identify the types and location of pedestrian mobility constraints and to assist in prioritizing safety and mobility improvements.
- 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.

- Policy CIRC-6.1 (New Rail Crossings) – Consider and explore opportunities for new rail crossings that would increase circulation system safety and reduce heavy vehicle trips on B Street.
- Action CIRC-6.1.1 (Southern Rail Crossing) – Investigate opportunities for construction of a new railroad crossing to the south of Hamilton Slough to accommodate a truck route leading from the southwest portion of Biggs to SR 99.
- Action CIRC-6.1.2 (F Street Rail Crossing) – Research and explore options for the exchange of the City’s rail crossing at F Street for rights to establish a new rail crossing in a location that enhances emergency response options and circulation system safety.

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan would result in significant transportation-related impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that protect visual resources effects and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

##### City Roadway Facilities (Standard of Significance 1)

**Impact 3.13.1** Implementation of the proposed General Plan would increase traffic volume that would degrade operating conditions along local roadways. Therefore, the impact is considered **significant**.

**Figure 3.13-6** indicates resulting LOS associated with the projected growth rate associated with implementation of the proposed General Plan. **Table 3.13-4** provides the proposed roadway classification, number of lanes, forecast traffic volume, and resulting LOS of each study segment.

As shown in **Table 3.13-4**, 20 of the 22 local roadway segments are anticipated to operate at LOS C or better conditions consistent with the proposed General Plan threshold (Fehr & Peers 2013). Only the roadway segments of B Street between Eighth Street and Eleventh Street and West Rio Bonito Road between SR 99 and Milky Way are projected to operate below LOS C. In evaluating the roadway system, a lower vehicle LOS standard may be desired when balanced against other community values related to resource protection, social equity, economic development, and consideration of pedestrians, bicyclists, and transit users. In addition, roadway LOS is directly linked to roadway infrastructure costs. A higher LOS standard (i.e. LOS A or B) results in higher expenditure of infrastructure dollars to construct and maintain wider roadways that may not meet the needs of the City.

Proposed General Plan Action CIRC-1.6.1 specifically addresses LOS, as it ensures the preparation and adoption of enhanced LOS standards for the City’s circulation system consistent with the Transportation Research Board’s *Highway Capacity Manual* and local goals, policies, and objectives. Implementation of this General Plan provision will address multimodal measures of effectiveness. In addition, Policy CIRC-1.6 states that new development would be required to provide off-site street improvements as needed to avoid creating significant traffic impacts on streets surrounding the proposed projects. This policy establishes LOS C 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 the General Plan.

### 3.13 TRANSPORTATION AND CIRCULATION

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Since only 20 of the 22 local roadway segments are anticipated to operate at LOS C or better conditions consistent with the proposed General Plan threshold, this impact is considered significant. The expansion of the roadway segments of B Street between Eighth Street and Eleventh Street and West Rio Bonito Road between SR 99 and Milky Way could potentially mitigate the projected LOS impacts by providing increased traffic capacity. Wider roadways, in general, are inconsistent with maintaining rural character and aesthetics, cause greater impacts to biological resources and agricultural land, and discourage use by pedestrians and bicyclists; nonetheless, the expansion of these roadway segments could potentially mitigate the projected LOS impacts. However, while roadway expansion may be possible in the case of West Rio Bonito Road as this segment is adjacent to agricultural land on either side and thus easily developed, the segment of B Street that is between Eighth Street and Eleventh Street is adjacent to existing residential development on either side, which results in a considerable constraint to potential widening. This existing residential development would have to be purchased at substantial cost and demolished in order to provide the needed space for facility expansion.

As there is no feasible mitigation that can be applied to reduce this impact and additionally, since Policy CIRC-1.6 would allow for the threshold of acceptable traffic operations to be surpassed if determined desirable by City policy makers, impacts to City roadway facilities are considered **significant and unavoidable**.



**TABLE 3.13-4  
ROADWAY LEVEL OF SERVICE – GENERAL PLAN BUILDOUT**

Roadway Segment	Existing Conditions				Cumulative Conditions with Project	
	Classification	Lanes	Volume	LOS	Volume	LOS
1. East Biggs Highway – SR 99 to Biggs Avenue	Rural Arterial	2	2,342	C or Better	2,350	C or Better
2. B Street – First Street to SR 99	Rural Arterial	2	2,315	C or Better	3,580	C or Better
3. B Street – First Street to Second Street	Rural Arterial	2	2,264	C or Better	3,010	C or Better
4. B Street – Second Street to Seventh Street	Rural Arterial	2	2,440	C or Better	3,530	C or Better
5. B Street – Eighth Street to Eleventh Street	Rural Arterial	2	1,990	C or Better	6,730	D or Worse
6. Dakota Avenue – Sixth Street to SR 99	Rural Collector/Local	2	291	C or Better	550	C or Better
7. Chatfield Avenue – Sixth Street to SR 99	Rural Collector/Local	2	203	C or Better	630	C or Better
8. West Rio Bonito Road – SR 99 to Milky Way	Rural Arterial	2	1,159	C or Better	7,520	D or Worse
9. E Street – Milky Way to Second Street	Rural Arterial	2	1,093	C or Better	4,370	C or Better
10. E Street – Second Street to Fourth Street	Rural Arterial	2	1,074	C or Better	3,760	C or Better
11. E Street – Fifth Street to Seventh Street	Rural Arterial	2	901	C or Better	3,900	C or Better
12. Bannock Street – Eighth Street to West Biggs Gridley Road	Rural Collector/Local	2	170	C or Better	560	C or Better
13. Second Street – C Street to D Street	Rural Collector/Local	2	721	C or Better	1,300	C or Better
14. Second Street – Aleut Street to Bannock Street	Rural Collector/Local	2	448	C or Better	500	C or Better
15. Fourth Street – F Street to H Street	Rural Collector/Local	2	353	C or Better	650	C or Better
16. Eighth Street – B Street to Aleut Street	Rural Collector/Local	2	706	C or Better	710	C or Better
17. Sixth Street – Aleut Street to Bannock Street	Rural Collector/Local	2	1,113	C or Better	1,160	C or Better
18. Sixth Street – Dakota Street to Chatfield Avenue	Rural Collector/Local	2	1,025	C or Better	1,100	C or Better
19. Afton Road/Eighth Street – Riceton Highway to F Street	Rural Arterial	2	1,153	C or Better	1,830	C or Better
20. Eighth Street – B Street to E Street	Rural Arterial	2	1,269	C or Better	4,550	C or Better

### 3.13 TRANSPORTATION AND CIRCULATION

Roadway Segment	Existing Conditions				Cumulative Conditions with Project	
	Classification	Lanes	Volume	LOS	Volume	LOS
21. West Biggs Gridley Road – Bannock Street to Farris Road	Rural Arterial	2	1,890	C or Better	5,500	C or Better
22. West Biggs Gridley Road – Farris Road to Rudd Lane	Rural Arterial	2	1,884	C or Better	5,210	C or Better
23. SR 99 – Hamilton Road to West Rio Bonito Road	Rural State Highway	2	11,500	D	22,560	E
24. SR 99 – West Rio Bonito Road to B Street/Biggs Highway	Rural State Highway	2	11,800	D	19,610	E
25. SR 99 – B Street/Biggs Highway to Dakota Avenue	Rural State Highway	2	14,200	D	21,360	E

Source: Fehr & Peers 2013

### State Highway Facilities (Standard of Significance 1)

**Impact 3.13.2** Implementation of the proposed General Plan would increase traffic volume that would degrade operating conditions along the state highway. The resulting levels of service are within the levels adopted in applicable plans and policies. However, implementation of improvements to the state highway system is uncertain since the City of Biggs has no control over Caltrans actions regarding SR 99. Therefore, the impact is considered **significant**.

**Figure 3.13-6** indicates resulting LOS associated with implementation of the proposed General Plan. **Table 3.13-4** provides the proposed roadway classification, number of lanes, forecast traffic volume, and resulting LOS of each study segment.

All three SR 99 study segments are anticipated to operate at LOS E conditions. LOS E is the concept level of service established by Caltrans. The resulting level of service for the three SR 99 segments is due to a combination of cumulative traffic and implementation of the proposed General Plan.

Proposed General Plan Policy CIRC-1.4 identifies the collection of the fair-share cost of all feasible transportation improvements to reduce the severity of transportation impacts associated with SR 99. Caltrans accepts direct fair-share cost contributions from developers and has a preferred fair-share cost calculation methodology contained in the *Guide for the Preparation of Traffic Impact Studies*. While implementation of Policy CIRC-1.4 would ensure fair-share funding toward roadway impacts, there is no guarantee that Caltrans will agree to new funding mechanisms or construct roadway capacity expansion projects to reduce the identified impacts. Therefore, this impact would remain **significant and unavoidable**.

### Result in Change in Air Traffic Patterns (Standard of Significance 2)

**Impact 3.13.3** Implementation of the proposed General Plan may increase aviation traffic; however, this growth is consistent with applicable plans and policies. Therefore, this impact is considered **less than significant**.

The proposed General Plan contains no potential internal policy inconsistencies or discrepancies with other adopted plans or programs supporting the provision of aviation facilities or services in Butte County. The City of Biggs does not own or contain its own aviation facility. In addition, demand for aviation facilities or services, which may increase slightly with population and employment growth in Biggs or surrounding areas, is not expected to cause operational problems at airports in the county. The existing airports have relatively low levels of usage and could accommodate expected increases in usage. As a result, implementation of the proposed General Plan would result in a **less than significant** impact related to aviation policy conflicts.

### Roadway or Traffic Hazards (Standard of Significance 3)

**Impact 3.13.4** Implementation of the proposed General Plan will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). However, buildout of the proposed General Plan could result in increased travel on roadways that do not meet current design standards and present hazards in their current state. Therefore, this impact is considered **significant**.

### 3.13 TRANSPORTATION AND CIRCULATION

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As an agricultural community, there are several existing aspects of living in Biggs that can be perceived as inconveniences or discomforts due to the prevalence of agricultural operations. For instance, slow-moving agricultural equipment can sometimes be found using city roadways, which can impede the standard flow of traffic and/or result in incompatibilities with typical automobile traffic. Currently Biggs residents accept such existing traffic issues as a normal and necessary aspect of living in a community with an active agricultural sector.

This assessment of transportation and circulation hazards is based on a review of locations where development would be allowed through implementation of the proposed General Plan. While the proposed General Plan would allow increased development relative to existing levels and would result in increased traffic volumes, the proposed General Plan includes policies to minimize traffic hazards, both existing and those that may occur with development. For instance, Policies S-6.1 and CIRC-6.1 would enhance the safety of railroad crossings in the city, as these policy provisions seek to establish safety measures at the at-grade crossings and improved emergency response and circulation with the implementation of grade-separated crossings. Additionally, Policies CIRC-3.2 and CIRC-4.5 establish that road maintenance and improvement projects which represent a safety hazard receive highest priority, and Policy CIRC-4.4 requires the identification of locations that present hazards to pedestrian, along with pursuing remedies to those hazards. As Biggs grows under the General Plan, there is a potential for new development to result in traffic hazards on roadways that are not yet constructed. Proposed General Plan Policy CIRC-1.2 and associated actions require new development to dedicate adequate rights-of-way to allow for construction of roadways and address the preparation of street improvement standards. Policy CIRC-2.1 mandates that 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. New development would not be allowed to proceed unless the identified impacts to circulation are effectively addressed.

Implementation of these policy provisions in the proposed General Plan would make this impact less than significant in terms of the existing and planned roadway network; however, funding has not been secured to improve existing deficiencies. Therefore, this impact is considered to be **significant and unavoidable**.

#### **Emergency Access (Standard of Significance 4)**

**Impact 3.13.5** Implementation of the proposed General Plan will result in inadequate emergency access unless improvements proposed in the document are implemented simultaneously with development. This impact is considered **significant**.

The lack of east-west connectivity and periodic road blockages presented by at-grade crossings of active railroad tracks compromise emergency response. Although the proposed General Plan proposes the development of grade-separated crossings, these improvements are not funded and require implementation in coordination with other jurisdictions. Since there is uncertainty as to whether the existing crossings would be modified or new grade-separated crossings built, this impact is considered **significant and unavoidable**.

#### **Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities**

**Impact 3.13.6** Implementation of the proposed General Plan will increase the demand for public transit, bicycle, and pedestrian facilities. However, the proposed General Plan will not conflict with adopted policies, plans, or programs regarding these modes or otherwise decrease the performance or safety of such facilities. Therefore, this impact is considered **less than significant**.

The proposed General Plan Circulation Element contains no potential internal policy inconsistencies or inconsistencies with other adopted plans or programs supporting the provision of transit, bicycle, and pedestrian facilities or services within the Planning Area. The proposed General Plan incorporates the *Biggs Area Bicycle Transportation Plan* by reference and includes Action CIRC-4.1.3 requiring that the plan be updated every five years.

As previously stated, Butte Regional Transit's B-Line offers service to Biggs, with Routes 30 and 32 serving the city. Development consistent with the General Plan will be designed to accommodate usage and future expansion of the Transit services.

In terms of bicycle and pedestrian facilities, Policy CIRC-4.2 requires that new development projects provide connections and facilities for bicycles, and Action CIRC-4.1.5 ensures that new street improvement projects consider potential impacts to rider safety and convenience. Policy CIRC-4.1 seeks to pursue the development of a comprehensive and interconnected bicycle route system in Biggs. Action CIRC-4.2.1 seeks implementation of a program to install bicycle parking facilities within the street right-of-way at key locations in the downtown, near transit stops, and near municipal and community buildings. Policy CIRC-4.3 ensures 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 requires detached sidewalks for new development projects adjacent to collector and arterial streets.

The General Plan also encourages the development of compact development patterns that are pedestrian- and bicycle-friendly, which increases opportunities for walking and bicycling and transit use. Implementation of the proposed General Plan policies and actions listed above would reduce this impact to a **less than significant** level.

#### **3.13.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES**

##### **CUMULATIVE SETTING**

The setting for this cumulative analysis includes existing, proposed, planned, and approved projects in the Planning Area. The cumulative setting also assumes anticipated and planned development outside of the City's Planning Area and in Butte County. Development in the region would change the intensity of land uses in the region and increase housing, employment, shopping, and recreational opportunities. This analysis also accounts for regional traffic volume conditions anticipated for year 2035 for regional routes in Biggs.

The following cumulative analysis is focused on cumulative traffic impacts to local roadway and state highways where city-generated traffic would contribute to future traffic volumes in Butte County and other regional traffic. Impacts to transit service, bicycle/pedestrian facilities, roadway safety, and emergency access addressed above are area-specific impacts to the city and are not expected to result in adverse impacts related to cumulative conditions.

### 3.13 TRANSPORTATION AND CIRCULATION

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#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Traffic Impacts on Local Roadways

**Impact 3.13.7** When considered with existing, proposed, planned, and approved development in the region, buildout of the proposed General Plan would rely on future roadway capacity expansion projects for which full funding is not ensured. This is considered a **cumulatively considerable** impact.

The Circulation Element of the proposed General Plan identifies future roadway capacity expansion projects and new roadway connections, for which full funding is not ensured. The proposed General Plan includes policies that require new development to finance a project's off-site circulation improvements and contribute a fair share toward cumulative project impacts. For instance, Policy CIRC-1.3 states that 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. In addition, Action CIRC-1.3.1 calls for periodic review of the City's Development Impact Fee program to ensure that fees associated with the program are adequately supporting the City's current street design criteria and Capital Improvement Program. These requirements will be effective for ensuring that new development pays its fair share of planned improvements. Action CIRC-1.3.2 ensures full funding for improvements by establishing a funding mechanism to fund the planned roadway capacity expansion projects identified in the proposed Circulation Element.

While the City will require projects to either make improvements or pay their appropriate proportionate share of the cost of improvements through local, regional or special fees, and will hold the fees until needed for the improvement, the City cannot be certain that the sufficient funding will be collected to construct the improvement prior to occupancy of a given project. As such, the impact(s) may increase slightly over time while the City collects sufficient funds to construct the improvement. Further, some of the improvements will not be wholly within the City's jurisdiction and will require other agencies to permit the improvement. As the City cannot be certain that improvements will be approved or made by other agencies (i.e. Butte County, Caltrans) the City must conclude that the impact may remain and will therefore be **significant and unavoidable**.

##### Cumulative Traffic Impacts on State Highways

**Impact 3.13.8** When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed General Plan would contribute to cumulative traffic volumes on State Route 99 that result in significant impacts to level of service and operations. This is considered a **cumulatively considerable** impact.

The traffic impact analysis provided in Impact 3.13.2 is based on cumulative conditions (year 2035) that take into account anticipated traffic volumes from development in the region. Buildout of the proposed General Plan would add substantial traffic volumes on state highway facilities that would result in significant traffic impacts to SR 99. Improvements to regional transportation facilities associated with cumulative traffic conditions are intended to be addressed through implementation of regional programs. Impacted facilities include segments of SR 99.

Implementation of proposed General Plan policies and actions would assist in reducing its cumulative contribution to regional traffic effects. However, this impact would still be considered

**cumulatively considerable** and **significant and unavoidable**, as the City does not have authority over improvements outside of the City's jurisdiction (e.g., Caltrans facilities), and the City cannot ensure that these improvements would be completed. With the exception of funding sources for regional traffic improvements associated with the BCAG Regional Transportation Improvement Program, there are no other regional traffic mitigation programs in which the City could participate to minimize regional traffic impacts resulting from the General Plan.

### 3.13 TRANSPORTATION AND CIRCULATION

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## **3.14 GREENHOUSE GASES AND CLIMATE CHANGE**



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## 3.14 GREENHOUSE GASES AND CLIMATE CHANGE

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This section provides a discussion of the proposed General Plan's effect on greenhouse gas emissions and the associated effects of climate change. The California Environmental Quality Act (CEQA) requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval.

### 3.14.1 EXISTING SETTING

#### EXISTING CLIMATE SETTING

Since the early 1990s, scientific consensus holds that the world's population is releasing greenhouse gases (GHG) faster than the earth's natural systems can absorb them. These gases 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<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O), 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.

While often used interchangeably, there is a difference between the terms "climate change" and "global warming." According to the National Academy of Sciences, climate change refers to any significant, measurable change of climate lasting for an extended period of time that can be caused by both natural factors and human activities. Global warming, on the other hand, is an average increase in the atmosphere's temperature caused by increased GHG emissions. The use of the term climate change is becoming more prevalent because it encompasses all changes to the climate, not just temperature.

To fully understand global climate change, it is important to recognize the naturally occurring greenhouse effect and to define the GHGs that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>).

**Table 3.14.1** provides descriptions of the primary GHGs attributed to global climate change, including a description of their physical properties, primary sources, and contribution to the greenhouse effect.

### 3.14 GREENHOUSE GASES AND CLIMATE CHANGE

**TABLE 3.14.1  
GREENHOUSE GASES**

Greenhouse Gas	Description
Carbon Dioxide (CO <sub>2</sub> )	Carbon dioxide (CO <sub>2</sub> ) is a colorless, odorless gas. CO <sub>2</sub> is emitted in a number of ways, both naturally and through human activities. The largest source of CO <sub>2</sub> emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO <sub>2</sub> emissions. The atmospheric lifetime of CO <sub>2</sub> is variable because it is so readily exchanged in the atmosphere. <sup>1</sup>
Methane (CH <sub>4</sub> )	Methane (CH <sub>4</sub> ) is a colorless, odorless gas that is not flammable under most circumstances. CH <sub>4</sub> is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years. <sup>2</sup>
Nitrous Dioxide (N <sub>2</sub> O)	Nitrous oxide (N <sub>2</sub> O) is a clear, colorless gas with a slightly sweet odor. N <sub>2</sub> O is produced by both natural and human-related sources. Primary human-related sources of N <sub>2</sub> O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N <sub>2</sub> O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N <sub>2</sub> O is approximately 120 years. <sup>3</sup>
Hydrofluorocarbons (HFCs)	Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years). <sup>4</sup>
Perfluorocarbons (PFCs)	Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF <sub>4</sub> ), perfluoroethane (C <sub>2</sub> F <sub>6</sub> ), perfluoropropane (C <sub>3</sub> F <sub>8</sub> ), perfluorobutane (C <sub>4</sub> F <sub>10</sub> ), perfluorocyclobutane (C <sub>4</sub> F <sub>8</sub> ), perfluoropentane (C <sub>5</sub> F <sub>12</sub> ), and perfluorohexane (C <sub>6</sub> F <sub>14</sub> ). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF <sub>4</sub> and C <sub>2</sub> F <sub>6</sub> as byproducts. The estimated atmospheric lifetimes for CF <sub>4</sub> and C <sub>2</sub> F <sub>6</sub> are 50,000 and 10,000 years, respectively (USEPA 2010b). <sup>4,5</sup>
Sulfur Hexafluoride (SF <sub>6</sub> )	Sulfur hexafluoride (SF <sub>6</sub> ) is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF <sub>6</sub> is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF <sub>6</sub> produced worldwide. Significant leaks occur from aging equipment and during equipment maintenance and servicing. SF <sub>6</sub> has an atmospheric life of 3,200 years. <sup>4</sup>

Source: <sup>1</sup>EPA 2011a, <sup>2</sup>EPA 2011b, <sup>3</sup>EPA 2010a, <sup>4</sup>EPA 2010b, <sup>5</sup>EFCTC 2003

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. Gases with high global-warming potential, such as HFCs, PFCs, and SF<sub>6</sub>, are the most heat absorbent. Methane traps over 21 times more heat per molecule than CO<sub>2</sub>, and N<sub>2</sub>O absorbs 310 times more heat per molecule than CO<sub>2</sub>. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO<sub>2</sub>e), which weight each gas by its global warming potential (GWP). 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<sub>2</sub> were being emitted. **Table 3.14-2** shows the GWPs for different greenhouse gases for a 100-year time horizon.

**TABLE 3.14-2  
GLOBAL WARMING POTENTIAL FOR GREENHOUSE GASES**

Greenhouse Gas	Carbon Dioxide Equivalent Multipliers (Global Warming Potential)
Carbon Dioxide (CO <sub>2</sub> )	1
Methane (CH <sub>4</sub> )	21
Nitrous Dioxide (N <sub>2</sub> O)	310
Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs)	6,500
Sulfur Hexafluoride (SF <sub>6</sub> )	23,900

Source: California Climate Action Registry 2009

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California is a significant emitter of CO<sub>2</sub> in the world and produced 477 million gross metric tons of CO<sub>2</sub> equivalents in 2008 (CARB 2010). Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2008, accounting for 36.4 percent of total GHG emissions in the state (CARB 2010). This category was followed by the electric power sector (including both in-state and out-of-state sources) (24.3 percent) and the industrial sector (19.3 percent) (CARB 2010).

EFFECTS OF GLOBAL CLIMATE CHANGE

California can draw on substantial scientific research conducted by experts at various state universities and research institutions. With more than a decade of concerted research, scientists have established that the early signs of climate change are already evident in the state—as shown, for example, in increased average temperatures, changes in temperature extremes, reduced snowpack in the Sierra Nevada, sea level rise, and ecological shifts.

Many of these changes are accelerating—locally, across the country, and around the globe. As a result of emissions already released into the atmosphere, California will face intensifying climate changes in coming decades (CNRA 2009a). Generally, research indicates that California should expect overall hotter and drier conditions with a continued reduction in winter snow (with concurrent increases in winter rains), as well as increased average temperatures and accelerating sea-level rise. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing (CNRA 2009a).

### 3.14 GREENHOUSE GASES AND CLIMATE CHANGE

Climate change temperature projections identified in the 2009 California Climate Adaptation Strategy suggest the following (CNRA 2009a):

- Average temperature increase is expected to be more pronounced in the summer than in the winter season.
- Inland areas are likely to experience more pronounced warming than coastal regions.
- Heat waves are expected to increase in frequency, with individual heat waves also showing a tendency toward becoming longer, and extending over a larger area, thus more likely to encompass multiple population centers in California at the same time.
- As GHGs remain in the atmosphere for decades, temperature changes over the next 30 to 40 years are already largely determined by past emissions. By 2050, temperatures are projected to increase by an additional 1.8 to 5.4°F (an increase one to three times as large as that which occurred over the entire 20th century).
- By 2100, the models project temperature increases between 3.6 to 9°F.

According to the 2009 California Climate Adaptation Strategy, the impacts of climate change in California have the potential to include, but are not limited to, the areas discussed in **Table 3.14-3**.

**TABLE 3.14-3  
POTENTIAL STATEWIDE IMPACTS FROM CLIMATE CHANGE**

Potential Statewide Impact	Description
Public Health	Climate change is expected to lead to an increase in ambient (i.e., outdoor) average air temperature, with greater increases expected in summer than in winter months. Larger temperature increases are anticipated in inland communities as compared to the California coast. The potential health impacts from sustained and significantly higher than average temperatures include heat stroke, heat exhaustion, and the exacerbation of existing medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Numerous studies have indicated that there are generally more deaths during periods of sustained higher temperatures, and these are due to cardiovascular causes and other chronic diseases. The elderly, infants, and socially isolated people with pre-existing illnesses who lack access to air conditioning or cooling spaces are among the most at risk during heat waves.
Floods and Droughts	<p>The impacts of flooding can be significant. Results may include population displacement, severe psychosocial stress with resulting mental health impacts, exacerbation of pre-existing chronic conditions, and infectious disease. Additionally, impacts can range from a loss of personal belongings, and the emotional ramifications from such loss, to direct injury and/or mortality.</p> <p>Drinking water contamination outbreaks in the United States are associated with extreme precipitation events. Runoff from rainfall is also associated with coastal contamination that can lead to contamination of shellfish and contribute to food-borne illness. Floodwaters may contain household, industrial, and agricultural chemicals as well as sewage and animal waste. Flooding and heavy rainfall events can wash pathogens and chemicals from contaminated soils, farms, and streets into drinking water supplies. Flooding may also overload storm and wastewater systems, or flood septic systems, also leading to possible contamination of drinking water systems.</p> <p>Drought impacts develop more slowly over time. Risks to public health that Californians may face from drought include impacts on water supply and quality, food production (both agricultural and commercial fisheries), and risks of waterborne illness. As surface water</p>

### 3.14 GREENHOUSE GASES AND CLIMATE CHANGE

Potential Statewide Impact	Description
	supplies are reduced as a result of drought conditions, the amount of groundwater pumping is expected to increase to make up for the water shortfall. The increase in groundwater pumping has the potential to lower the water tables and cause land subsidence. Communities that utilize well water will be adversely affected by drops in water tables or through changes in water quality. Groundwater supplies have higher levels of total dissolved solids compared to surface waters. This introduces a set of effects for consumers, such as repair and maintenance costs associated with mineral deposits in water heaters and other plumbing fixtures, and on public water system infrastructure designed for lower salinity surface water supplies. Drought may also lead to increased concentration of contaminants in drinking water supplies.
Water Resources	The state's water supply system already faces challenges to provide water for California's growing population. Climate change is expected to exacerbate these challenges through increased temperatures and possible changes in precipitation patterns. The trends of the last century—especially increases in hydrologic variability—will likely intensify in this century. The State can expect to experience more frequent and larger floods and deeper droughts. Rising sea level will threaten the Delta water conveyance system and increase salinity in near-coastal groundwater supplies. Planning for and adapting to these simultaneous changes, particularly their impacts on public safety and long-term water supply reliability, will be among the most significant challenges facing water and flood managers this century.
Forests and Landscapes	Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, wildfire occurrence statewide could increase from 57 percent to 169 percent by 2085. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state.

Source: CNRA 2009a

#### Current Greenhouse Gas Emissions

##### California Emissions

The California Energy Commission estimates that California is the second-largest state emitter of GHG emissions in the United States, behind Texas in absolute emissions (CEC 2006). However, the state has relatively low carbon intensity when considering GHG emissions per person or GHG emissions per unit gross state product. Worldwide, California is responsible for approximately 2 percent of the world's CO<sub>2</sub> emissions (CEC 2006). The California Air Resources Board (CARB) released estimates of California's 1990 emissions inventory, which amounted to 433.29 million gross metric tons of carbon dioxide equivalent (MMTCO<sub>2e</sub>) (CARB 2009). CARB has also estimated that 2008 emissions levels were 477 MMTCO<sub>2e</sub> (CARB 2010).

##### Butte County Emissions

A 2006 greenhouse gas inventory for Butte County was prepared as part of the Butte County General Plan. In 2006, GHG emissions in Butte County totaled 601,266 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>). On-road vehicles contributed 295,750 MTCO<sub>2e</sub>, or 49.2 percent, and off-road equipment contributed an additional 6.8 percent, or 40,939 MTCO<sub>2e</sub>. Approximately 28.1 percent of the 2006 GHG emissions can be attributed to electricity and natural gas used to power or heat residences, homes, and industries. Industrial sources (stationary sources) related to the burning of other fuels or fugitive emissions accounted for 4,093 MTCO<sub>2e</sub>, or 0.7 percent. Waste generated by Butte County residents in 2006 will produce 17,873 metric tons of GHGs (due to landfill methane) over the next 30 years, roughly the

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decompositional lifetime of the landfilled waste. Waste currently in place at the Neal Road Recycling and Waste Facility will result in 14,247 MTCO<sub>2</sub>e in the form of landfill methane; this amount is 2.4 percent of the 2006 total. The burning of fuel to power agricultural equipment in 2006 contributed 77,019 MTCO<sub>2</sub>e, roughly 10 percent of the on-road vehicle emissions and 12.8 percent of the county total for 2006 (Butte County 2010).

#### 3.14.2 REGULATORY FRAMEWORK

The adoption of recent legislation has provided a clear mandate that climate change must be included in an environmental review for a project subject to the California Environmental Quality Act (CEQA). Several GHG emission-related laws and regulations are provided as follows.

##### FEDERAL REGULATION AND THE CLEAN AIR ACT

In the past, the US Environmental Protection Agency (EPA) has not regulated greenhouse gases under the Clean Air Act (CAA) because it asserted that the act did not authorize the EPA to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. However, the US Supreme Court held that the EPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, twelve states and cities, including California, together with several environmental organizations, sued to require the EPA to regulate GHGs as pollutants under the Clean Air Act (127 S. Ct. 1438 [2007]). The US Supreme Court held that the EPA was authorized by the Clean Air Act to regulate CO<sub>2</sub> emissions from new motor vehicles. The Court did not mandate that the EPA enact regulations to reduce GHG emissions, but found that the only instances in which the EPA could avoid taking action were if it found that GHG emissions do not contribute to climate change or if it offered a “reasonable explanation” for not determining that GHG emissions contribute to climate change.

On December 7, 2009, the EPA issued an “endangerment finding” under the Clean Air Act, concluding that GHG emissions threaten the public health and welfare of current and future generations and that motor vehicles contribute to GHG pollution (EPA 2009). These findings provide the basis for adopting new national regulations to mandate GHG emission reductions under the federal Clean Air Act. The EPA’s endangerment finding paves the way for federal regulation of GHG emissions.

It was expected that Congress would enact GHG legislation, primarily for a cap-and-trade system. However, proposals circulated in both the House of Representative and the Senate were controversial, and it may be some time before Congress adopts major climate change legislation. Under the Consolidated Appropriations Act of 2008 (HR 2764), Congress has established mandatory GHG reporting requirements for some emitters of greenhouse gases. In addition, on September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires annual reporting to the EPA of GHG emissions from large sources and suppliers of greenhouse gases, including facilities that emit 25,000 metric tons or more a year of GHGs.

The following discussion summarizes the EPA’s recent regulatory activities with respect to various types of GHG sources.

##### **EPA and National Highway Traffic Safety Administration Joint Rulemaking for Vehicle Standards**

In response to the *Massachusetts v. EPA* ruling discussed above, the Bush Administration issued an Executive Order on May 14, 2007, directing the EPA, the Department of Transportation (DOT),



and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008.

On October 10, 2008, the National Highway Traffic Safety Administration (NHTSA) released a final environmental impact statement analyzing proposed interim standards for passenger cars and light trucks in model years 2011 through 2015. The NHTSA issued a final rule for model year 2011 on March 30, 2009 (NHTSA 2009).

On May 7, 2010, the EPA and the NHTSA issued a final rule regulating fuel efficiency and GHG pollution from motor vehicles for cars and light-duty trucks for model years 2012–2016 (EPA 2010c). On May 21, 2010, President Obama issued a memorandum to the Secretaries of Transportation and Energy, and to the Administrators of the EPA and the NHTSA, calling for the establishment of additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and the NHTSA issued a Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal greenhouse gas and fuel economy standards for model year 2017–2025 light-duty vehicles. The agencies proposed standards projected to achieve 163 grams per mile of CO<sub>2</sub> in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. California has announced its support of this national program. The final rule was adopted in October 2012, and the NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

#### **Fuel Efficiency Standards for Heavy-Duty Engines and Vehicles**

In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the EPA and the NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks, which apply to vehicles from model years 2014–2018. Both the EPA and the NHTSA have adopted standards for CO<sub>2</sub> emissions and fuel consumption, respectively, tailored to each of three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this program will reduce GHG emissions and fuel consumption for affected vehicles by 6 percent to 23 percent.

#### **Energy Independence and Security Act**

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. Among other key measures, the act would do the following, which would aid in the reduction of national GHG emissions, both mobile and non-mobile:

- 1) Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- 2) Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.
- 3) While superseded by the NHTSA and EPA actions described above, EISA also set miles per gallon targets for cars and light trucks and directed the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

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Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

#### **Voluntary Programs**

The EPA administers a variety of voluntary programs and partnerships with GHG emitters in which the Environmental Protection Agency partners with industries that produce and utilize synthetic gases to reduce emissions of particularly potent GHG emissions. For example, the EPA's National Clean Diesel Campaign (NCDC) promotes diesel emission reduction strategies. The NCDC works to reduce the pollution emitted from diesel engines across the country through the implementation of varied control strategies by working with manufacturers, fleet operators, air quality professionals, environmental and community organizations, and state and local officials to reduce diesel emissions. NCDC activities include developing new emissions standards for locomotive and marine diesel engines, and promoting the reduction of emissions for existing diesel engines, including use of cleaner fuels, retrofitting and repairing existing fleets, and idling reduction, among others. The EPA also administers the State and Local Climate and Energy Program, which provides technical assistance, analytical tools, and outreach support to state, local, and tribal governments.

#### Other Applicable Regulations and Policies

In addition to the federal regulations and programs described above, there are still more policies and programs to address climate change. A database compiled by the International Energy Agency lists more than 300 policies and measures addressing climate change in the United States.

#### STATE REGULATION

California has adopted various administrative initiatives and also enacted a variety of legislation relating to climate change, much of which sets aggressive goals for GHG emissions reductions within the state. However, none of this legislation provides definitive direction regarding the treatment of climate change in the environmental review documents prepared under CEQA. In particular, the amendments to the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or thresholds of significance and do not specify greenhouse gas reduction mitigation measures. Instead, the CEQA amendments continue to rely on lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. In addition, no state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating any significant effects in CEQA documents. Thus, lead agencies exercise their discretion determining how to analyze greenhouse gases.

The discussion below provides a brief overview of California Air Resources Board (CARB) and Office of Planning and Research (OPR) documents and of the primary legislation relating to climate change that may affect the emissions associated with the proposed project. It begins with an overview of the primary regulatory acts that have driven GHG regulation and analysis in California.

#### **Executive Order S-3-05 (Statewide GHG Targets)**

California Executive Order S-03-05 (June 1, 2005) mandates a reduction of GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

Although the 2020 target has been incorporated into legislation (AB 32), the 2050 target remains only a goal of the Executive Order.

#### **Assembly Bill 32, the California Global Warming Solutions Act of 2006**

The California Global Warming Solutions Act of 2006 (AB 32) 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) was signed into law in September 2006 after considerable study and expert testimony before the legislature. The law instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The act directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. Based on CARB's calculation of 1990 baseline emissions levels, California must reduce GHG emissions by approximately 29 percent below "business-as-usual" predictions of year 2020 GHG emissions to achieve this goal.

The bill required CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. CARB accomplished the key milestones set forth in AB 32, including the following:

- June 30, 2007. Identification of discrete early action GHG emissions reduction measures. On June 21, 2007, CARB satisfied this requirement by approving three early action measures. These were later supplemented by adding six other discrete early action measures.
- January 1, 2008. Identification of the 1990 baseline GHG emissions level, approval of a statewide limit equivalent to that level, and adoption of reporting and verification requirements concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline.
- January 1, 2009. Adoption of a scoping plan for achieving GHG emission reductions. On December 11, 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan), discussed in more detail below.
- January 1, 2010. Adoption and enforcement of regulations to implement the "discrete" actions. Several early action measures have been adopted and became effective on January 1, 2010.
- January 1, 2011. Adoption of GHG emissions limits and reduction measures by regulation. On October 28, 2010, CARB released its proposed cap-and-trade regulations, which would cover sources of approximately 85 percent of California's GHG emissions (CARB 2010b). CARB's board ordered CARB's executive director to prepare a final regulatory package for cap and trade on December 16, 2010.
- January 1, 2012. GHG emissions limits and reduction measures adopted in 2011 become enforceable.

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#### AB 32 Scoping Plan

As noted above, on December 11, 2008, CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emission level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business as usual"). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations will occur through the end of year 2013. The key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, heavy-duty truck measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation (CARB 2008).

In 2009, a coalition of special interest groups brought a challenge to the Scoping Plan alleging that it violated AB 32 and that the environmental review document (called a "Functional Equivalent Document") violated CEQA by failing to appropriately analyze alternatives to the proposed cap-and-trade program. On May 20, 2011, the San Francisco Superior Court entered a final judgment ordering that CARB take no further action with respect to cap-and-trade rulemaking until it complies with CEQA. While CARB disagrees with the trial court finding and appealed the decision on May 23, 2011, in order to remove any doubt about the matter and in keeping with CARB's interest in public participation and informed decision-making, CARB revisited the alternatives. The revised analysis includes the five alternatives included in the original environmental analysis: a "no project" alternative (that is, taking no action at all); a plan relying on a cap-and-trade program for the sectors included in a cap; a plan relying more on source-specific regulatory requirements with no cap-and-trade component; a plan relying on a carbon fee or tax; and a plan relying on a variety of proposed strategies and measures. The public hearing to consider approval of the AB 32 Scoping Plan Functional Equivalent Document and the AB 32 Scoping Plan was held on August 24, 2011. On this date, CARB re-approved the Scoping Plan.

In August 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relies on emissions projections updated in light of current economic forecasts

which account for the economic downturn since 2008 as well as reduction measures already approved and put in place. This reduced the projected 2020 emissions from 596 million metric tons (MMT) CO<sub>2</sub>e to 545 MMTCO<sub>2</sub>e. The reduction in projected 2020 emissions means that the revised business-as-usual (BAU) reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now only 21 percent.

### **Assembly Bill 1493**

Assembly Bill 1493 ("the Pavley Standard" or AB 1493) (Health and Safety Code Sections 42823 and 43018.5) required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from noncommercial passenger vehicles and light-duty trucks of model year 2009 through 2016. The bill also required the California Climate Action Registry to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emissions reduction credits. The bill authorizes CARB to grant emissions reduction credits for reductions in GHG emissions prior to the date of enforcement of regulations, using model year 2000 as the baseline for reduction.

In 2004, CARB applied to the EPA for a waiver under the federal Clean Air Act to authorize implementation of these regulations. The waiver request was formally denied by the EPA in December 2007 after California filed suit to prompt federal action. In January 2008, the California Attorney General filed a new lawsuit against the EPA for denying California's request for a waiver to regulate and limit GHG emissions from these vehicles. In January 2009, President Barack Obama issued a directive to the EPA to reconsider California's request for a waiver. On June 30, 2009, the EPA granted the waiver to California for its GHG emission standards for motor vehicles. As part of this waiver, the EPA specified the provision that CARB may not hold a manufacturer liable or responsible for any noncompliance caused by emission debits generated by a manufacturer for the 2009 model year. CARB has adopted a new approach to passenger vehicles—cars and light trucks—by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. These standards will apply to all passenger and light-duty trucks used by customers, employees of, and deliveries to the proposed project.

### **Low Carbon Fuel Standard**

Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction in the average fuel carbon intensity (CI) for transportation fuels in California regulated by CARB. CARB identified the Low Carbon Fuel Standard (LCFS) as a discrete early action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009. In 2009, CARB approved for adoption of the LCFS regulation, which became fully effective in April 2010 and is codified at Title 17, California Code of Regulations, Sections 95480–95490. The Low Carbon Fuel Standard will reduce greenhouse gas emissions by reducing the CI of transportation fuels used in California by at least 10 percent by 2020. CI is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "life cycle" of a transportation fuel.

On December 29, 2011, the US District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. One of the district court's rulings preliminarily enjoined CARB from enforcing the regulation. In January 2012, CARB appealed that decision to the Ninth Circuit Court of Appeals and then moved to stay the injunction pending resolution of the appeal. On April 23, 2012, the Ninth Circuit granted CARB's motion for a stay of the injunction while it continues to consider CARB's appeal of the lower court's decision.

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#### Clean Cars

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model years 2017–2025. The program combines the control of smog, soot, and GHG emissions with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

#### Renewables Portfolio Standard (Senate Bill 1078, Senate Bill 107, and Senate Bill X1-2)

Established in 2002 under SB 1078, and accelerated in 2006 under SB 107 and again in 2011 under SBX1-2, California's Renewables Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. The 33 percent standard is consistent with the RPS goal established in the Scoping Plan. As interim measures, the RPS requires 20 percent of retail sales to be sourced from renewable energy by 2013, and 25 percent by 2016. Initially, the RPS provisions applied to investor-owned utilities, community choice aggregators, and electric service providers. SBX1-2 added, for the first time, publicly owned utilities to the entities subject to the RPS. The expected growth in the RPS to meet the standards in effect in 2008 is not reflected in the BAU calculation in the AB 32 Scoping Plan, discussed below. In other words, the Scoping Plan's 2020 business as usual does not take credit for implementation of the RPS that occurred after its adoption.

#### Senate Bill 375

SB 375 (codified at Government Code and Public Resources Code<sup>1</sup>), signed in September 2008, provides for a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 will be implemented over the next several years and includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. SB 375 also requires Metropolitan Planning Organizations (MPOs) (such as the Western Riverside Council of Governments) to incorporate a "sustainable communities strategy" (SCS) in their regional transportation plans (RTPs) that will achieve GHG emission reduction targets by reducing vehicle miles traveled from light-duty vehicles through the development of more compact, complete, and efficient communities.

SB 375 is similar to the Regional Blueprint Planning Program, established by the California Department of Transportation, which provides discretionary grants to fund regional transportation and land use plans voluntarily developed by MPOs working in cooperation with councils of governments. The Scoping Plan relies on the requirements of SB 375 to implement the carbon emissions reductions anticipated from land use decisions.

On September 23, 2010, CARB adopted regional targets for the reduction of greenhouse gases applying to the years 2020 and 2035 (CARB 2011a). For the area under the Western Riverside Council of Government's jurisdiction, including the project area, CARB adopted regional targets for reduction of GHG emissions by 8 percent for 2020 and by 13 percent for 2035. On February 15, 2011, CARB's executive officer approved the final targets (CARB 2011b).

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<sup>1</sup> Senate Bill 375 is codified at Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, and 65080.01 as well as Public Resources Code Sections 21061.3 and 21159.28 and Chapter 4.2.

### California Building Energy Efficiency Standards

Energy conservation standards for new residential and commercial buildings were originally adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6 of the California Code of Regulations (CCR)). In general, Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). Part 11 establishes voluntary standards on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. Some of these standards have become mandatory in the 2010 edition of the Part 11 code. Current mandatory standards include:

- Twenty (20) percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35, and 40 percent reductions
- Separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects
- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects
- Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies
- Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board

The California Energy Commission has opened a public process and rulemaking proceeding for the adoption of changes to the 2013 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1 (collectively referred to here as the standards). The proposed amended standards will be adopted in 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction. The standards, which take effect on January 1, 2014, will provide builders with options for better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

### LOCAL

#### Butte County Air Quality Management District (BCAQMD)

In Butte County, the air quality regulating authority is the Butte County Air Quality Management District (BCAQMD). The BCAQMD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs, and it regulates agricultural burning. Other responsibilities include monitoring air quality, preparing clean air plans, and responding to

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citizen complaints concerning air quality. The BCAQMD does not currently have any regulations related to climate change mitigation or to the CEQA analysis of climate change.

#### 3.14.3 IMPACTS AND MITIGATION MEASURES

##### STANDARDS OF SIGNIFICANCE

Per Appendix G of the CEQA Guidelines, the City considers impacts related to climate change significant if implementation of the proposed project would result in any of the following:

- 1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- 2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Subsequent development allowed under the proposed General Plan would result in the generation of GHG emissions associated with future construction activities, consisting primarily of emissions from equipment exhaust, as well as long-term operations, consisting primarily of new vehicular trips, stationary source emissions such as natural gas used for heating, and indirect source emissions such as electricity usage for lighting.

Addressing GHG generation impacts requires an agency to make a determination as to what constitutes a significant impact. The amendments to the CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine if a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions (14 CCR Section 15064.4(a)).

In its Final Statement of Reasons for Regulatory Action accompanying the CEQA Amendments (FSOR), the California Natural Resources Agency (CNRA 2009b) explains that quantification of GHG emissions "is reasonably necessary to ensure an adequate analysis of GHG emissions using available data and tools" and that "quantification will, in many cases, assist in the determination of significance." However, as explained in the FSOR, the revised Section 15064.4(b) assigns lead agencies the discretion to determine the methodology to quantify GHG emissions. The FSOR also notes that CEQA case law has long stated that "there is no iron-clad definition of 'significance.' Accordingly, lead agencies must use their best efforts to investigate and disclose all that they reasonably can concerning a project's potential adverse impacts."

Determining a threshold of significance for a project's climate change impacts poses a special difficulty for lead agencies. Much of the science in this area is new and is evolving constantly. At the same time, neither the state nor local agencies are specialized in this area and there are currently no local, regional, or state thresholds for determining whether a proposed project has a significant impact on climate change. The CEQA Amendments do not prescribe specific significance thresholds but instead leave considerable discretion to lead agencies to develop appropriate thresholds to apply to projects within their jurisdiction.

As noted earlier, AB 32 is a legal mandate requiring that statewide GHG emissions be reduced to 1990 levels by 2020. In adopting AB 32, the legislature determined the necessary GHG reductions for the state to make in order to sufficiently offset its contribution to the cumulative



climate change problem to reach 1990 levels. AB 32 is the only legally mandated requirement for the reduction of greenhouse gases. As such, compliance with AB 32 is the adopted basis upon which the agency can base its significance threshold for evaluating the project's GHG impacts.

The BCAQMD has not announced when any regulations related to climate change mitigation or to the CEQA analysis of climate change will be forthcoming. On a state level, AB 32 identified that an acceptable level of GHG emissions in California in 2020 is 427 MMTCO<sub>2</sub>e, which is the same as the 1990 GHG emissions level. This level is also approximately 15 percent less than current GHG emissions and approximately 21 percent less than projected 2020 conditions. In order to achieve these GHG reductions, there will have to be widespread reductions of GHG emissions from sources in many various sectors across the California economy. Some of those reductions will need to come from the existing sources of emissions in the form of changes in vehicle emissions and mileage, changes in the sources of electricity, and increases in energy efficiency by existing residential, commercial, industrial, and agricultural development, in addition to other measures. Over the last few years, the state has been adopting comprehensive regulations to reduce the GHG emissions from vehicles, industry, buildings, and other sources. These regulations are expected to play a major part in reaching the goal of reducing currently projected 2020 emissions levels by 15 percent compared to current levels.

While City actions can help to promote GHG reductions from the existing economy, existing development is not under the discretionary land use authority of the City, and thus most of these reductions will come as the result of state and federal mandates. The remainder of the necessary GHG reductions will need to come from requiring new development to have a lower carbon intensity than current conditions. County land use discretion can substantially influence the GHG emissions from new development.

In terms of determining whether GHG emissions in Biggs will be cumulatively considerable, this EIR evaluates whether Butte County is doing its part to ensure that California, cumulatively, meets the AB 32 target. CARB specifically recommended in the adopted Scoping Plan that municipalities adopt a goal of reducing emissions by 15 percent compared to current levels. While there can and likely will be variation in how much reduction each city, county, or region can realistically achieve by 2020, on the average each jurisdiction must reduce emissions by approximately 15 percent compared to current conditions.

For the purposes of this EIR, the proposed General Plan would result in a cumulatively considerable contribution if GHG emissions in 2020 associated with Biggs land uses and associated transportation factors are greater than 85 percent of current GHG emissions. If they are, the proposed Biggs General Plan would contribute considerably to global GHG emissions and related climate change effects. If the emissions associated with new development allowed under the proposed General Plan, combined with the ongoing emissions of existing development, are less than 85 percent of current GHG emissions, the proposed General Plan would not contribute considerably to global GHG emissions and related climate change effects.

#### METHODOLOGY

The resultant GHG emissions of Biggs's projected buildout were calculated using the California Emissions Estimator Model (CalEEMod), version 2011.1.1, computer program (see **Appendix 3.14-1**). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for the use of government agencies, land use planners, and environmental professionals. This model was developed in coordination with the South Coast Air Quality

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Management District and is the most current emissions model approved for use in California by various other air districts.

The California Natural Resources Agency has noted that impacts of GHG emissions should focus on the cumulative impact on climate change. The public notice states (CNRA 2009c):

*While the Proposed Amendments do not foreclose the possibility that a single project may result in greenhouse gas emissions with a direct impact on the environment, the evidence before [CNRA] indicates that in most cases, the impact will be cumulative. Therefore, the Proposed Amendments emphasize that the analysis of greenhouse gas emissions should center on whether a project's incremental contribution of greenhouse gas emissions is cumulatively considerable.*

Thus, the CEQA Amendments continue to make clear that the significance of GHG emissions is most appropriately considered on a cumulative level.

The following proposed General Plan policies address impacts related to the city's contribution to GHGs:

- Policy LU-4.2 (Urban Forest) – Require the planting of native and locally appropriate trees in all new developments to provide shade and visual interest.
- Policy LU-7.1 (Compact Growth) – Promote compact city growth and phased extension of urban services to discourage sprawl and encourage development that improves agriculture and important public places.
- Policy CIRC-1.4 (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.
- 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-4.1.3 (Bicycle Transportation Plan) – Update the City's Bicycle Transportation Plan every five (5) years to maintain eligibility for grant funding from Caltrans' Bicycle Transportation Account.
- 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.

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- Action CIRC-4.3.1 (*Detached Sidewalks*) – Continue to require detached sidewalks for new development projects adjacent to Collector and Arterial streets.
- Action CIRC-4.3.2 (*Sidewalk Design*) – Discourage the use of curvilinear sidewalks on local 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.
- Action CIRC-4.4.2 (*Pedestrian Impediment Survey*) – Periodically update the City existing pedestrian impediment survey to identify the types and location of pedestrian mobility constraints and to assist in prioritizing safety and mobility improvements.
- Policy CIRC-4.5 (*Prioritization of Improvements*) – Pedestrian and bicycle improvements shall be prioritized in the following order.
- 1) Projects which increase safety for children traveling to and from school.
  - 2) Projects which remove barriers to handicapped individuals.
  - 3) Projects which increase overall convenience and safety for pedestrians and bicyclists.
- Action CIRC-5.1.1 (*Engagement and 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.
- 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 CE-6.2 (*Connectivity/Safety*) – Create safe, inviting, and user-friendly pedestrian and bicycle environments.

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- 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-6.2.3*    *Continue to pursue grant funding opportunities to enhance the pedestrian and bicycle amenities in the city.*
- 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.*

The impact analysis provided below utilizes these proposed policies to determine whether implementation of the proposed General Plan would result in significant impacts. The analyses identify and describe how specific policies provide enforceable requirements and/or performance standards that address climate change and avoid or minimize significant impacts.

#### IMPACTS AND MITIGATION MEASURES

#### **Generate Greenhouse Gas Emissions That May Have a Significant Impact on the Environment (Standard of Significance 1)**

**Impact 3.14.1**    Implementation of the proposed General Plan will result in greenhouse gas emissions that would further contribute to significant impacts on the environment. This is considered a **cumulatively considerable** impact.

#### Construction GHG Emissions

Subsequent development proposed under the General Plan would result in direct emissions of GHGs from construction. As noted in Section 3.3, Air Quality, the quantification of emissions resulting from future construction activities in Biggs under the proposed General Plan is not possible due to project-level variability and uncertainties related to future individual projects. However, all construction projects can produce GHG emissions. 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 also limit GHG emissions as both result from the same sources (i.e., motorized construction equipment). In addition, per Senate Bill 97, all future development projects under the proposed General Plan would be required to analyze and mitigate GHG emissions during development project review, pursuant to CEQA. Construction-related mitigation could include various measures such as an enforced limitation of off-road diesel equipment idling times below the state-mandated maximum of 5 minutes and/or an off-

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road construction equipment emissions reduction plan demonstrating that all off-road equipment (portable and mobile) meet or are cleaner than Tier 2 engine emission specifications.

Adherence to BCAQMD rules and regulations, which limit criteria air pollutants and thus GHG emissions during construction, as well as Senate Bill 97, would reduce construction-generated GHG emissions but would not offset GHG emissions resulting from construction activities.

#### Operational GHG Emissions

Future growth in Biggs is guided by the land uses identified in the proposed General Plan Land Use Diagram. **Table 3.14-4** summarizes the emissions associated with both existing conditions (2013) and buildout conditions in Biggs.

**TABLE 3.14-4  
GREENHOUSE GAS EMISSIONS (2013 CONDITION AND BUILDOUT) – METRIC TONS PER YEAR**

Source	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
<b>Biggs Existing 2013 Conditions (Annual) – Metric Tons per Year</b>				
Area	1,657	1.1	0.1	1,708
Energy	5,728	0.2	0.1	5,764
Mobile	28,131	2.2	0.0	28,177
Solid Waste	1,593	94	0.0	3,570
Water	4,601	88	2.2	7,135
<b>Total</b>	<b>41,711</b>	<b>185</b>	<b>2.4</b>	<b>46,354</b>
<b>Biggs Buildout Conditions (Annual) – Metric Tons per Year</b>				
Area	17,079	11	1.0	17,607
Energy	53,478	2.0	1.0	53,810
Mobile	132,561	3.5	0.0	132,634
Solid Waste	16,913	1,000	0.0	37,904
Water	49,266	942	24	76,541
<b>Total</b>	<b>269,297</b>	<b>1,958</b>	<b>26</b>	<b>318,496</b>
<b>Net Difference (Buildout Conditions – 2013 Existing Conditions)</b>				
<b>Net Difference</b>	<b>232,823</b>	<b>1,773</b>	<b>24</b>	<b>277,386</b>

Source: CalEEMod 2011 (see Appendix 3.14-1).

As shown in **Table 3.14-4**, under existing conditions (2013), the City of Biggs generates 46,354 metric tons of CO<sub>2</sub>e annually. With theoretical buildout, GHG emissions are calculated to grow to 318,496 metric tons per year.

As noted in the Standards of Significance discussion above, the proposed General Plan would result in a cumulatively considerable contribution if GHG emissions in 2020 associated with Biggs land uses and associated transportation factors are greater than 85 percent of current GHG emissions. As shown in **Table 3.14-4**, the majority of estimated GHG emissions generated at city buildout result from mobile emissions sources. The proposed General Plan seeks to reduce the environmental impact (including GHG emissions) of land use development by increasing the

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amount of commercial and industrial services in the city, which are currently deficient. Increasing commercial service options and the availability of employment opportunities in Biggs would reduce reliance on the automobile, and thus reduce GHG emissions, as currently city residents are largely required to commute to other communities such as Gridley or Chico for employment and retail options.

The proposed General Plan also seeks to reduce the environmental impact (including GHG emissions) of land use development by increasing the viability of walking, biking, and transit by allowing mixed-use projects. For example, proposed Policy CR-7.1 seeks to design Biggs to encourage walking, bicycling, and the use of transit, and associated Action CR-7.1.1 is intended to 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.

The intent of proposed General Plan policies is to accommodate anticipated growth in a compact urban form, including mixed-use development. However, GHG calculations predict that emissions are greater than 85 percent of current (2013) GHG emissions; this is in excess of the AB 32 target and would result in a net increase in GHG emissions. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable**.

#### **Conflict with Applicable Greenhouse Gas Reduction Plan (Standard of Significance 2)**

**Impact 3.14.2** Implementation of the proposed General Plan would not be consistent with the goals of AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, etc.), as thresholds would be surpassed. This is considered a **cumulatively considerable** impact.

The core mandate of AB 32 is that statewide GHG emissions in 2020 equal 1990 levels. AB 32 is anticipated to secure emission reductions through a variety of mechanisms, such as increasing energy efficiency and introducing more renewable energy sources. CARB has already begun to adopt strategies to reduce greenhouse gas emissions under AB 32. Strategies included in the Climate Change Scoping Plan, described in detail above, such as the California Light-Duty Vehicle GHG Standard, Renewables Portfolio Standard, and Low Carbon Fuel Standard, while applicable to land use projects, are generally not under the control of local agencies like the City of Biggs. Nonetheless, emission reductions from these strategies are anticipated to occur as CARB adopts and implements regulations under AB 32. Reductions are already taking place as of 2012 due to the newly adopted vehicle emission standards and the Low Carbon Fuel Standard.

It is the intent of AB 32 to reduce statewide GHG emissions by 15 percent below 2005 levels by 2020. As noted under Impact 3.14.1, buildout of Biggs would result in a net increase in cumulative GHG emissions. Two important steps in helping to reduce climate change impacts are the creation of an inventory of existing GHGs and a plan to reduce these emissions. A climate action plan (CAP) is a guiding document to identify ways in which a city, county, or community can reduce GHG emissions and adapt to the inevitable effects of climate change. A common goal for a CAP is a 15 percent reduction below 2005 levels by 2020 in order to comply with AB 32. A climate action plan outlines transportation, land use, energy use, and waste production measures to achieve its target and proposes a timeline for implementation. Climate action plans are becoming increasingly popular as a way to spread awareness of climate change, reduce an area's impact on the environment, and save money on energy bills. Additionally, when referenced in general plans and environmental documents, CAPs signify a public agency's efforts to combat climate change. Compliance with local GHG reduction measures in new

development is critical to ensuring the City's ability to meet GHG reduction goals consistent with state and regional goals.

As the City of Biggs has not developed a climate action plan, the following mitigation is required.

#### Mitigation Measures

**MM 3.14.2** Add the following policy to the Conservation and Recreation Element of the General Plan:

Policy CR-7.6: As funding permits, the City will prepare a greenhouse gas inventory and climate action plan designed to reduce greenhouse gases. The City may also participate in a regional climate action plan prepared by another jurisdiction. Until a climate action plan is adopted, each project shall evaluate its impact on greenhouse gases as part of the environmental process.

Climate action plans are representative of a way for jurisdictions to determine consistency with the state legislation, AB 32, which directs the State and other local agencies to reduce GHG emissions. Climate action plans encompass a jurisdiction's current and future efforts to reduce GHG emissions and the negative effects of global climate change. Climate action plans are an integral part of planning and development and serve as an analytical link between development in a municipality like Biggs, and state requirements and regional GHG-reducing efforts.

Mitigation measure **MM 3.14.2** requires the City to prepare a GHG inventory and CAP; however, embarking on this process, while mandated by this mitigation, will require additional funding that is not available at this time. While implementation of an upcoming CAP could potentially mitigate GHG emissions projected for buildout conditions consistent with the reduction goal of AB 32, the proposed General Plan acknowledges that the City is unable to embark on the process of CAP development at this time. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable**.

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## **4.0 CUMULATIVE IMPACTS**

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This section summarizes the cumulative impacts associated with the proposed General Plan using the same environmental issue areas as Section 3.0. Cumulative impacts are the result of combining the potential effects of the project (i.e., the proposed General Plan) with other existing, approved, proposed, and reasonably foreseeable development projects in the region. The following discussion considers the cumulative impacts of the relevant environmental issue areas.

### 4.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) contain an assessment of the cumulative impacts that could be associated with the proposed project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." *Cumulatively considerable* means that the incremental effects of an individual 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 (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact is an impact created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

*. . . the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

In addition, Section 15130(b) identifies the following elements as necessary for an adequate cumulative impact analysis:

- 1) *Either:*
  - (A) *A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,*
  - (B) *A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.*
- 2) *A definition of the geographic scope of the area affected by the cumulative effect and a reasonable explanation for the geographic limitation used;*
- 3) *A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and*
- 4) *A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.*

## 4.0 CUMULATIVE IMPACTS

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Where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

### 4.2 CUMULATIVE SETTING

A general description of the cumulative setting is provided in Section 3.0, Introduction to the Environmental Analysis, as well as **Table 3.0-2**. In addition, each environmental issue area evaluated in the DEIR identifies its own cumulative setting.

### 4.3 CUMULATIVE IMPACTS ANALYSIS

As described above, cumulative impacts are two or more effects that, when combined, are considerable or compound other environmental effects. Each cumulative impact is determined to have one of the following levels of significance: less than cumulatively considerable, cumulatively considerable, or cumulatively considerable and significant and unavoidable. The specific cumulative impacts for each environmental issue area are identified in the technical sections of Section 3.0. The cumulative impact analysis herein focuses on whether the General Plan's contribution to projected regional growth would result in a cumulatively considerable environmental impact.

#### AESTHETICS AND VISUAL RESOURCES

#### **Cumulative Impacts to Scenic Vista, Scenic Resources, Existing Visual Character, and Light and Glare**

**Impact 3.1.5** Implementation of the proposed General Plan, in combination with other reasonably foreseeable development projects in Butte County, would contribute to the alteration of the visual character of the region, impacts to scenic vistas, and increased glare/lighting. This is considered a **less than cumulatively considerable** impact.

The Butte County region is anticipated to experience growth in association with new development, which would result in cumulatively considerable changes in the visual character and scenic views of the region, as well as increases in the amount of light and glare in the region. As undeveloped areas transition from a rural to an urban character, existing viewsheds within the county and incorporated cities would be affected, existing views of rural uses and open spaces would be changed to urban uses, and views of agricultural fields and orchards may be altered and/or obstructed. Important visual resources such as mature trees, rock outcroppings, and rural structures would be lost. Development under the proposed General Plan would contribute to this trend in alteration of the visual character of the area by converting open space and rural uses to urban development. This would also contribute to changes in nighttime lighting and illumination levels in the region.

As discussed under Impacts 3.2.1 through 3.1.4, the City's proposed and existing policy and regulatory framework (General Plan and Municipal Code) provides a comprehensive approach to reducing the visual prominence of new development, adverse impacts to existing scenic vistas, and substantial increases in light and glare in the Biggs Planning Area. Incorporation of smart growth principles (compact urban form) and other measures would substantially reduce any contribution to significant cumulative impacts associated with alteration of the visual

character of the region, impacts to scenic vistas, and increased glare/lighting in the region. Therefore, this impact is considered **less than cumulatively considerable**.

## AGRICULTURAL RESOURCES

### Cumulative Impacts to Agricultural Resources

**Impact 3.2.4** Implementation of the proposed General Plan, along with regional and statewide growth, would result in a contribution to the conversion of important farmland. This is a **cumulatively considerable** and **significant and unavoidable** impact.

As demonstrated by **Figure 2.0-2**, the proposed General Plan would avoid substantial loss of important farmlands west of the city limits with implementation of an urban growth boundary at the western boundary of the proposed Planning Area. However, implementation of the proposed General Plan Land Use Diagram would result in the conversion of important farmland areas in other areas of the proposed Planning Area. While this loss of important farmland would be limited to the west, it would still contribute to the loss of important farmland in the county as well as in the state. Since no cumulative threshold of acceptable important farmland loss has been established by the State of California or Butte County, any contribution is determined cumulatively considerable in this Draft EIR. As described under Impact 3.2.1, the proposed General Plan contains several policies and actions that would minimize agricultural land conversion. However, the cumulative impacts to agricultural resources from implementation of the General Plan would still be considerable.

The proposed General Plan policies and actions described above [in Section 3.2] do not offset the loss of important farmland at the statewide level. Thus, the contribution to cumulative impacts on agricultural resources is considered to be a **cumulatively considerable** and **significant and unavoidable** impact.

## AIR QUALITY

### Result in a Cumulatively Considerable Net Increase in Nonattainment Criteria Pollutant

**Impact 3.3.7** Implementation of the proposed General Plan, in combination with cumulative development in the Sacramento Valley Air Basin, would result in a cumulatively considerable net increase of ozone and coarse and fine particulate matter. This is considered a **cumulatively considerable** impact.

**Table 3.3-6** summarizes the emissions associated with theoretical buildout conditions with implementation of the proposed General Plan. As illustrated in **Table 3.3-6**, criteria air pollutants and precursors for which SVAB is in nonattainment are anticipated to increase.

As discussed throughout the Air Quality section, the General Plan contains several policy provisions to address air quality. Proposed General Plan Policy CR-7.2 and Policy CR-7.3 mandate that during project and environmental review, the City will evaluate air quality impacts and incorporate applicable mitigations to reduce impacts consistent with BCAQMD requirements. The BCAQMD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs. Other responsibilities include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality. All projects in the City of Biggs are subject to applicable BCAQMD rules and regulations in effect at the time of construction. Descriptions of specific rules applicable to future construction and

## 4.0 CUMULATIVE IMPACTS

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development operations resulting from implementation of the proposed General Plan have been identified throughout the section. However, the contribution of pollutant emission is still considered **cumulatively considerable** and thus a **significant and unavoidable** impact, as these actions might not fully offset air pollutant emissions resulting from construction and operational activities and could violate or substantially contribute to a violation in already nonattainment O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> federal and state standards. There are no feasible mitigation measures that can further offset air pollutant emissions from subsequent development and growth under the proposed General Plan.

### BIOLOGICAL RESOURCES

#### Cumulative Biological Resource Impacts

**Impact 3.4.4** The proposed General Plan, in combination with other reasonably foreseeable projects, would result in direct and indirect mortality and loss of habitat for special-status species and sensitive and/or critical habitat. This would be a **cumulatively considerable** impact.

There are several biological communities within the Biggs Planning Area and in the region that are critically important for the protection of several sensitive species. Implementation of the proposed General Plan may result in degradation of wildlife habitat through a variety of actions which, when combined with other habitat impacts occurring from development within surrounding areas, would result in significant cumulative impacts. Future development within Biggs and in the surrounding vicinity would contribute to cumulative impact on special-status species and sensitive and critical habitats. Furthermore, increased development and disturbance created by human activities (e.g., fires, increased nighttime lighting, reduced access to habitat and movement corridors) would result in direct mortality, habitat loss, and deterioration of habitat suitability. These impacts are considered **cumulatively considerable**.

Implementation of the proposed General Plan policies and actions described under Impacts 3.4.1 through 3.4.3 would reduce the proposed General Plan's impacts to these resources. However, the extent of sensitive and/or critical habitat loss that urban development, including roadway expansion and utility piping, would contribute to the considerable regional loss of these resources. It is anticipated that the eventual implementation of the proposed Butte Regional Conservation Plan would address and mitigate regional biological resource impacts. However, this plan has yet to be adopted. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable**.

### CULTURAL AND PALEONTOLOGICAL RESOURCES

#### Cumulative Impacts on Historic Resources, Prehistoric Resources, and Human Remains

**Impact 3.5.4** Implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development in the region, could result in cumulative impacts to cultural resources in the region. However, proposed General Plan policy provisions and state policy in the form of the California Environmental Quality Act would ensure that historic and prehistoric resources are not adversely impacted. This impact would be **less than cumulatively considerable**.

Implementation of the proposed General Plan, in combination with cumulative development in the surrounding region, would increase the potential to disturb known and undiscovered cultural

resources. The project might contribute to the cumulative loss of cultural resources in the region. This contribution might be considerable when combined with other past, present, and reasonably foreseeable development in the region.

However, as discussed under Impacts 3.5.1 and 3.5.2, the Biggs Planning Department and Planning Commission review architectural drawings or renderings, which are required to be submitted with an application for a building permit, in order to ensure that development and new land uses are designed and operated in a manner compatible with the preservation of these historic resources. In addition, future discretionary approvals that could result in the potential disturbance of historic and cultural resources will be subject to individual review of potential impacts under a separate CEQA document. Furthermore, Section 7050.5(b) of the California Health and Safety Code specifies protocol when human remains are discovered on a project site, while Public Resources Code Section 21083.2 includes requirements for activities that preserve unique archeological resources in place in an undisturbed state. Future environmental and discretionary review of development projects under the proposed General Plan would ensure that the project's contribution to cumulative impacts would be **less than cumulatively considerable**.

### Cumulative Impacts on Paleontological Resources

**Impact 3.5.5** Implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development in the region, could result in cumulative impacts to paleontological resources in the region. However, policy provisions in the proposed General Plan would ensure that impacts would be **less than cumulatively considerable**.

While multiple impacts may occur during the implementation period of the General Plan, cumulative impacts are unlikely. Cumulative impacts that may occur would be reduced to **less than cumulatively considerable** levels by the requirements of CEQA, which includes requirements for activities that preserve unique resources in place in an undisturbed state.

## GEOLOGY AND SOILS

### Cumulative Geologic and Soil Hazards

**Impact 3.6.5** Subsequent land use activities associated with implementation of the proposed General Plan, in combination with other existing, planned, proposed, and reasonably foreseeable development in the region, may result in cumulative geologic and soil hazards. However, policy provisions in the proposed General Plan ensure that potential development is not adversely impacted by cumulative geologic and soil hazards. This is considered a **less than cumulatively considerable** impact.

All new development, including development in areas outside of Biggs, would be required to comply with the CBC, which requires stringent earthquake-resistant design parameters and common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil-related impacts. Furthermore, 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 NPDES provisions. NPDES requirements would significantly reduce the potential for substantial erosion or topsoil loss to occur in association with new development by requiring an approved SWPPP that provides a schedule for the implementation and maintenance of erosion control measures and a description of erosion control practices,

## 4.0 CUMULATIVE IMPACTS

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including appropriate design details and a time schedule. The proposed General Plan also requires that damage to new structures from seismic, geologic, or soil conditions be prevented to the maximum extent feasible.

Implementation of NPDES requirements and CBC standards as discussed under Impacts 3.6.1 through 3.6.3 would reduce cumulative impacts associated with geology and soils throughout the region. Furthermore, site-specific review, including soil reports, required by the City of Biggs would reduce the proposed General Plan's contribution to cumulative impacts to **less than cumulatively considerable**.

### HAZARDS AND HAZARDOUS MATERIALS

#### Cumulative Hazards and Health Risks

**Impact 3.7.5** Implementation of the General Plan would not cumulatively contribute to regional hazards. This is considered a **less than cumulatively considerable** impact.

The cumulative effects from land uses proposed in association with the proposed General Plan could create a risk to public health from exposure to hazardous materials (PCB-containing transformers, underground storage tanks/aboveground storage tanks, etc.). Hazardous material-related impacts are generally site-specific, and each individual development is responsible for mitigating such risks. Exposure to natural hazards can be controlled through proper site design, best management practices during construction and operation, compliance with established building requirements, and appropriate zoning. Various land uses (commercial, industrial, schools, and even residential properties) will use limited hazardous materials during construction and operational activities. All new and existing projects are required to comply with all federal, state, and local regulations regarding the handling, transportation, and disposal of hazardous materials. Therefore, the proposed General Plan's cumulative hazardous material impacts and threats to public health are considered **less than cumulatively considerable**.

### HYDROLOGY AND WATER QUALITY

#### Cumulative Water Quality Impacts

**Impact 3.8.5** Land uses and growth under the proposed General Plan, in combination with current land uses in the surrounding region, could introduce substantial grading, site preparation, and an increase in urbanized development. Increased development would contribute to cumulative water quality impacts that are considered **less than cumulatively considerable**.

Development under the proposed General Plan could contribute to water quality degradation from construction, operation, and alteration of drainage patterns. This could add to other potential development activities in the region. However, the proposed General Plan includes several policies and actions that address water quality. These policies and actions are described under Impacts 3.8.1 and 3.8.2. Implementation of the proposed General Plan policies and actions, as well as compliance with provisions of the City's Municipal Code, would ensure that the proposed General Plan's contribution to cumulative water quality impacts would be mitigated. Thus, this impact would be **less than cumulatively considerable**.



### **Cumulative Drainage Impacts**

**Impact 3.8.6** Implementation of the proposed General Plan could increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions downstream. This is considered a **less than cumulatively considerable** impact.

Urban development under the proposed General Plan would result in an increase in impervious surfaces in the Biggs Planning Area that would contribute (in combination with cumulative development in the watershed) to increases in flood conditions for area waterways. However, the proposed General Plan contains policies and actions that adequately address drainage issues at the Planning Area level.

The City of Biggs adopted a Master Storm Drainage Plan in 1998 that identifies the public storm drain improvements necessary to serve the city. The plan identifies specific projects to improve existing storm drainage and to provide drainage facilities for future development, many of which have already been implemented by the City. Proposed General Plan Policy PFS-4.1 ensures regular updates to the City's Storm Water Master Plan to address current and future storm drainage needs as the city grows. 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 or drainage system. Proposed Action PFS-4.1.3 seeks to continue to install storm drainage infrastructure in underserved or deficient areas as funding allows.

The proposed General Plan's contribution to the cumulative condition of drainage-related impacts in the area, as well as its potential incremental contribution to cumulative impacts, would be reduced to **less than cumulatively considerable**.

### LAND USE

### **Cumulative Land Use Impacts**

**Impact 3.9.4** Implementation of the proposed General Plan, in addition to existing, proposed, approved, and reasonably foreseeable development in the City of Biggs and Butte County, would contribute to cumulative land use impacts associated with the division of an established community or conflicts with land use plans and regulations that provide environmental protection. This would be a **less than cumulatively considerable** impact.

Under cumulative conditions, the proposed General Plan and subsequent development would not contribute to land use conflicts beyond those discussed in Impacts 3.9.1, 3.9.2, and 3.9.3. There would be no further contribution to the division of an established community or conflicts between planning documents and regulations. As identified under Impacts 3.9.1 through 3.9.3, proposed General Plan policies and actions provide for land use compatibility within the Biggs Planning Area and coordination with County land use planning as well as with the Butte Regional Conservation Plan/Natural Community Conservation Plan. Thus, this impact is **less than cumulatively considerable**.

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### NOISE

#### Cumulative Noise Impacts

**Impact 3.10.5** Implementation of the proposed General Plan, in combination with other development in nearby unincorporated areas of the county, would increase transportation noise along area roadways. This would be a **cumulatively considerable** impact.

#### Transportation Noise

As identified in **Table 3.10-6**, implementation of the proposed General Plan, in combination with anticipated growth by the year 2035, would result in noticeable increases in traffic noise. In comparison to existing conditions, increases in traffic noise levels of up to approximately 5 dBA CNEL could occur along certain portions of area roadways. Of the major roadways analyzed, noticeable increases in traffic noise levels could occur along most major roadway segments. Increased traffic noise levels would also be experienced in the Planning Area outside of the urban development areas in the unincorporated area of Butte County.

The proposed General Plan policies include requirements that contain specific performance standards addressing transportation noise. These policies are listed under Impact 3.10.2. Implementation of the proposed General Plan noise policies identified under Impact 3.10.2 would reduce potential transportation noise impacts in the city. Additionally, future development projects would be required to analyze project-related noise impacts and incorporate necessary noise reduction measures sufficient to achieve applicable noise standards. Noise reduction measures typically implemented to reduce transportation noise include increased insulation and building requirements, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. The applicability of these measures would be determined on a project-by-project basis.

However, it may not be possible to fully mitigate transportation noise in all areas of the city, particularly for existing development that may be constrained due to age, placement, or other factors that limit the feasibility of mitigation, such as residences fronting on the roadway which limit the placement of noise barriers. In addition, the City does not have jurisdiction to implement noise mitigation outside of its boundaries (or may not be allowed to in Caltrans rights-of-way) to address potential noise impacts to the surrounding, nearby unincorporated areas of Butte County or along Caltrans facilities. It is important to note that the increases in traffic noise levels associated with buildout of the proposed General Plan would occur gradually over a period of approximately 20 years or more. Nonetheless, the proposed General Plan's contribution to cumulative traffic noise would be **cumulatively considerable** and a **significant and unavoidable** impact.

#### Construction Noise

Short-term noise and ground vibrations from construction and agricultural activities are inevitable and cannot be mitigated beyond a certain level. While proposed General Plan Action N-1.6.2 requires the incorporation of noise mitigation techniques such as the movement of equipment staging areas, screening of portable noise sources, limits on amplified sound devices and use of noise baffling and reducing technologies, these measures would not be guaranteed to reduce intermittent noise levels to below 75 dBA. Therefore, temporary noise impacts associated with construction and agricultural noise activities would be **significant and unavoidable**.

POPULATION AND HOUSING

**Cumulative Population and Housing Increases**

**Impact 3.11.3** Subsequent land use activities associated with implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development, could result in a cumulative increase in population and housing growth in Biggs as well as in the surrounding Butte County region, along with associated environmental impacts. This cumulative increase in population and housing is beyond that projected by BCAG. Therefore, this is a **cumulatively considerable** impact.

The land use concept in the General Plan has been developed to accommodate projected population increases and make sure Biggs is strategically positioned to manage future growth and to capture positive growth opportunities. The proposed Land Use Diagram and policy orientation of the proposed General Plan seek to accommodate the need for a strong and vibrant downtown core as well as additional commercial service and employment-generating land use locations along major transportation routes. Unlike a population forecast such as that produced by BCAG, the theoretical buildout scenario does not have a time horizon, such as 2035, nor does it include transportation, demographic, existing land use, or economic assumptions typically used by a forecast model to provide more realistic land use planning data. Therefore, due to regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely.

Nonetheless, realization of full theoretical buildout under the General Plan would result in growth beyond that anticipated by BCAG. As stated, 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. Full theoretical buildout under the General Plan would result in an increase of 15,922 people and 5,744 units for a total of 17,614 residents living in 6,359 dwelling units in Biggs. Since full theoretical buildout under the General Plan would result in growth beyond that anticipated by BCAG this impact is considered to be **cumulative considerable** and **significant and unavoidable**.

PUBLIC SERVICES AND UTILITIES

**Cumulative Demand for Fire Protection Services**

**Impact 3.12.1.3** Implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in Butte County, would increase the demand for fire protection services and thus require additional staffing, equipment, and related facilities under cumulative conditions. The provision of these facilities could result in environmental impacts. The project's contribution to the need for expanded fire protection services is considered **less than cumulatively considerable** given requirements for project-level CEQA review of future fire protection facilities, along with compliance with the California Fire Code.

Future regional growth would result in increased demand for fire protection services throughout Butte County. This cumulative regional demand could result in increased requests for mutual aid from the BCFD, and growth in the city could result in increased service requests from the BCFD. However, the need for additional fire protection facilities associated with the proposed General

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Plan would be limited to facilities needed to serve the city, as the BCFD's Biggs-related service area is limited to the city limits. It is not anticipated that increased BCFD services would result in the need for additional fire protection facilities because such services would be provided via existing facilities, equipment, and personnel at the time of the mutual aid request. In addition, future fire protection facilities projects would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency.

All new development in the county, including in Biggs, would be subject to the California Fire Code, which would help to prevent and minimize the occurrence of fires, thus increasing the ability of the BCFD and other fire service providers to provide adequate fire protection services.

Project-level CEQA review of future fire protection facilities, along with compliance with the California Fire Code, would ensure that cumulative environmental impacts associated with the continued provision of fire protection response services would be considered **less than cumulatively considerable**.

### Cumulative Demand for Law Enforcement Services

**Impact 3.12.2.2** Implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the GBPD service area, would increase the demand for law enforcement services and thus require additional staffing, equipment, and facilities, the construction of which could cause significant environmental impacts. The project's contribution to the need for expanded law enforcement services is considered **less than cumulatively considerable** given requirements for project-level CEQA review.

As discussed in Impact 3.12.2.1, the proposed General Plan would result in the need for additional law enforcement staffing, equipment, and facilities. Growth anticipated in association with the proposed General Plan would occur in the Biggs Planning Area. While areas outside of the city limits are not currently in the department's official service area, the GBPD regularly provides services to these areas. Furthermore, the GBPD service area would be expanded to cover areas of future development annexing into the city consistent with the proposed General Plan. Therefore, the proposed General Plan would not contribute to a cumulative demand for law enforcement services outside of the Biggs Planning Area.

Future law enforcement facilities projects would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency. Project-specific environmental review would identify and mitigate cumulative environmental impacts. Therefore, the proposed General Plan's contribution to the continued provision of law enforcement services in the cumulative setting would be considered **less than cumulatively considerable**.

### Cumulative Schools Impacts

**Impact 3.12.3.2** Population growth associated with implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, would result in a cumulative increase in student enrollment and require additional schools and related facilities to accommodate the growth. This is a **less than cumulatively considerable** impact.

As discussed under Impact 3.12.3.1, implementation of the proposed General Plan is expected to result in population growth that would increase student enrollment in the BUSD. As noted, current state law requires that the environmental impact of new development on school facilities is considered fully mitigated through the payment of required development impact fees. All new development associated with the proposed General Plan would be required to pay the applicable development impact fees. Furthermore, any significant expansion of school facilities or development of new school facilities (grade school and post-secondary) would be subject to the appropriate CEQA environmental review, which would identify any site-specific impacts and provide mitigation to reduce those impacts. Therefore, cumulative impacts on school facilities are considered **less than cumulatively considerable**.

### Cumulative Park and Recreation Demands

**Impact 3.12.4.2** Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would increase the use of existing parks and would require additional park and recreation facilities in the cumulative setting, the provision of which could have an adverse physical effect on the environment. This would be a **less than cumulatively considerable** impact.

Future development consistent with the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would increase the use of existing parks and would contribute to the cumulative demand for regional and local parks and recreational facilities and services in the Biggs Planning Area. As previously discussed, the specific environmental impacts resulting from the provision of park and recreational facilities would be identified by project-level environmental review in conjunction with individual development projects. The potential environmental effects of parks and recreational facilities in the cumulative setting would be similar to those described under Impact 3.12.4.1.

Individual development projects associated with the proposed General Plan would be subject to development impact fees to fund the provision of physical parkland, and the General Plan directs that the City collaborate with Butte County, the BUSD, and the City of Gridley to pursue other park funding sources and look for opportunities for joint use of facilities for community recreation and other public purposes. These fees and policy provisions would ensure that the City would adequately provide for park and recreation needs for residents, and environmental review of new development would mitigate any environmental impacts of park and recreational facilities. Therefore, the proposed General Plan would have a **less than cumulatively considerable** impact on parks and recreation services.

### Cumulative Water Supply Impacts

**Impact 3.12.5.3** Implementation of the proposed General Plan, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, would increase the cumulative demand for water supplies and related infrastructure. The project's contribution to cumulative water supply and infrastructure impacts is considered **less than cumulatively considerable**.

As noted under Impact 3.12.5.1, it is anticipated that water supplies would be adequate to serve the most conservative growth scenario allowed under the proposed General Plan. Future growth in Butte County and the surrounding region would further contribute to the need for additional groundwater supply to be drawn from the Sacramento Valley Groundwater Basin. As previously

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discussed, the basin is an unadjudicated groundwater basin and no safe yield has been established. However, groundwater levels have remained consistent over time, and long-term historical data shows that well levels seasonally and annually fluctuate with no significant difference in the well levels over the long term. Therefore, it is assumed that an adequate supply will be available to meet cumulative demand, and it is not anticipated that growth in the cumulative setting would result in significant groundwater level declines.

Regional growth would also result in the need for new water supply infrastructure. However, it is anticipated that such infrastructure would be evaluated on a project-by-project basis and that any necessary improvements would be required to be installed by developers as part of individual developments. The potential environmental effects associated with additional water supply infrastructure include, but are not limited to, air quality, agricultural resources, temporary property access disruption, land use, noise, traffic, visual resources, and odor, as shown in **Table 3.12.5-1**.

Implementation of the proposed General Plan, as well as future project-level CEQA review, would require the City to ensure that new development would not proceed without adequate water supply and necessary infrastructure. The maximum future growth allowed under the proposed General Plan would not impact significant groundwater recharge areas and would result in increased water use efficiency in the Biggs Planning Area. In addition, proposed General Plan policies and actions include extensive requirements for conservation measures that would further reduce the proposed General Plan's contribution to cumulative water supply impacts. The BCDWRC is actively working to manage and conserve groundwater and maintain groundwater levels in the cumulative setting. For example, the Butte County Groundwater Management Ordinance includes the development and monitoring of basin management objectives to maintain groundwater levels adequate to sustain municipal, agricultural, and domestic use. In addition, the Butte County Integrated Water Resource Plan discusses current and future water demands and water resource management options, and the Butte County Groundwater Management Plan includes groundwater management objectives. Therefore, as it is anticipated that groundwater supply would be available to serve cumulative development without overdraft of the basin, this impact is considered **less than cumulatively considerable**.

### Cumulative Wastewater Service Impacts

**Impact 3.12.6.2** Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, would contribute to the cumulative demand for wastewater service. However, implementation of proposed General Plan policy provisions would ensure adequate wastewater facilities are provided. This impact is considered to be a **less than cumulatively considerable** impact.

As identified, additional wastewater treatment and infrastructure capacity improvements would be needed to serve future development. The maximum growth allowed under the proposed General Plan would further increase the need for upgraded and expanded wastewater infrastructure to adequately serve the population and associated nonresidential development anticipated by 2035. Impacts associated with the maximum growth allowed under the proposed General Plan are discussed under Impact 3.12.6.1 and were identified as less than significant. Since the cumulative setting is concurrent with the Biggs Planning Area, no cumulative impacts would be expected beyond those previously identified.

As described under Impact 3.12.6.1, proposed General Plan policies require that wastewater conveyance and treatment capacity and infrastructure be available in time to meet the demand created by new development. Proposed policies also require monitoring and

conservation that would serve to reduce demands placed on the sewer system capacity and ensure that capacity would not be exceeded. Therefore, the proposed General Plan would not contribute to cumulative wastewater infrastructure impacts, and this impact is considered **less than cumulatively considerable**.

### **Cumulative Solid Waste Impacts**

**Impact 3.12.7.3** Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would result in increased demand for solid waste services. This impact is **less than cumulatively considerable**.

Implementation of the proposed General Plan, in combination with other existing, approved, proposed, or reasonably foreseeable development, may significantly increase the amount of residential, commercial, and industrial development in the region. This growth would result in increased generation of solid waste that would need to be processed at the Neal Road Recycling and Waste Facility. The facility has capacity to accept waste from the entirety of its service area, including from Biggs, until 2034. In addition, other regional landfills would be available to accept cumulative solid waste.

Implementation of General Plan policies and actions as discussed under Impact 3.12.7.1 would reduce the proposed General Plan's contribution to cumulative solid waste generation. Subsequent development in other areas of the region would also be subject to waste reduction programs consistent with Public Resources Code Sections 42900–42927. In addition, adequate landfill capacity would be available under cumulative conditions to meet the needs of the City of Biggs and the surrounding region. Therefore, the proposed General Plan would not contribute significantly to cumulative solid waste impacts, and this impact is considered **less than cumulatively considerable**.

### **Cumulative Demand for Electrical Services**

**Impact 3.12.8.2** Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would contribute to the cumulative demand for electrical services and associated infrastructure that could result in a physical impact on the environment. This is considered a **less than cumulatively considerable** impact.

Implementation of the proposed General Plan, along with other existing, planned, proposed, approved, and reasonably foreseeable development in areas served by the Biggs Electric Department would result in a cumulative increase in demand for electrical services and associated infrastructure and could result in increased infrastructure extensions to serve future development. The City of Biggs builds infrastructure on an as-needed basis. All electrical distribution lines, substations, transmission, delivery facilities, and easements required to serve the Biggs Planning Area would be subject to CEQA review as discussed under Impact 3.12.8.1. It is expected that much of the distribution infrastructure would be collocated with other utilities within roadway rights-of-way in order to minimize the extent of environmental effects.

In addition, subsequent development under the proposed General Plan would be required to comply with energy efficiency standards in Title 24 of the California Code of Regulations intended to minimize impacts to peak energy usage periods and to reduce impacts on overall state energy needs.

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Since future energy-related projects would be reviewed for project-level environmental impacts and the majority of this infrastructure would be collocated and constructed concurrently with other utilities within roadway rights-of-way to lessen or eliminate potential environmental effects, the proposed General Plan's contributions to the continued provision of electrical service and infrastructure in the cumulative setting would be considered **less than cumulatively considerable**.

### TRANSPORTATION AND CIRCULATION

#### Cumulative Traffic Impacts on Local Roadways

**Impact 3.13.7** When considered with existing, proposed, planned, and approved development in the region, buildout of the proposed General Plan would rely on future roadway capacity expansion projects for which full funding is not ensured. This is considered a **cumulatively considerable** impact.

The Circulation Element of the proposed General Plan identifies future roadway capacity expansion projects and new roadway connections, for which full funding is not ensured. The proposed General Plan includes policies that require new development to finance a project's off-site circulation improvements and contribute a fair share toward cumulative project impacts. For instance, Policy CIRC-1.3 states that 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. In addition, Action CIRC-1.3.1 calls for periodic review of the City's Development Impact Fee program to ensure that fees associated with the program are adequately supporting the City's current street design criteria and Capital Improvement Program. These requirements will be effective for ensuring that new development pays its fair share of planned improvements. Action CIRC-1.3.2 ensures full funding for improvements by establishing a funding mechanism to fund the planned roadway capacity expansion projects identified in the proposed Circulation Element.

While the City will require projects to either make improvements or pay their appropriate proportionate share of the cost of improvements through local, regional or special fees, and will hold the fees until needed for the improvement, the City cannot be certain that the sufficient funding will be collected to construct the improvement prior to occupancy of a given project. As such, the impact(s) may increase slightly over time while the City collects sufficient funds to construct the improvement. Further, some of the improvements will not be wholly within the City's jurisdiction and will require other agencies to permit the improvement. As the City cannot be certain that improvements will be approved or made by other agencies (i.e. Butte County, Caltrans) the City must conclude that the impact may remain and will therefore be **significant and unavoidable**.

#### Cumulative Traffic Impacts on State Highways

**Impact 3.13.8** When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed General Plan would contribute to cumulative traffic volumes on State Route 99 that result in significant impacts to level of service and operations. This is considered a **cumulatively considerable** impact.

The traffic impact analysis provided in Impact 3.13.2 is based on cumulative conditions (year 2035) that take into account anticipated traffic volumes from development in the region. Buildout of the proposed General Plan would add substantial traffic volumes on state highway facilities that would result in significant traffic impacts to SR 99. Improvements to regional transportation facilities



associated with cumulative traffic conditions are intended to be addressed through implementation of regional programs. Impacted facilities include segments of SR 99.

Implementation of proposed General Plan policies and actions would assist in reducing its cumulative contribution to regional traffic effects. However, this impact would still be considered **cumulatively considerable** and **significant and unavoidable**, as the City does not have authority over improvements outside of the City's jurisdiction (e.g., Caltrans facilities), and the City cannot ensure that these improvements would be completed. With the exception of funding sources for regional traffic improvements associated with the BCAG Regional Transportation Improvement Program, there are no other regional traffic mitigation programs in which the City could participate to minimize regional traffic impacts resulting from the General Plan.

## GREENHOUSE GASES AND CLIMATE CHANGE

### Generate Greenhouse Gas Emissions That May Have a Significant Impact on the Environment

**Impact 3.14.1** Implementation of the proposed General Plan will result in greenhouse gas emissions that would further contribute to significant impacts on the environment. This is considered a **cumulatively considerable** impact.

#### Construction GHG Emissions

Subsequent development proposed under the General Plan would result in direct emissions of GHGs from construction. As noted in Section 3.3, Air Quality, the quantification of emissions resulting from future construction activities in Biggs under the proposed General Plan is not possible due to project-level variability and uncertainties related to future individual projects. However, all construction projects can produce GHG emissions. 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 also limit GHG emissions as both result from the same sources (i.e., motorized construction equipment). In addition, per Senate Bill 97, all future development projects under the proposed General Plan would be required to analyze and mitigate GHG emissions during development project review, pursuant to CEQA. Construction-related mitigation could include various measures such as an enforced limitation of off-road diesel equipment idling times below the state-mandated maximum of 5 minutes and/or an off-road construction equipment emissions reduction plan demonstrating that all off-road equipment (portable and mobile) meet or are cleaner than Tier 2 engine emission specifications.

Adherence to BCAQMD rules and regulations, which limit criteria air pollutants and thus GHG emissions during construction, as well as Senate Bill 97, would reduce construction-generated GHG emissions but would not offset GHG emissions resulting from construction activities.

#### Operational GHG Emissions

Future growth in Biggs is guided by the land uses identified in the proposed General Plan Land Use Diagram. **Table 3.14-4** summarizes the emissions associated with both existing conditions (2013) and buildout conditions in Biggs.

As shown in **Table 3.14-4**, under existing conditions (2013), the City of Biggs generates 46,354 metric tons of CO<sub>2</sub>e annually. With theoretical buildout, GHG emissions are calculated to grow to 318,496 metric tons per year.

## 4.0 CUMULATIVE IMPACTS

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As noted in the Standards of Significance discussion, the proposed General Plan would result in a cumulatively considerable contribution if GHG emissions in 2020 associated with Biggs land uses and associated transportation factors are greater than 85 percent of current GHG emissions. As shown in **Table 3.14-4**, the majority of estimated GHG emissions generated at city buildout result from mobile emissions sources. The proposed General Plan seeks to reduce the environmental impact (including GHG emissions) of land use development by increasing the amount of commercial and industrial services in the city, which are currently deficient. Increasing commercial service options and the availability of employment opportunities in Biggs would reduce reliance on the automobile, and thus reduce GHG emissions, as currently city residents are largely required to commute to other communities such as Gridley or Chico for employment and retail options.

The proposed General Plan also seeks to reduce the environmental impact (including GHG emissions) of land use development by increasing the viability of walking, biking, and transit by allowing mixed-use projects. For example, proposed Policy CR-7.1 seeks to design Biggs to encourage walking, bicycling, and the use of transit, and associated Action CR-7.1.1 is intended to 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.

The intent of proposed General Plan policies is to accommodate anticipated growth in a compact urban form, including mixed-use development. However, GHG calculations predict that emissions are greater than 85 percent of current (2013) GHG emissions; this is in excess of the AB 32 target and would result in a net increase in GHG emissions. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable**.

### Conflict with Applicable Greenhouse Gas Reduction Plan

**Impact 3.14.2** Implementation of the proposed General Plan would not be consistent with the goals of AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, etc.), as thresholds would be surpassed. This is considered a **cumulatively considerable** impact.

The core mandate of AB 32 is that statewide GHG emissions in 2020 equal 1990 levels. AB 32 is anticipated to secure emission reductions through a variety of mechanisms, such as increasing energy efficiency and introducing more renewable energy sources. CARB has already begun to adopt strategies to reduce greenhouse gas emissions under AB 32. Strategies included in the Climate Change Scoping Plan, such as the California Light-Duty Vehicle GHG Standard, Renewables Portfolio Standard, and Low Carbon Fuel Standard, while applicable to land use projects, are generally not under the control of local agencies like the City of Biggs. Nonetheless, emission reductions from these strategies are anticipated to occur as CARB adopts and implements regulations under AB 32. Reductions are already taking place as of 2012 due to the newly adopted vehicle emission standards and the Low Carbon Fuel Standard.

It is the intent of AB 32 to reduce statewide GHG emissions by 15 percent below 2005 levels by 2020. As noted under Impact 3.14.1, buildout of Biggs would result in a net increase in cumulative GHG emissions. Two important steps in helping to reduce climate change impacts are the creation of an inventory of existing GHGs and a plan to reduce these emissions. A climate action plan (CAP) is a guiding document to identify ways in which a city, county, or community can reduce GHG emissions and adapt to the inevitable effects of climate change. A common goal for a CAP is a 15 percent reduction below 2005 levels by 2020 in order to comply with AB 32. A climate action plan outlines transportation, land use, energy use, and waste production measures to achieve its target and proposes a timeline for implementation. Climate action plans

are becoming increasingly popular as a way to spread awareness of climate change, reduce an area's impact on the environment, and save money on energy bills. Additionally, when referenced in general plans and environmental documents, CAPs signify a public agency's efforts to combat climate change. Compliance with local GHG reduction measures in new development is critical to ensuring the City's ability to meet GHG reduction goals consistent with state and regional goals.

As the City of Biggs has not developed a climate action plan, the following mitigation is required.

### Mitigation Measures

**MM 3.14.2** Add the following policy to the Conservation and Recreation Element of the General Plan:

Policy CR-7.6: As funding permits, the City will prepare a greenhouse gas inventory and climate action plan designed to reduce greenhouse gases. The City may also participate in a regional climate action plan prepared by another jurisdiction. Until a climate action plan is adopted, each project shall evaluate its impact on greenhouse gases as part of the environmental process.

Climate action plans are representative of a way for jurisdictions to determine consistency with the state legislation, AB 32, which directs the State and other local agencies to reduce GHG emissions. Climate action plans encompass a jurisdiction's current and future efforts to reduce GHG emissions and the negative effects of global climate change. Climate action plans are an integral part of planning and development and serve as an analytical link between development in a municipality like Biggs, and state requirements and regional GHG-reducing efforts.

Mitigation measure **MM 3.14.2** requires the City to prepare a GHG inventory and CAP; however, embarking on this process, while mandated by this mitigation, will require additional funding that is not available at this time. While implementation of an upcoming CAP could potentially mitigate GHG emissions projected for buildout conditions consistent with the reduction goal of AB 32, the proposed General Plan acknowledges that the City is unable to embark on the process of CAP development at this time. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable**.



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## **5.0 ALTERNATIVES**

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### 5.1 INTRODUCTION

State of California Environmental Quality Act (CEQA) Guidelines Section 15126.6(a) states that an environmental impact report (EIR) shall describe and analyze a range of reasonable alternatives to a project. These alternatives should feasibly attain most of the basic objectives of the project, while avoiding or substantially lessening one or more of the significant environmental impacts of the project. An EIR need not consider every conceivable alternative to a project, nor is it required to consider alternatives that are infeasible. The discussion of alternatives is to focus on those alternatives which are capable of avoiding or substantially lessening any significant effects of the project, even if they impede the attainment of the project objectives to some degree or would be more costly (CEQA Guidelines Section 15126.6[b]).

According to the CEQA Guidelines, an EIR need only examine in detail those alternatives that could feasibly meet most of the basic objectives of the project. When addressing feasibility, CEQA Guidelines Section 15126.6 states that “among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to alternative sites.” The CEQA Guidelines also specify that the alternatives discussion should not be remote or speculative; however, they need not be presented in the same level of detail as the assessment of the proposed project.

CEQA Guidelines indicate that several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include (1) the nature of the significant impacts of the proposed project; (2) the ability of alternatives to avoid or lessen the significant impacts associated with the project; (3) the ability of the alternatives to meet the objectives of the project; and (4) the feasibility of the alternatives. These factors would be unique for each project.

The significant environmental impacts of the project that the alternatives will seek to eliminate or reduce were determined and based on the findings contained in each technical section evaluated in Sections 3.1 through 3.14 of this DEIR. The specific significant environmental impacts associated with the General Plan as determined in this DEIR include the following:

#### AGRICULTURAL RESOURCES

- Loss of and conversion of agricultural land under project and cumulative conditions (Impact 3.2.1 and Impact 3.2.4)

#### AIR QUALITY

- Conflict with the Northern Sacramento Valley Planning Area 2009 Air Quality Attainment Plan (Impact 3.3.1)
- Contribution to air quality impacts (construction and operational) under project and cumulative conditions (Impacts 3.3.2, Impact 3.3.3, and Impact 3.3.7)

#### BIOLOGICAL RESOURCES

- Cumulative impacts to biological resources (Impact 3.4.4)

### NOISE

- Exposure to surface transportation noise (Impact 3.10.2)
- Exposure to construction and agricultural noise (Impact 3.10.4)
- Cumulative noise impacts (Impact 3.10.5)

### POPULATION AND HOUSING

- Substantial increase in population and housing (Impact 3.11.1)
- Cumulative population and housing increase (Impact 3.11.3)

### TRANSPORTATION AND CIRCULATION

- Impacts to local roadways and state highway facilities (Impact 3.13.1 and Impact 3.13.2)
- Roadway or traffic hazards (Impact 3.13.4)
- Emergency access (Impact 3.13.5)
- Cumulative impacts on local roadways and state highway facilities (Impact 3.13.7 and Impact 3.13.8)

### GREENHOUSE GASES AND CLIMATE CHANGE

- Generate greenhouse gas emissions that may have a significant impact on the environment (Impact 3.14.1)
- Conflict with applicable greenhouse gas reduction plan (Impact 3.14.2)

## 5.2 ALTERNATIVES UNDER CONSIDERATION

Three alternatives were identified for examination and analysis in this DEIR:

- Alternative 1 – Existing General Plan Alternative (No Project Alternative)
- Alternative 2 – Prevent Agricultural Land Conversion Alternative
- Alternative 3 – Reduced Western Expansion Alternative

These alternatives constitute an adequate range of reasonable alternatives as required under CEQA Guidelines Section 15126.6.

### ALTERNATIVES CONSIDERED BUT NOT SELECTED FOR ANALYSIS

#### Off-Site Alternative

Off-site alternatives are generally evaluated in an environmental document to avoid, lessen, or eliminate the significant impacts of a project by considering the proposed development in an



entirely different location. To be feasible, development of off-site locations must be able to fulfill the project purpose and meet most of the project's basic objectives. Given the nature of the proposed project (adoption of a General Plan for the entire city), it is not possible to consider an off-site alternative because the city boundaries have been established through incorporation. Further, this alternative would not meet the basic project objectives because consideration of another location would not address issues pertinent to the establishment of land use designations and policies to regulate the orderly development of the city. For this reason, an off-site alternative is considered infeasible pursuant to State CEQA Guidelines Section 15126.6(c) and is being rejected as a feasible project alternative.

**5.3 ALTERNATIVE 1 – EXISTING GENERAL PLAN ALTERNATIVE (NO PROJECT ALTERNATIVE)**

DESCRIPTION OF ALTERNATIVE

CEQA Guidelines Section 15126.6(e) requires that a “no project” alternative be evaluated in an EIR. However, the no project alternative is not intended to be a no action alternative under CEQA. Under this alternative, the proposed City of Biggs General Plan and its associated Land Use Diagram would not be adopted and the existing Biggs General Plan policy document and Land Use Diagram would remain in effect. The City would utilize its existing zoning and other regulations regarding development within the City's jurisdiction and would not rely on future land annexation to accommodate growth opportunities. Infrastructure would be installed under existing plans, if applicable. Existing General Plan policies and actions would continue to be in effect.

As stated in Section 2.0, Project Description, there are only 16 vacant residential parcels within the city boundary, totaling 10.2 acres. Accounting for the proposed Eagle Meadows residential development application received by the City, which would allow for 17 residential units within the city limits on 4.3 acres, the remaining 5.9 acres of vacant residential parcels allowing for a maximum 70 residential units, and the approved annexation proposals of the North Biggs Estates and Summit Estates residential development projects, which would add a total of 141 residential units to the city, buildout of Alternative 1 would allow for a total of 845 residential units in Biggs.

**Table 5.0-1** illustrates Alternative 1 land uses by acreage.

**TABLE 5.0-1  
BUILDOUT CONDITIONS FOR ALTERNATIVE 1**

<b>Housing and Population Factor</b>	<b>Total Condition</b>
Residential Units	845
Population <sup>1</sup>	2,535
<b>Non Residential Factor</b>	<b>Total Condition</b>
Commercial Square Feet	179,902
Industrial Square Feet	561,150
Public Square Feet	627,897
<b>Total Maximum Square Footage</b>	<b>1,368,949</b>

<sup>1</sup>Based on the average number of persons per household of 3.0 (DOF 2013).

**ENVIRONMENTAL ANALYSIS**

The following analysis is based on the significant environmental impacts identified in Sections 3.1 through 3.14 of this Draft EIR. The reader is referred to these sections for further details on impacts associated with the proposed General Plan. This analysis of Alternative 1 is consistent with the requirements for analysis of a No Project Alternative, as set forth in CEQA Guidelines Section 15126.6(e). More specifically, CEQA Guidelines Section 15126.6(e)(3)(A) states that, when the project under evaluation is the revision of an existing land use or regulatory plan, the No Project Alternative will be the continuation of the existing plan.

**Agricultural Resources****Loss of and conversion of agricultural land under project and cumulative conditions (Impact 3.2.1 and Impact 3.2.4)**

As noted in Section 3.2, Agricultural Resources, land use designation changes in the proposed General Plan result in a net decrease of substantial agriculturally designated land acreages. Most of the agricultural lands within the proposed Biggs Planning Area are actually outside the city limits and located along the edges of the city. The conversion of agricultural land was identified as a significant and unavoidable impact under project and cumulative conditions.

Alternative 1 would still result in the loss of important farmlands within the City Sphere of Influence as a result of the approved annexation proposals of the North Biggs Estates and Summit Estates residential development projects. However, implementation of Alternative 1 would not expand the Biggs Planning Area to the extent planned by the proposed General Plan and would retain lands designated for agricultural uses within the Planning Area to a substantially greater extent. For instance, while the North Biggs Estates and Summit Estates residential development projects will result in the loss of 34.74 acres of agricultural lands, the proposed General Plan would result in the same loss of agricultural acres in addition to another 455.34 acres of Prime Farmland and 229.41 acres of Farmland of Statewide Importance. This substantial reduction of jurisdictional expansion would result in fewer agricultural lands operating under the City's regulatory climate, but would remain a significant and unavoidable impact.

**Air Quality****Conflict with the Northern Sacramento Valley Planning Area 2009 Air Quality Attainment Plan (Impact 3.3.1)**

Implementation of the proposed General Plan and the resulting development would result in emissions of the ozone (O<sub>3</sub>) precursor emission, reactive organic gases (ROG), to increase with 2035 conditions versus existing conditions (2013) by 70 percent while the O<sub>3</sub> precursor emission, nitrogen oxides (NO<sub>x</sub>), would actually decrease by 45 percent. (Despite the increased population growth projected for 2035, emissions of NO<sub>x</sub> and carbon monoxide (CO) would decrease, as these pollutants are sourced primarily from vehicle emissions and vehicle emission technology is anticipated to be greatly improved in the year 2035.) The upward trend in ROG emissions is not reflective of the projected O<sub>3</sub> emissions reductions documented in the Northern Sacramento Valley Planning Area (NSVPA) 2009 Air Quality Attainment Plan, which projects a 5.6 percent reduction in ROG emissions from area and mobile sources in the NSVPA by the year 2020 (the latest year projected in the NSVPA 2009 Air Quality Attainment Plan). (The 2009 Air Quality Attainment Plan projects a 22.2 percent reduction in NO<sub>x</sub> emissions.) While the projected decrease in NO<sub>x</sub> emissions under the proposed General Plan is reflective of the NSVPA 2009 Air

Quality Attainment Plan, the upward trend in the O<sub>3</sub> precursor emission ROG is not reflective of the projected O<sub>3</sub> emissions reductions documented in the NSVPA 2009 Air Quality Attainment Plan. Since it is the intent of the NSVPA 2009 Air Quality Attainment Plan to achieve ozone attainment status, and O<sub>3</sub> precursor emission ROG is projected to increase as a result of the General Plan, this impact is significant and unavoidable.

Development under Alternative 1 would reduce the amount of growth compared with the proposed General Plan (845 residential units and 2,535 people at buildout compared with 6,359 residential units and 17,614 people at buildout). Therefore, implementation of Alternative 1 would result in reduced O<sub>3</sub> precursor emissions compared with the proposed General Plan, as population growth is proportionate to the amount of O<sub>3</sub> precursor emissions generated. However, emission levels under Alternative 1 would still result in an increase of O<sub>3</sub> precursor emissions and even though this alternative would result in less potential for development and population growth and thus less emissions, it would still result in impacts associated with the 2009 Air quality Attainment Plan.

### Contribution to air quality impacts (construction and operational) under project and cumulative conditions (Impacts 3.3.2, Impact 3.3.3, and Impact 3.3.7)

Implementation of the proposed General Plan and the resulting development would increase the potential for additional mobile and stationary source emissions and short-term construction emissions, which would adversely affect regional air quality. All of the air quality impacts listed above result in significant and unavoidable impacts.

Development under Alternative 1 would accommodate a substantially reduced amount of potential growth compared with the proposed General Plan (845 residential units and 2,535 people at buildout compared with 6,359 residential units and 17,614 people at buildout under the proposed General Plan). Therefore, implementation of Alternative 1 would result in reduced air pollutant emissions compared with the proposed General Plan, as population growth is proportionate to the amount of emissions generated. However, Alternative 1 would still result in construction emissions and additional mobile and stationary source emissions compared with current conditions, and these emission levels would still result in an increase of criteria air pollutants and precursors for which the air basin is in nonattainment. Nonetheless, Alternative 1 would accommodate less potential air pollutant emission generation compared with the proposed General Plan.

## **Biological Resources**

### Cumulative impacts to biological resources (Impact 3.4.4)

Implementation of the proposed General Plan may result in degradation of wildlife habitat through a variety of actions which, when combined with other habitat impacts occurring from development in surrounding areas, would result in significant cumulative impacts. Future development in Biggs and in the surrounding vicinity would contribute to cumulative impacts on special-status species and sensitive and critical habitats. Furthermore, increased development and disturbance created by human activities (e.g., fires, increased nighttime lighting, reduced access to habitat and movement corridors) would result in direct mortality, habitat loss, and deterioration of habitat suitability. Cumulative biological resource impacts would result in significant and unavoidable impacts.

There are currently 3,165 acres in the Biggs Planning Area, and the proposed General Plan proposes to increase this acreage to 4,370 acres. Alternative 1 would maintain the current

Planning Area boundary at 3,165 acres as opposed to expanding it to 4,370 acres. Since there would be no Planning Area extension under Alternative 1, approximately 1,205 acres identified for urban development in the proposed General Plan would not be developed. This reduction in potential developable acreage would result in less habitat loss and therefore reduced impacts to special-status species.

### **Noise**

#### Exposure to surface transportation noise, construction/agricultural noise, and cumulative noise (Impact 3.10.2, 3.10.4, and Impact 3.10.5)

Implementation of the proposed General Plan may result in increases in vehicular traffic and thus a permanent increase in ambient noise levels in Biggs above levels existing without the project. It would also result in exposure of persons to noise levels in excess of standards established in the proposed General Plan from both traffic and construction-related activities, which is considered to be a significant and unavoidable impact. Cumulative noise impacts would also result in significant and unavoidable impacts.

Development under Alternative 1 would accommodate a substantially reduced amount of growth compared with the proposed General Plan (845 residential units and 2,535 people at buildout compared with 6,359 residential units and 17,614 people at buildout under the proposed General Plan). Therefore, implementation of Alternative 1 would result in reduced vehicle traffic noise compared with the proposed General Plan, as vehicle trips and associated vehicle traffic noise are proportionate to population growth. Similarly, reduced population growth also equals less construction activities and thus less construction-generated noise. However, Alternative 1 would still result in an increase in urban development compared with current conditions and therefore an increase in vehicle trips and traffic noise as well as construction and associated construction noise compared with current conditions.

### **Population and Housing**

#### Substantial increase of population and housing under project and cumulative conditions (Impact 3.11.1 and Impact 3.11.3)

Implementation of the proposed General Plan could result in growth beyond that anticipated by the Butte County Association of Government's (BCAG) population projections. Therefore, this impact is considered to be significant and unavoidable under project and cumulative conditions.

Development under Alternative 1 would accommodate a substantially reduced amount of growth compared with the proposed General Plan (845 residential units and 2,535 people at buildout compared with 6,359 residential units and 17,614 people at buildout under the proposed General Plan). BCAG projects an average growth rate of 3.3 percent annually, which would result in an estimated increase of 2,367 people and 825 dwelling units for a total of 4,059 people living in 1,440 units in Biggs by 2035. Therefore, Alternative 1 would be consistent with BCAG projections and thus have a less than significant impact in terms of population and housing growth.

**Transportation and Traffic**Impacts to local roadway and state highway facilities (Impact 3.13.1 and Impact 3.13.2)

While 20 of the 22 local roadway segments are anticipated to operate at level of service (LOS) C or better conditions consistent with the proposed General Plan threshold, the roadway segments of B Street between Eighth Street and Eleventh Street and West Rio Bonito Road between State Route 99 and Milky Way are projected to operate below LOS C. Proposed Policy CIRC-1.6 establishes LOS C as the threshold for acceptable operations, and there is no feasible mitigation to reduce impacts to these two roadway segments. Concerning state highway facilities (State Route 99), while implementation of proposed General Plan Policy CIRC-1.4 would ensure fair-share funding toward roadway impacts, there is no guarantee that Caltrans will agree to new funding mechanisms or construct roadway capacity expansion projects to reduce the identified impacts under the General Plan. Therefore, these impacts would remain significant and unavoidable.

Development under Alternative 1 would accommodate a substantially reduced amount of growth compared with the proposed General Plan (845 residential units and 2,535 people at buildout compared with 6,359 residential units and 17,614 people at buildout under the proposed General Plan). The reduced potential for development and population growth under Alternative 1 equates to reduced traffic compared with the proposed General Plan to the point in which the roadway segments of B Street between Eighth Street and Eleventh Street and West Rio Bonito Road between State Route 99 and Milky Way, as well as the state facility, State Route 99, would not be adversely impacted. (The existing 1998 General Plan would continue to be in effect under Alternative 1, and the environmental analysis prepared for the 1998 General Plan did not identify any significant traffic-related impacts.)

Roadway or traffic hazards (Impact 3.13.4)

While the proposed General Plan would allow increased development relative to existing levels and would result in increased traffic volumes, the proposed General Plan includes policies to minimize traffic hazards—both existing and those that may occur with development. For instance, Policies S-6.1 and CIRC-6.1 would enhance the safety of railroad crossings in the city, as these policy provisions seek to establish safety measures at the at-grade crossings and improved emergency response and circulation with the implementation of grade-separated crossings. Policy CIRC-1.2 and associated actions require new development to dedicate adequate rights-of-way to allow for construction of roadways and address the preparation of street improvement standards. Additionally, Policies CIRC-3.2 and CIRC-4.5 establish that road maintenance and improvement projects which represent a safety hazard receive highest priority, and Policy CIRC-4.4 requires the identification of locations that present hazards to pedestrians, along with pursuing remedies to those hazards. Implementation of these policy provisions in the proposed General Plan would make this impact less than significant; however, funding is not secured to improve existing deficiencies. Therefore, this impact is considered to be significant and unavoidable.

While Alternative 1 does not include proposed General Plan policy provisions seeking to establish safety measures, the implementation of those proposed General Plan policy provisions cannot be guaranteed as funding is not secured to improve existing deficiencies. Furthermore, roadway and traffic hazard impacts would be reduced under Alternative 1 due to less growth potential (845 residential units and 2,535 people at buildout compared with 6,359 residential units and 17,614 people at buildout under the proposed General Plan). Though traffic hazard impacts would still exist under Alternative 1, namely in association with existing at-grade crossings in the

city, the reduced potential for development and population growth under Alternative 1 equates to reduced traffic compared with the proposed General Plan to the point in which traffic hazards would be less pronounced and would affect substantially fewer people.

### Emergency access (Impact 3.13.5)

The lack of east–west connectivity and periodic road blockages presented by at-grade crossings of active railroad tracks compromise emergency response. Although the General Plan proposes the development of grade-separated crossings, these improvements are not funded and require implementation in coordination with other jurisdictions. Since there is uncertainty as to whether the existing crossings would be modified or new grade-separated crossings built, this impact is considered significant and unavoidable.

While Alternative 1 would accommodate less urban growth potential compared with the proposed General Plan (845 residential units and 2,535 people at buildout compared with 6,359 residential units and 17,614 people at buildout under the proposed General Plan), the existing lack of east–west connectivity and periodic road blockages presented by at-grade crossings of active railroad tracks would remain an issue under this alternative. Nonetheless, this issue would be less pronounced and would affect substantially fewer people under Alternative 1.

### Cumulative impacts on local roadways and state highway facilities (Impact 3.13.7 and Impact 3.13.8)

While implementation of the policies and actions included in the proposed General Plan would ensure full funding for planned roadway capacity expansion projects, there is no guarantee that other jurisdictions will participate in the program, and in terms of state facilities, the City does not have authority over improvements on Caltrans facilities. Therefore, the City cannot ensure that necessary improvements would be completed. For this reason, impacts would be significant and unavoidable.

Development under Alternative 1 would accommodate a substantially reduced amount of growth compared with the proposed General Plan (845 residential units and 2,535 people at buildout compared with 6,359 residential units and 17,614 people at buildout under the proposed General Plan). While Alternative 1 would not include policy provisions to ensure funding for new roadway capacity expansion projects, such projects may not ever become necessary due to the reduced amount of growth accommodated. (The existing 1998 General Plan would continue to be in effect under Alternative 1, and the environmental analysis prepared for the 1998 General Plan did not identify any significant traffic-related impacts.)

## **Greenhouse Gases and Climate Change**

### Generate greenhouse gas emissions that may have a significant impact on the environment (Impact 3.14.1)

Greenhouse gas (GHG) emission projections under the proposed General Plan are greater than 85 percent of current (2013) GHG emissions. This is in excess of the Assembly Bill (AB) 32 target and would result in a net increase in GHG emissions. Thus, this impact is considered cumulatively considerable and significant and unavoidable.

Development under Alternative 1 would accommodate a substantially reduced amount of potential growth compared with the proposed General Plan (845 residential units and 2,535 people at buildout compared with 6,359 residential units and 17,614 people at buildout under

the proposed General Plan). Therefore, implementation of Alternative 1 would result in reduced GHG emissions compared with the proposed General Plan, as population growth is proportionate to the amount of GHG emissions generated. However, Alternative 1 would still result in construction-related GHG emissions and additional mobile and stationary sources of GHG emissions compared with current conditions. Alternative 1 would result in less potential GHG emissions generation compared with the proposed General Plan.

### Conflict with applicable greenhouse gas reduction plan (Impact 3.14.2)

It is the intent of AB 32 to reduce statewide GHG emissions by 15 percent below 2005 levels by 2020. As noted under Impact 3.14.1, buildout of Biggs would result in a net increase in cumulative GHG emissions. Mitigation measure **MM 3.14.2** requires the City to prepare a GHG inventory and climate action plan (CAP); however, embarking on this process, while mandated by this mitigation, will require additional funding that is not available at this time. While implementation of an upcoming CAP could potentially mitigate GHG emissions projected for buildout conditions consistent with the reduction goal of AB 32, the proposed General Plan has acknowledged that embarking on the process of CAP development is unable to occur at this time. Thus, this impact is considered cumulatively considerable and significant and unavoidable.

While implementation of Alternative 1 would result in reduced GHG emissions compared with the projections of the proposed General Plan, emissions levels would still represent an increase of GHG. However, development under this alternative would accommodate a reduced amount of growth. Therefore, implementation of Alternative 1 would result in reduced GHG emissions compared with the proposed General Plan, as population growth is proportionate to the amount of GHG emissions generated.

## **5.4 ALTERNATIVE 2 – PREVENT AGRICULTURE LAND CONVERSION ALTERNATIVE**

### DESCRIPTION OF ALTERNATIVE

Under this alternative, the City would modify the proposed General Plan to prevent the conversion of land designated and zoned for agricultural use to urban uses. For purposes of this alternative, it is assumed that land designated for urban development under the proposed General Plan, but currently zoned for agricultural use, would remain in agriculture. Alternative 2 would essentially limit all future development to infill and redevelopment opportunities within the existing city limits. As described in Section 2.0, Project Description, Biggs currently has limited infill and redevelopment opportunities within its existing city limits, with only 16 vacant residential parcels totaling 10.2 acres.

### ENVIRONMENTAL ANALYSIS

The following analysis is based on the significant environmental impacts identified in Sections 3.1 through 3.14 of this Draft EIR. The reader is referred to these sections for further details on impacts associated with the proposed General Plan.

## **Agricultural Resources**

### Loss of and conversion of agricultural land under project and cumulative conditions (Impact 3.2.1 and Impact 3.2.4)

As noted in Section 3.2, Agricultural Resources, land use designation changes in the proposed General Plan result in a net decrease of substantial agriculturally designated land acreages. Most of the agricultural lands within the proposed Biggs Planning Area are actually outside the city limits and located along the edges of the city. The conversion of agricultural land was identified as a significant and unavoidable impact under project and cumulative conditions.

Agricultural land accounts for approximately 3,870 acres within the General Plan Planning Area. Alternative 2 would ensure that none of the land currently designated and zoned for agricultural use would be converted to urban uses and would essentially limit all future development to infill and redevelopment opportunities within the existing city limits. This would eliminate the significant and unavoidable impact identified in Section 3.2, Agricultural Resources, of the Draft EIR by preventing the conversion of agricultural land to urban uses and therefore eliminate the immediate significant and unavoidable impact associated with the proposed project.

## **Air Quality**

### Conflict with the Northern Sacramento Valley Planning Area 2009 Air Quality Attainment Plan (Impact 3.3.1)

Implementation of the proposed General Plan and the resulting development would result in emissions of the O<sub>3</sub> precursor emission, ROG, to increase with 2035 conditions versus existing conditions (2013) by 70 percent while the O<sub>3</sub> precursor emission, NO<sub>x</sub>, would actually decrease by 45 percent. (Despite the increased population growth projected for 2035, emissions of NO<sub>x</sub> and CO would decrease as these pollutants are sourced primarily from vehicle emissions and vehicle emission technology is anticipated to be greatly improved in the year 2035.) The upward trend in ROG emissions is not reflective of the projected O<sub>3</sub> emissions reductions documented in the NSVPA 2009 Air Quality Attainment Plan, which projects a 5.6 percent reduction in ROG emissions from area and mobile sources in the NSVPA by the year 2020 (the latest year projected in the NSVPA 2009 Air Quality Attainment Plan). (The 2009 Air Quality Attainment Plan projects a 22.2 percent reduction in NO<sub>x</sub> emissions.) While the projected decrease in NO<sub>x</sub> emissions under the proposed General Plan is reflective of the NSVPA 2009 Air Quality Attainment Plan, the upward trend in the O<sub>3</sub> precursor emission ROG is not reflective of the projected O<sub>3</sub> emissions reductions documented in the NSVPA 2009 Air Quality Attainment Plan. Since it is the intent of the NSVPA 2009 Air Quality Attainment Plan to achieve ozone attainment status, and O<sub>3</sub> precursor emission ROG is projected to increase as a result of the General Plan, this impact is significant and unavoidable.

Agricultural land accounts for approximately 3,870 acres in the General Plan Planning Area. Alternative 2 would ensure that none of the land currently designated and zoned for agricultural use would be converted to urban uses. Therefore, Alternative 2 would result in reduced development and in turn substantially reduce potential O<sub>3</sub> precursor emissions as compared to the proposed General Plan, since population growth is proportionate to the amount of O<sub>3</sub> precursor emissions generated. However, emissions levels under Alternative 2 would still result in an increase of O<sub>3</sub> precursor emissions. Even though this alternative would result in less potential for development and population growth and thus less emissions, it would still result in impacts associated with the 2009 Air Quality Attainment Plan.



### Contribution to air quality impacts (construction and operational) under project and cumulative conditions (Impacts 3.3.2, Impact 3.3.3, and Impact 3.3.7)

Implementation of the proposed General Plan and the resulting development would increase the potential for additional mobile and stationary source emissions and short-term construction emissions, which would adversely affect regional air quality. All of the air quality impacts listed above result in significant and unavoidable impacts.

Agricultural land accounts for approximately 3,870 acres in the General Plan Planning Area. Alternative 2 would ensure that none of the land currently designated and zoned for agricultural use would be converted to urban uses. Therefore, implementation of Alternative 2 would result in reduced air pollutant emissions compared with the proposed General Plan, as population growth is proportionate to the amount of emissions generated. However, Alternative 2 would still result in construction emissions and additional mobile and stationary source emissions compared with current conditions, and these emission levels would still result in an increase of criteria air pollutants and precursors for which the air basin is in nonattainment. (Impacts under Alternative 2 would be mitigated similar to the proposed General Plan through the application of proposed policies identified in Section 3.3, Air Quality.)

### **Biological Resources**

#### Cumulative impacts to biological resources (Impact 3.4.4)

Implementation of the proposed General Plan may result in degradation of wildlife habitat through a variety of actions which, when combined with other habitat impacts occurring from development in surrounding areas, would result in significant cumulative impacts. Future development in Biggs and in the surrounding vicinity would contribute to cumulative impacts on special-status species and sensitive and critical habitats. Furthermore, increased development and disturbance created by human activities (e.g., fires, increased nighttime lighting, reduced access to habitat and movement corridors) would result in direct mortality, habitat loss, and deterioration of habitat suitability. Cumulative biological resource impacts would result in significant and unavoidable impacts.

Agricultural land accounts for approximately 3,870 acres within the General Plan Planning Area. Alternative 2 would ensure that none of the land designated and zoned for agricultural use would be converted to urban uses; therefore, 3,870 acres identified for urban development in the proposed General Plan would not be developed. This alternative would limit all future development to infill and redevelopment opportunities within the existing city limits. This reduction in potential developable acreage compared with the proposed General Plan would result in less habitat loss and therefore reduced impacts to special-status species. This would reduce the significant and unavoidable impact identified in Section 3.4, Biological Resources, by preventing the development of special-status species habitat associated with 3,870 acres of agricultural lands.

### **Noise**

#### Exposure to surface transportation noise, construction/agricultural noise, and cumulative noise (Impact 3.10.2, 3.10.4, and Impact 3.10.5)

Implementation of the proposed General Plan may result in increases in vehicular traffic and thus a permanent increase in ambient noise levels in Biggs above levels existing without the project. It would also result in exposure of persons to noise levels in excess of standards

established in the proposed General Plan from both traffic and construction-related activities, which is considered to be a significant and unavoidable impact. Cumulative noise impacts would also result in significant and unavoidable impacts.

Development under Alternative 2 would accommodate a substantially reduced amount of growth compared with the proposed General Plan due to the reduction of 3,870 acres of developable land from the Land Use Diagram. Therefore, implementation of Alternative 2 would result in reduced vehicle traffic noise compared with the proposed General Plan, as vehicle trips and associated vehicle traffic noise are proportionate to population growth. Similarly, reduced population growth also equals less construction activities and thus less construction-generated noise. However, Alternative 2 would still result in an increase in urban development compared with current conditions and therefore an increase in vehicle trips and traffic noise as well as construction and associated construction noise compared with current conditions.

### **Population and Housing**

#### Substantial increase of population and housing under project and cumulative conditions (Impact 3.11.1 and Impact 3.11.3)

Implementation of the proposed General Plan could result in growth beyond that anticipated by BCAG's population projections. Therefore, this impact is considered to be significant and unavoidable under project and cumulative conditions.

Development under Alternative 2 would accommodate a substantially reduced amount of growth compared with the proposed General Plan due to the reduction of 3,870 acres of developable land from the Land Use Diagram. BCAG projects an average growth rate of 3.3 percent annually, which would result in an estimated increase of 2,367 people and 825 dwelling units for a total of 4,059 people living in 1,440 units in Biggs by 2035. Therefore, similar to Alternative 1, Alternative 2 would essentially limit all future development to infill and redevelopment opportunities within the existing city limits. As a result, Alternative 2 would most likely be consistent with BCAG projections and thus have a less than significant impact in terms of population and housing growth.

### **Transportation and Traffic**

#### Impacts to local roadway and state highway facilities (Impact 3.13.1 and Impact 3.13.2)

While 20 of the 22 local roadway segments are anticipated to operate at LOS C or better conditions consistent with the proposed General Plan threshold, the roadway segments of B Street between Eighth Street and Eleventh Street and West Rio Bonito Road between SR 99 and Milky Way are projected to operate below LOS C. Proposed Policy CIRC-1.6 establishes LOS C as the threshold for acceptable operations, and there is no feasible mitigation to reduce impacts to these two roadway segments. Concerning state highway facilities, while implementation of proposed General Plan Policy CIRC-1.4 would ensure fair-share funding toward roadway impacts, there is no guarantee that Caltrans will agree to new funding mechanisms or construct roadway capacity expansion projects to reduce the identified impacts under the General Plan. Therefore, these impacts would remain significant and unavoidable.

Development under Alternative 2 would accommodate a substantially reduced amount of growth compared with the proposed General Plan due to the reduction of 3,870 acres of developable land from the Land Use Diagram and the limitation of all future development to infill and redevelopment opportunities within the existing city limits. The reduced potential for

development and population growth under Alternative 2 equates to reduced traffic compared with the proposed General Plan, as population is proportionate to the level of traffic. Similar to the No Project Alternative, the potential development and population growth under Alternative 2 would be reduced to the point in which the roadway segments of B Street between Eighth Street and Eleventh Street and West Rio Bonito Road between State Route 99 and Milky Way as well as the state facility, State Route 99, would not be adversely impacted. The Planning Area would consist of just ±500 acres with only 10.2 acres of vacant residential land, thus substantially limiting potential population growth.

### Roadway and traffic hazards (Impact 3.13.4)

While the proposed General Plan would allow increased development relative to existing levels and would result in increased traffic volumes, the proposed General Plan includes policies to minimize traffic hazards—both existing and those that may occur with development. For instance, Policies S-6.1 and CIRC-6.1 would enhance the safety of railroad crossings in the city, as these policy provisions seek to establish safety measures at the at-grade crossings and improved emergency response and circulation with the implementation of grade-separated crossings. Policy CIRC-1.2 and associated actions require new development to dedicate adequate rights-of-way to allow for construction of roadways and address the preparation of street improvement standards. Additionally, Policies CIRC-3.2 and CIRC-4.5 establish that road maintenance and improvement projects which represent a safety hazard receive highest priority, and Policy CIRC-4.4 requires the identification of locations that present hazards to pedestrians, along with pursuing remedies to those hazards. Implementation of these policy provisions in the proposed General Plan would make this impact less than significant; however, funding is not secured to improve existing deficiencies. Therefore, this impact is considered to be significant and unavoidable.

Alternative 2 would implement the same policy provisions as the proposed General Plan, so roadway and traffic hazard impacts for Alternative 2 could be addressed similar to the proposed General Plan. However, any needed safety improvements would still not be funded, so Alternative 2 would not change the uncertainty as to whether any needed safety improvements would be built. In spite of this, the omission of 3,870 acres of the Planning Area from potential urban development would represent a substantial reduction of potential traffic, as reduced development equates to reduced traffic and therefore a substantial reduction in impacts associated with roadway and traffic hazards. Though traffic hazard impacts would still exist under Alternative 2, namely in association with existing at-grade crossings in the city, the reduced potential for development and population growth under Alternative 2 would result in reduced traffic compared with the proposed General Plan to the point in which traffic hazards would be less pronounced and would affect substantially fewer people.

### Emergency access (Impact 3.13.5)

The lack of east–west connectivity and periodic road blockages presented by at-grade crossings of active railroad tracks compromise emergency response. Although the proposed General Plan proposes the development of grade-separated crossings, these improvements are not funded and require implementation in coordination with other jurisdictions. Since there is uncertainty as to whether the existing crossings would be modified or new grade-separated crossings built, this impact is considered significant and unavoidable.

Alternative 2 would implement the same policy provisions as the proposed General Plan, so emergency access impacts for Alternative 2 could be addressed similar to the proposed General Plan. However, any needed improvements would still not be funded and would still

require implementation in coordination with other jurisdictions. Therefore, Alternative 2 would not change the uncertainty as to whether the existing crossings would be modified or new grade-separated crossings built. In spite of this, the omission of 3,870 acres of the Planning Area from potential urban development would represent a substantial reduction of potential traffic, as reduced development equates to reduced traffic and therefore a substantial reduction in impacts associated with emergency access. Though emergency access impacts would still exist under Alternative 2, namely in association with the existing lack of east-west connectivity and periodic road blockages presented by at-grade crossings of active railroad tracks in the city, the reduced potential for development and population growth under Alternative 2 would result in reduced traffic compared with the proposed General Plan to the point in which emergency access impacts would be less pronounced and would affect substantially fewer people.

### Cumulative impacts on local roadways and state highway facilities (Impact 3.13.7 and Impact 3.13.8)

While implementation of the policies and actions included in the proposed General Plan would ensure full funding for the planned roadway capacity expansion projects, there is no guarantee that other jurisdictions will participate in the program, and in terms of state facilities, the City does not have authority over improvements on Caltrans facilities. Therefore the City cannot ensure that necessary improvements would be completed. For this reason, impacts would be significant and unavoidable.

Development under Alternative 2 would accommodate a substantially reduced amount of growth compared with the proposed General Plan due to the reduction of 3,870 acres of developable land from the Land Use Diagram and the limitation of all future development to infill and redevelopment opportunities within the existing city limits. The reduced potential for development and population growth under Alternative 2 equates to reduced traffic compared with the proposed General Plan, as population is proportionate to the level of traffic. While Alternative 2 would include the same policy provisions as the proposed General Plan in order to try to ensure funding for new roadway capacity expansion projects, such projects may not ever become necessary due to the reduced amount of growth accommodated.

### **Greenhouse Gases and Climate Change**

#### Generate greenhouse gas emissions that may have a significant impact on the environment (Impact 3.14.1)

GHG emission projections under the proposed General Plan are greater than 85 percent of current (2013) GHG emissions. This is in excess of the AB 32 target and would result in a net increase in GHG emissions. Thus, this impact is considered cumulatively considerable and significant and unavoidable.

Agricultural land accounts for approximately 3,870 acres in the General Plan Planning Area, and Alternative 2 would ensure that none of the land currently designated and zoned for agricultural use would be converted to urban uses. Therefore, implementation of Alternative 2 would result in reduced GHG emissions compared with the proposed General Plan, as population growth is proportionate to the amount of emissions generated. However, Alternative 2 would still result in construction-related GHG emissions and additional mobile and stationary sources of GHG emissions compared with current conditions. (Impacts under Alternative 2 would be mitigated similar to the proposed General Plan through the application of proposed policies identified in Section 3.14, Greenhouse Gases and Climate Change.)

### Conflict with applicable greenhouse gas reduction plan (Impact 3.14.2)

It is the intent of AB 32 to reduce statewide GHG emissions by 15 percent below 2005 levels by 2020. As noted under Impact 3.14.1, buildout of Biggs would result in a net increase in cumulative GHG emissions. Mitigation measure **MM 3.14.2** requires the City to prepare a GHG inventory and climate action plan; however, embarking on this process, while mandated by this mitigation, will require additional funding that is not available at this time. While implementation of an upcoming CAP could potentially mitigate GHG emissions projected for buildout conditions consistent with the reduction goal of AB 32, the proposed General Plan has acknowledged that embarking on the process of CAP development is unable to occur at this time. Thus, this impact is considered cumulatively considerable and significant and unavoidable.

While implementation of Alternative 2 would result in reduced GHG emissions compared with the projections of the proposed General Plan, emissions levels would still represent an increase of greenhouse gases. However, development under this alternative would accommodate a reduced amount of growth by precluding 3,870 acres of the proposed General Plan Planning Area from urban development.

## **5.5 ALTERNATIVE 3 – REDUCED WESTERN EXPANSION ALTERNATIVE**

### DESCRIPTION OF ALTERNATIVE

Under this alternative, the City would modify the proposed General Plan Land Use Diagram to preclude the inclusion of any additional lands west of the Union Pacific railroad tracks that traverse Biggs between Seventh and Eighth streets. This alternative would have the effect of omitting approximately 933 acres of land from the proposed General Plan Planning Area proposed for Heavy Industrial, Light Industrial, Low Density Residential, Agricultural, and Agricultural Industrial land use designations.

### ENVIRONMENTAL ANALYSIS

The following analysis is based on the significant environmental impacts identified in Sections 3.1 through 3.14 of this Draft EIR. The reader is referred to these sections for further details on impacts associated with the proposed General Plan.

#### **Agricultural Resources**

### Loss of and conversion of agricultural land under project and cumulative conditions (Impact 3.2.1 and Impact 3.2.4)

As noted in Section 3.2, Agricultural Resources, land use designation changes in the proposed General Plan result in a net decrease of substantial agriculturally designated land acreages. Most of the agricultural lands within the proposed Biggs Planning Area are actually outside the city limits and located along the edges of the city. This was identified as a significant and unavoidable impact under project and cumulative conditions.

Alternative 3 would still result in the loss of important farmlands. However, implementation of Alternative 3 would not expand the Biggs Planning Area to the extent planned by the proposed General Plan and would retain agricultural uses to a greater extent. This substantial reduction of jurisdictional expansion would result in fewer agricultural lands operating under the City's regulatory climate, thus reducing their potential to be converted to urban uses.

**Air Quality****Conflict with the Northern Sacramento Valley Planning Area 2009 Air Quality Attainment Plan (Impact 3.3.1)**

Implementation of the proposed General Plan and the resulting development would result in emissions of the O<sub>3</sub> precursor emission, ROG, to increase with 2035 conditions versus existing conditions (2013) by 70 percent while the O<sub>3</sub> precursor emission, NO<sub>x</sub>, would actually decrease by 45 percent. (Despite the increased population growth projected for 2035, emissions of NO<sub>x</sub> and CO would decrease as these pollutants are sourced primarily from vehicle emissions and vehicle emission technology is anticipated to be greatly improved in the year 2035.) The upward trend in ROG emissions is not reflective of the projected O<sub>3</sub> emissions reductions documented in the NSVPA 2009 Air Quality Attainment Plan, which projects a 5.6 percent reduction in ROG emissions from area and mobile sources in the NSVPA by the year 2020 (the latest year projected in the NSVPA 2009 Air Quality Attainment Plan). (The 2009 Air Quality Attainment Plan projects a 22.2 percent reduction in NO<sub>x</sub> emissions.) While the projected decrease in NO<sub>x</sub> emissions under the proposed General Plan is reflective of the NSVPA 2009 Air Quality Attainment Plan, the upward trend in the O<sub>3</sub> precursor emission ROG is not reflective of the projected O<sub>3</sub> emissions reductions documented in the NSVPA 2009 Air Quality Attainment Plan. Since it is the intent of the NSVPA 2009 Air Quality Attainment Plan to achieve ozone attainment status, and O<sub>3</sub> precursor emission ROG is projected to increase as a result of the General Plan, this impact is significant and unavoidable.

Alternative 3 would have the effect of omitting approximately 933 acres of land from the proposed General Plan Planning Area proposed for Heavy Industrial, Light Industrial, Low Density Residential, Agricultural, and Agricultural Industrial land use designations. Therefore, Alternative 3 would result in reduced development and in turn substantially reduce potential O<sub>3</sub> precursor emissions as compared to the proposed General Plan, since population growth is proportionate to the amount of O<sub>3</sub> precursor emissions generated. However, emissions levels under Alternative 3 would still result in an increase of O<sub>3</sub> precursor emissions. Even though this alternative would result in less potential for development and population growth and thus less emissions, it would still result in impacts associated with the 2009 Air Quality Attainment Plan.

**Contribution to air quality impacts (construction and operational) under project and cumulative conditions (Impacts 3.3.2, Impact 3.3.3, and Impact 3.3.7)**

Implementation of the proposed General Plan and the resulting development would increase the potential for additional mobile and stationary source emissions and short-term construction emissions, which would adversely affect regional air quality. All of the air quality impacts listed above result in significant and unavoidable impacts.

A reduction in allowed development under Alternative 3 would reduce the amount of short-term and long-term air pollutant emissions emitted compared to the proposed General Plan, as population growth is proportionate to the amount of emissions generated. However, Alternative 3 would still result in construction emissions and additional mobile and stationary source emissions compared with current conditions, and these emission levels would still result in an increase of criteria air pollutants and precursors for which the air basin is in nonattainment. (Impacts under Alternative 3 would be mitigated similar to the proposed General Plan through the application of proposed policies identified in Section 3.3, Air Quality.)

### **Biological Resources**

#### Cumulative impacts to biological resources (Impact 3.4.4)

Implementation of the proposed General Plan may result in degradation of wildlife habitat through a variety of actions which, when combined with other habitat impacts occurring from development in surrounding areas, would result in significant cumulative impacts. Future development in Biggs and in the surrounding vicinity would contribute to cumulative impacts to special-status species and sensitive and critical habitats. Furthermore, increased development and disturbance created by human activities (e.g., fires, increased nighttime lighting, reduced access to habitat and movement corridors) would result in direct mortality, habitat loss, and deterioration of habitat suitability. Cumulative biological resource impacts would result in significant and unavoidable impacts.

Alternative 3 would result in reduced biological impacts by omitting several hundred acres of land from the proposed General Plan Planning Area proposed for Heavy Industrial, Light Industrial, Low Density Residential, Agricultural, and Agricultural Industrial land use designations. This reduction in potential developable acreage compared with the proposed General Plan would result in less habitat loss and therefore reduced impacts to special-status species, yet not to a less than significant level, as biological resources would still be impacted in other portions of the proposed Planning Area.

### **Noise**

#### Exposure to surface transportation noise, construction/agricultural noise, and cumulative noise (Impact 3.10.2, 3.10.4, and Impact 3.10.5)

Implementation of the proposed General Plan may result in increases in vehicular traffic and thus a permanent increase in ambient noise levels in Biggs above levels existing without the project. It would also result in exposure of persons to noise levels in excess of standards established in the proposed General Plan from both traffic and construction-related activities, which is considered to be a significant and unavoidable impact. Cumulative noise impacts would also result in significant and unavoidable impacts.

Development under Alternative 3 would accommodate a reduced amount of growth compared with the proposed General Plan due to the reduction of 933 acres of developable land from the Land Use Diagram. Therefore, implementation of Alternative 3 would result in reduced vehicle traffic noise compared with the proposed General Plan, as vehicle trips and associated vehicle traffic noise are proportionate to population growth. Similarly, reduced population growth also equals less construction activities and thus less construction-generated noise. However, Alternative 3 would still result in an increase of urban development compared with current conditions and therefore an increase in vehicle trips and traffic noise as well as construction and associated construction noise compared with current conditions.

### **Population and Housing**

#### Substantial increase of population and housing under project and cumulative conditions (Impact 3.11.1 and Impact 3.11.3)

Implementation of the proposed General Plan could result in growth beyond that anticipated by BCAG's population projections. Therefore, this impact is considered to be significant and unavoidable under project and cumulative conditions.

Development under Alternative 3 would accommodate a reduced amount of growth compared with the proposed General Plan due to the reduction of 933 acres of developable land from the Land Use Diagram. BCAG projects an average growth rate of 3.3 percent annually, which would result in an estimated increase of 2,367 people and 825 dwelling units for a total of 4,059 people living in 1,440 units in Biggs by 2035. While Alternative 3 allow for less potential population growth and would therefore be closer to BCAG population projections when compared with the proposed General Plan, the amount of potential development accommodated under this alternative would still result in inconsistencies with BCAG projections.

### **Transportation and Traffic**

#### Impacts to local roadway and state highway facilities (Impact 3.13.1 and Impact 3.13.2)

While 20 of the 22 local roadway segments are anticipated to operate at LOS C or better conditions consistent with the proposed General Plan threshold, the roadway segments of B Street between Eighth Street and Eleventh Street and West Rio Bonito Road between SR 99 and Milky Way are projected to operate below LOS C. Proposed Policy CIRC-1.6 establishes LOS C as the threshold for acceptable operations and there is no feasible mitigation to reduce impacts to these two roadway segments. Concerning state highway facilities, while implementation of proposed General Plan Policy CIRC-1.4 would ensure fair-share funding toward roadway impacts, there is no guarantee that Caltrans will agree to new funding mechanisms or construct roadway capacity expansion projects to reduce the identified impacts under the General Plan. Therefore, these impacts would remain significant and unavoidable.

Development under Alternative 3 would accommodate a substantially reduced amount of growth compared with the proposed General Plan due to the reduction of 933 acres of developable land from the Land Use Diagram. The reduced potential for development and population growth under Alternative 3 equates to reduced traffic compared with the proposed General Plan, as population is proportionate to the level of traffic. As with the proposed General Plan Land Use Diagram, due to the scale of development activity associated with buildout of Alternative 3, impacts to local roadways and SR 99 would still occur. Traffic impacts for Alternative 3 could be addressed similar to the proposed General Plan, and like the proposed General Plan, there would still be no guarantee that Caltrans will agree to new funding mechanisms or construct roadway capacity expansion projects to reduce identified impacts. Nonetheless, omission of several hundred acres from the Planning Area would represent a reduction in potential urban development and associated traffic, and therefore a substantial reduction in impacts to local roadways and state highway facilities.

#### Roadway and traffic hazards (Impact 3.13.4)

While the proposed General Plan would allow increased development relative to existing levels and would result in increased traffic volumes, the proposed General Plan includes policies to minimize traffic hazards—both existing and those that may occur with development. For instance, Policies S-6.1 and CIRC-6.1 would enhance the safety of railroad crossings in the city, as these policy provisions seek to establish safety measures at the at-grade crossings and improved emergency response and circulation with the implementation of grade-separated crossings. Policy CIRC-1.2 and associated action items require new development to dedicate adequate rights-of-way to allow for construction of roadways and address the preparation of street improvement standards. Additionally, Policies CIRC-3.2 and CIRC-4.5 establish that road maintenance and improvement projects that represent a safety hazard receive highest priority, and Policy CIRC-4.4 requires the identification of locations that present hazards to pedestrians, along with pursuing remedies to those hazards. Implementation of these policy provisions in the



proposed General Plan would make this impact less than significant; however, funding is not secured to improve existing deficiencies. Therefore, this impact is considered to be significant and unavoidable.

Alternative 3 would implement the same policy provisions as the proposed General Plan, so roadway and traffic hazard impacts for Alternative 3 could be addressed similar to the proposed General Plan. However, any needed safety improvements would still not be funded, so Alternative 3 would not change the uncertainty as to whether any needed safety improvements would be built. In spite of this, the omission of 933 acres of the proposed Planning Area from potential urban development would represent a substantial reduction of potential traffic, as reduced development equates to reduced traffic and therefore a substantial reduction in impacts associated with roadway and traffic hazards. Furthermore, Alternative 3 would reduce the need for remedies to identified hazards associated with at-grade crossings since it would preclude the inclusion of any additional lands west of the Union Pacific railroad tracks that traverse Biggs between Seventh and Eighth streets. The lack of any new urban development west of the Union Pacific railroad tracks would reduce this impact to a less than significant level.

### Emergency access (Impact 3.13.5)

The lack of east-west connectivity and periodic road blockages presented by at-grade crossings of active railroad tracks compromise emergency response. Although the proposed General Plan proposes the development of grade-separated crossings, these improvements are not funded and require implementation in coordination with other jurisdictions. Since there is uncertainty as to whether the existing crossings would be modified or new grade-separated crossings built, this impact is considered significant and unavoidable.

Alternative 3 would reduce the need for remedies to identified hazards associated with at-grade crossings since it would preclude the inclusion of any additional lands west of the Union Pacific railroad tracks that traverse Biggs between Seventh and Eighth streets. The lack of any new urban development west of the Union Pacific railroad tracks would reduce this impact to a less than significant level.

### Cumulative impacts on local roadways and state highway facilities (Impact 3.13.7 and Impact 3.13.8)

While implementation of the policies and actions included in the proposed General Plan would ensure full funding for planned roadway capacity expansion projects, there is no guarantee that other jurisdictions will participate in the program, and in terms of state facilities, the City does not have authority over improvements on Caltrans facilities. Therefore, the City cannot ensure that necessary improvements would be completed. For this reason, impacts would be significant and unavoidable.

Traffic impacts for Alternative 3 could be addressed similar to the proposed General Plan. Like the proposed General Plan, there would still be no guarantee that Caltrans will agree to new funding mechanisms or construct roadway capacity expansion projects to reduce identified impacts. Nonetheless, the omission of several hundred acres from the Planning Area would represent a substantial reduction of potential urban development and associated traffic, and therefore a substantial reduction in impacts to local roadways and state highway facilities. Furthermore, Alternative 3 would reduce the need for remedies to identified hazards associated with at-grade crossings since it would preclude the inclusion of any additional lands west of the

Union Pacific railroad tracks. The lack of any new urban development west of the Union Pacific railroad tracks would reduce cumulative traffic hazard-related impacts.

### Greenhouse Gases and Climate Change

#### Generate greenhouse gas emissions that may have a significant impact on the environment (Impact 3.14.1).

GHG emission projections under the proposed General Plan are greater than 85 percent of current (2013) GHG emissions. This is in excess of the AB 32 target and would result in a net increase in GHG emissions. Thus, this impact is considered cumulatively considerable and significant and unavoidable.

Alternative 3 would have the affect of omitting approximately 933 acres of land from the proposed General Plan Planning Area proposed for Heavy Industrial, Light Industrial, Low Density Residential, Agricultural, and Agricultural Industrial land use designations. Therefore, implementation of Alternative 3 would result in reduced GHG emissions compared with the proposed General Plan, as population growth is proportionate to the amount of emissions generated. However, Alternative 3 would still result in construction-related GHG emissions and additional mobile and stationary sources of GHG emissions compared with current conditions. (Impacts under Alternative 3 would be mitigated similar to the proposed General Plan through the application of proposed policies identified in Section 3.14, Greenhouse Gases and Climate Change.)

#### Conflict with applicable greenhouse gas reduction plan (Impact 3.14.2)

It is the intent of AB 32 to reduce statewide GHG emissions by 15 percent below 2005 levels by 2020. As noted under Impact 3.14.1, buildout of Biggs would result in a net increase in cumulative GHG emissions. Mitigation measure **MM 3.14.2** requires the City to prepare a GHG inventory and climate action plan; however, embarking on this process, while mandated by this mitigation, will require additional funding that is not available at this time. While implementation of an upcoming CAP could potentially mitigate GHG emissions projected for buildout conditions consistent with the reduction goal of AB 32, the proposed General Plan has acknowledged that embarking on the process of CAP development is unable to occur at this time. Thus, this impact is considered cumulatively considerable and significant and unavoidable.

While implementation of Alternative 3 would result in reduced GHG emissions compared with the projections of the proposed General Plan, emissions levels would still result in an increase of greenhouse gases. However, development under this alternative would accommodate a reduced amount of growth by omitting several hundred acres of the proposed General Plan Planning Area proposed for Heavy Industrial, Light Industrial, Low Density Residential, Agricultural, and Agricultural Industrial land use designations.

## 5.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

**Table 5.0-2** provides a summary of the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the proposed General Plan. The impact significance is identified for each alternative as well as the ranking of the impact as compared to the proposed General Plan. A "B" ranking means that the alternative would be "better" or would have less of an environmental impact than the proposed General Plan, while a "W" ranking means the alternative would result in a "worse" impact. The "S" ranking identifies where the alternative has a "similar" impact as the proposed General Plan. Based on the evaluation

described in this section, Alternative 2 would be the environmentally superior alternative. The proposed project, with additional policies to assist with reducing air quality impacts, encourage master planning and mixed use, and expand trails and transit, is the next environmentally superior alternative.

**TABLE 5.0-2  
SUMMARY COMPARISON OF ALTERNATIVES**

<b>Environmental Impacts</b>	<b>Proposed General Plan</b>	<b>No Project Alternative</b>	<b>Prevent Agricultural Land Conversion Alternative</b>	<b>Reduced Western Expansion Alternative</b>
<b>Agricultural Resources</b>				
<b>Impact 3.2.1</b> Implementation of the proposed General Plan would result in the conversion of important farmlands (Prime Farmland and Farmland of Statewide Importance), as designated by the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.	Significant and Unavoidable	Significant and Unavoidable	Less Than Significant	Significant and Unavoidable
Rank		B	B	B
<b>Impact 3.2.4</b> Implementation of the proposed General Plan, along with regional and statewide growth, would result in a contribution to the conversion of important farmland.	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Less Than Cumulatively Considerable	Cumulatively Considerable and Unavoidable
Rank		B	B	B
<b>Air Quality</b>				
<b>Impact 3.3.1</b> Subsequent land use activities associated with implementation of the proposed General Plan would obstruct implementation of the Northern Sacramento Valley Planning Area 2009 Air Quality Attainment Plan.	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable
Rank		B	B	B
<b>Impact 3.3.2</b> Subsequent land use activities associated with implementation of the proposed General Plan could result in long-term, operational emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter.	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable
Rank		B	B	B

## 5.0 ALTERNATIVES

Environmental Impacts	Proposed General Plan	No Project Alternative	Prevent Agricultural Land Conversion Alternative	Reduced Western Expansion Alternative
<b>Impact 3.3.3</b> Subsequent land use activities associated with implementation of the proposed General Plan could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter.	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable
Rank		B	B	B
<b>Impact 3.3.7</b> Implementation of the proposed General Plan, in combination with cumulative development in the Sacramento Valley Air Basin, would result in a cumulatively considerable net increase of ozone and of coarse and fine particulate matter.	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable
Rank		B	B	B
<b>Biological Resources</b>				
<b>Impact 3.4.4</b> The proposed General Plan, in combination with other reasonably foreseeable projects, would result in direct and indirect mortality and loss of habitat for special-status species and sensitive and/or critical habitat.	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Less Than Cumulatively Considerable	Cumulatively Considerable and Unavoidable
Rank		B	B	B
<b>Noise</b>				
<b>Impact 3.10.2</b> Traffic conditions under the proposed General Plan could result in a substantial permanent increase in ambient noise levels that could adversely affect noise-sensitive land uses.	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable
Rank		B	B	B
<b>Impact 3.10.4</b> Construction and agricultural activities associated with subsequent activities under the proposed General Plan could result in a substantial temporary or periodic increase in ambient noise levels.	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable	Significant and Unavoidable
Rank		B	B	B

## 5.0 ALTERNATIVES

Environmental Impacts	Proposed General Plan	No Project Alternative	Prevent Agricultural Land Conversion Alternative	Reduced Western Expansion Alternative
<b>Impact 3.10.5</b> Implementation of the proposed General Plan, in combination with other development in nearby unincorporated areas of the county, would increase transportation noise along area roadways and construction noise throughout the Planning Area.	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable
Rank		B	B	B
<b>Population and Housing</b>				
<b>Impact 3.11.1</b> Subsequent land use activities associated with implementation of the proposed General Plan could potentially induce population growth by the year 2035 beyond that currently anticipated.	Significant and Unavoidable	Less Than Significant	Less Than Significant	Significant and Unavoidable
Rank		B	B	B
<b>Impact 3.11.3</b> Subsequent land use activities associated with implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development, could result in a cumulative increase in population and housing growth in Biggs as well as in the surrounding Butte County region, along with associated environmental impacts. This cumulative increase in population and housing is beyond that projected by BCAG.	Cumulatively Considerable and Unavoidable	Less Than Cumulatively Considerable	Less Than Cumulatively Considerable	Cumulatively Considerable and Unavoidable
Rank		B	B	B
<b>Transportation and Circulation</b>				
<b>Impact 3.1.1</b> Implementation of the proposed General Plan would increase traffic volume that would degrade operating conditions along local roadways.	Significant and Unavoidable	Less Than Significant	Less Than Significant	Significant and Unavoidable
Rank		B	B	B

Environmental Impacts	Proposed General Plan	No Project Alternative	Prevent Agricultural Land Conversion Alternative	Reduced Western Expansion Alternative
<p><b>Impact 3.13.2</b> Implementation of proposed General Plan would increase traffic volume that would degrade operating conditions along the state highway. The resulting levels of service are within the levels adopted in applicable plans and policies. However, implementation of improvements to the state highway system is uncertain since the City of Biggs has no control over Caltrans actions regarding SR 99.</p>	Significant and Unavoidable	Significant and Unavoidable	Less Than Significant	Significant and Unavoidable
Rank		B	B	B
<p><b>Impact 3.13.4</b> Implementation of the proposed General Plan will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). However, buildout of the proposed General Plan could result in increased travel on roadways that do not meet current design standards and present hazards in their current state.</p>	Significant and Unavoidable	Significant and Unavoidable	Less Than Significant	Less Than Significant
Rank		B	B	B
<p><b>Impact 3.13.5</b> Implementation of the proposed General Plan will result in inadequate emergency access unless improvements proposed in the document are implemented simultaneously with development.</p>	Significant and Unavoidable	Significant and Unavoidable	Less Than Significant	Less Than Significant
Rank		B	B	B
<p><b>Impact 3.13.7</b> When considered with existing, proposed, planned, and approved development in the region, buildout of the proposed General Plan would rely upon future roadway capacity expansion projects for which full funding is not ensured.</p>	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Less Than Cumulatively Considerable	Cumulatively Considerable and Unavoidable
Rank		B	B	B

Environmental Impacts	Proposed General Plan	No Project Alternative	Prevent Agricultural Land Conversion Alternative	Reduced Western Expansion Alternative
<b>Impact 3.13.8</b> When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed General Plan would contribute to cumulative traffic volumes on State Route 99 that result in significant impacts to level of service and operations.	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Less Than Cumulatively Considerable	Cumulatively Considerable and Unavoidable
Rank		B	B	B
<b>Greenhouse Gases and Climate Change</b>				
<b>Impact 3.14.1</b> Implementation of the proposed General Plan will result in greenhouse gas emissions that would further contribute to significant impacts on the environment.	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable
Rank		B	B	B
<b>Impact 3.14.2</b> Implementation of the proposed General Plan would not be consistent with the goals of AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, etc.), as thresholds would be surpassed.	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable
Rank		B	B	B

As stated in Section 2.0, Project Description, the City of Biggs conducted an extensive public outreach process for the proposed General Plan to understand the needs and desires of the community and to identify and discuss concerns and controversial issues throughout the General Plan process. One such concern involves the fact that Biggs currently has limited infill and redevelopment opportunities within the existing city limits and Sphere of Influence (SOI). As a case in point, the 2009–2014 City of Biggs General Plan Housing Element, published and adopted in 2010, listed a total of only 16 vacant residential parcels within the city boundary, totaling 10.2 acres. The results of this situation have led to significant interest and pressure for the City to facilitate development of land outside of the current city limits. The City Council, various landowners, and some of the city's residents have expressed interest in the possibility of extending the current SOI and Planning Area to take advantage of growth opportunities presented by the city's unique location, topography, and visual, scenic, and natural resources.

As stated above, Alternative 2 would essentially limit all future development to infill and redevelopment opportunities within the existing city limits, which is nearly built out already. Therefore, while the environmentally superior alternative, Alternative 2 would inhibit the stated objective of the proposed General Plan to take advantage of growth opportunities presented by the city's unique location, topography, and visual, scenic, and natural resources.

### REFERENCES

DOF (California Department of Finance). 2013. *E-5 Population and Housing Estimates for Cities, Counties and the State, 2010–2013, with 2010 Benchmark*.



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## **6.0 LONG-TERM IMPLICATIONS**

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This section discusses additional topics statutorily required by the California Environmental Quality Act (CEQA) concerning the long-term implications of the proposed General Plan. The topics discussed include growth-inducing impacts, significant irreversible environmental changes, including irretrievable commitment of resources, and significant and unavoidable environmental impacts.

### 6.1 GROWTH-INDUCING IMPACTS

#### INTRODUCTION

CEQA Guidelines Section 15126.2(d) requires that an environmental impact report (EIR) evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

*The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth . . . It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.*

A project can have direct and/or indirect growth inducement potential. For example, direct growth inducement would result if a project involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand (*Napa Citizens for Honest Government v. Napa County Board of Supervisors*). Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with, or accommodated by, the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

#### COMPONENTS OF GROWTH

The timing, magnitude, and location of land development and population growth in a community are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services,

## 6.0 LONG-TERM IMPLICATIONS

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proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

### GROWTH EFFECTS OF THE PROJECT

Based on Government Code Section 65300, the proposed General Plan is intended to serve as the overall plan for the physical development of Biggs. While the General Plan does not specifically propose any specific development projects, it does accommodate as well as regulate future population and economic growth of the city that would result in direct and indirect growth-inducing effects.

Implementation of the proposed General Plan would refine existing land use designations in the city and establish new policies, programs, and design guidelines to guide and manage future development and land uses in the city. This would also include policy direction on roadway facility improvements, public service improvements, and the extension and expansion of utilities. The subsections in Section 3.0 discuss the specific environmental effects resulting from the proposed land use patterns and associated extension of public services, by environmental issue. If the proposed General Plan were to result in full theoretical buildout of the proposed land uses, 6,539 residential units and a population of approximately 17,614 would result. However, as discussed in Section 3.0, this growth is not likely to occur within the proposed General Plan planning period.

As described above, the proposed General Plan would induce further population and job growth in the city. The proposed General Plan could indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Proposed roadway improvements would support such growth in the Biggs Planning Area. The proposed General Plan also would encourage the development of infrastructure, including extension of infrastructure into unserved areas, to support the projected development. As a result, the proposed General Plan is considered to be growth-inducing. Sections 3.1 through 3.14 of this DEIR address the environmental effects of this growth in the Biggs Planning Area.

It is anticipated that agricultural areas in the proposed Biggs Planning Area may be pressured to develop, if adjacent lands are developed and infrastructure extended under the proposed project. In addition, the extension of infrastructure and would place growth pressure on adjoining land areas.

### 6.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

CEQA Guidelines Sections 21100(b)(2) and 21100.1(a) require that EIRs prepared for the adoption of a plan, policy, or ordinance of a public agency must include a discussion of significant irreversible environmental changes that would result from project implementation. In addition, CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes in the following manner:

*Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irrecoverable commitments of resources should be evaluated to assure that such current consumption is justified.*

Implementation of the proposed General Plan could result in the conversion of undeveloped properties to residential, commercial, office, public, and recreational uses. Subsequent development under the General Plan would constitute a long-term commitment to these uses. It is unlikely that circumstances would arise that would justify the return of those sites to their original condition.

Development of the city would irretrievably commit building materials and energy to the construction and maintenance of buildings and infrastructure. Renewable, nonrenewable, and limited resources that would likely be consumed as part of the development of the proposed project would include, but are not limited to, oil, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar materials. In addition, development of the project would result in the increased demand on public services (see Section 3.12, Public Services and Utilities).

### 6.3 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. In addition, Section 15093(a) of the CEQA Guidelines allows the decision-making agency to determine whether the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. The City can approve a project with unavoidable adverse impacts if it prepares a "Statement of Overriding Considerations" setting forth the specific reasons for making such a judgment.

The following impacts of the proposed General Plan, which have been recognized as "significant and unavoidable" in either the project or cumulative context, are specifically identified in Sections 3.1 through 3.14 of this Draft EIR. The reader is referred to the various environmental issue areas of these sections for further details and analysis of these significant and unavoidable impacts.

#### Loss of and Conversion of Agricultural Land

**Impact 3.2.1** Implementation of the proposed General Plan would result in the conversion of important farmlands, as designated by the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use. This is considered a **significant** impact.

According to the California Department of Conservation Important Farmland Map (2011) as indicated in **Table 3.2-4**, the Planning Area contains approximately 2,030 acres of Prime Farmland, 1,556 acres of Farmland of Statewide Importance, and 280 acres of Grazing Lands (defined hereafter as "important farmlands"). Unique Farmland is also considered "important farmland," yet no lands have been designated as such within the Planning Area. Most of the Prime Farmland within the Planning Area is located west of the city limits. Implementation of the proposed General Plan would not impact these lands, as proposed 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.

Nonetheless, the proposed General Plan Land Use Diagram (see **Figure 2.0-2** in Section 2.0, Project Description) designates residential and mixed-use land uses within important farmland areas. These areas include a total conversion of 455.34 acres of Prime Farmland and 229.41 acres of Farmland of Statewide Importance to urban uses, yet no amount of Unique Farmland. Grazing lands and agricultural acreage defined by Butte LAFCo as "prime agricultural land" would also be potentially affected. The proposed 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,

## 6.0 LONG-TERM IMPLICATIONS

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CR-2.2.3, and CR-2.2.5), 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. These policy provisions of the proposed General Plan demonstrate a commitment to continued agricultural activities adjacent to these locations.

Both the General Plan Land Use Element and Community Enhancement Element facilitate a compact urban form through the efficient use of land (i.e., increased density) and phased extension of urban services in order to discourage urban sprawl (Policy LU-2.2, Policy LU-7.1, Action CR-2.2.5, and Policy CE-1.1). As such, future development in the city would reduce the extent of outward city growth into agricultural areas.

The City recognizes the importance of agricultural lands and is committed to protecting this resource as supported by its commitment to an urban growth boundary west of the city (Action CR-2.2.5). Implementation of the proposed General Plan Land Use Diagram, however, would result in the potential conversion of important farmland acreage. This loss of important farmland is considered a **significant** impact.

Key themes of the proposed General Plan include buffering of agricultural resources and keeping an urban growth limit at the western boundary of the proposed Planning Area. These themes reflect the City's desire to retain a compact urban form as well as new neighborhoods contiguous to existing urban areas. However, because the city is surrounded by agricultural land, any annexation and development consistent with the General Plan would convert areas currently in agricultural production to urban uses. This conversion would not include any amount of Unique Farmland yet would include Prime Farmland, Farmland of Statewide Importance, Grazing Lands, and agricultural acreage defined by Butte LAFCo as "prime agricultural land." The proposed General Plan policies and actions described above do not completely offset the loss of important farmland, and no feasible mitigation measures are available to avoid this impact. Therefore, this impact is considered **significant and unavoidable**.

### Cumulative Impacts to Agricultural Resources

**Impact 3.2.4** Implementation of the proposed General Plan, along with regional and statewide growth, would result in a contribution to the conversion of important farmland. This is a **cumulatively considerable** and **significant and unavoidable** impact.

As demonstrated by **Figure 2.0-2**, the proposed General Plan would avoid substantial loss of important farmlands west of the city limits with implementation of an urban growth boundary at the western boundary of the proposed Planning Area. However, implementation of the proposed General Plan Land Use Diagram would result in the conversion of important farmland areas in other areas of the proposed Planning Area. While this loss of important farmland would be limited to the west, it would still contribute to the loss of important farmland in the county as well as in the state. Since no cumulative threshold of acceptable important farmland loss has been established by the State of California or Butte County, any contribution is determined cumulatively considerable in this Draft EIR. As described under Impact 3.2.1, the proposed General Plan contains several policies and actions that would minimize agricultural land conversion. However, the cumulative impacts to agricultural resources from implementation of the General Plan would still be considerable.

The proposed General Plan policies and actions described above do not offset the loss of important farmland at the statewide level. Thus, the contribution to cumulative impacts on

agricultural resources is considered to be a **cumulatively considerable** and **significant and unavoidable** impact.

### Conflict with the NSVPA 2009 Air Quality Attainment Plan

**Impact 3.3.1** Subsequent land use activities associated with implementation of the proposed General Plan would obstruct implementation of the Northern Sacramento Valley Planning Area 2009 Air Quality Attainment Plan. This impact is considered to be **significant**.

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.

The NSVPA 2009 Air Quality Attainment Plan is the most recent air quality planning document for Butte County and constitutes the region's SIP. State Implementation 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 national ambient air quality standards (NAAQS) for pollutants of concern. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts prepare SIP elements and submit them to CARB for review and approval. The NSVPA 2009 Air Quality Attainment Plan includes forecast ROG and NO<sub>x</sub> emissions (ozone precursors) for the entire NSVPA region through the year 2020. These emissions are not appropriated by county or municipality.

According to the BCAQMD, the consistency of the proposed General Plan with the NSVPA 2009 Air Quality Attainment Plan, which is also the SIP for the air basin, should be determined by both (a) the General Plan's consistency with population and vehicle use projections utilized by the Air Quality Attainment Plan and (b) the extent to which the General Plan implements Air Quality Attainment Plan transportation control measures (BCAQMD 2008).

Implementation of the proposed General Plan could increase population and vehicle miles traveled, which could conflict with BCAQMD air quality planning efforts. However, the NSVPA 2009 Air Quality Attainment Plan does not cite vehicle miles traveled or population numbers as the basis for its air quality planning efforts. The Air Quality Attainment Plan does cite projected O<sub>3</sub> precursor emissions (ROG and NO<sub>x</sub>) through the year 2020. For the purposes of this analysis, the resulting emissions of the draft General Plan's projected population growth of 3.3 percent annually (more than triple the historic growth rate average yet consistent with BCAG's lowest growth scenario) and nonresidential growth rate of 10 acres of new commercial development and 30 acres of new industrial development was quantified and compared with the NSVPA 2009 Air Quality Attainment Plan 2020 ozone precursor emission projections.

The NSVPA 2009 Air Quality Attainment Plan includes control strategies necessary to attain the California ozone standard at the earliest practicable date as well as developed emissions inventories and associated emissions projections for the NSVPA showing a downtrend for both ROG and NO<sub>x</sub>. Implementation of the proposed General Plan will result in long-term emissions from area and mobile emission sources associated with future growth. As illustrated in **Table 3.3-4**, the O<sub>3</sub> precursor emission ROG is anticipated to increase with 2035 conditions versus existing conditions

## 6.0 LONG-TERM IMPLICATIONS

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(2013) by 70 percent while the O<sub>3</sub> precursor emission NO<sub>x</sub> would actually decrease by 45 percent. (Despite the increased population growth projected for 2035, emissions of NO<sub>x</sub> and CO would decrease as these pollutants are sourced primarily from vehicle emissions and vehicle emission technology is anticipated to be greatly improved in the year 2035.)

While the projected decrease in NO<sub>x</sub> emissions is reflective of the NSVPA 2009 Air Quality Attainment Plan, which identifies a 22.2 percent reduction in NO<sub>x</sub> emissions from area and mobile sources within the NSVPA by the year 2020, the upward trend in the O<sub>3</sub> precursor emission, ROG is not reflective of the projected O<sub>3</sub> emissions reductions documented in the NSVPA 2009 Air Quality Attainment Plan, which projects a 5.6 percent reduction in ROG emissions from area and mobile sources by the year 2020 (the latest year projected in the NSVPA 2009 Air Quality Attainment Plan).

Implementation of BCAQMD rules and regulations and proposed General Plan policies and actions would prevent, reduce, and minimize potential air quality impacts. The BCAQMD monitors air quality, prepares clean air plans, and responds to citizen complaints concerning air quality. All projects in Butte County and in Biggs are subject to applicable BCAQMD rules and regulations in effect at the time of construction. For instance, 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. The proposed General Plan contains Policy CR-7.2, which requires new development projects to incorporate measures to reduce impacts to air quality as outlined by the BCAQMD CEQA *Air Quality Handbook* and the regional Sustainable Communities Strategy (SCS) Plan. The BCAQMD's CEQA *Air Quality Handbook* (2008) identifies a list of best available mitigation strategies tailored to the type of project being proposed.

However, since it is the intent of the NSVPA 2009 Air Quality Attainment Plan to achieve ozone attainment status, and the O<sub>3</sub> 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 is **significant and unavoidable**.

### **Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Long-Term, Operational Emissions**

**Impact 3.3.2** Subsequent land use activities associated with implementation of the proposed General Plan could result in long-term, operational emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter. This impact is considered to be **significant**.

#### Area Source and Mobile Source Emissions

Implementation of the proposed General Plan will result in long-term emissions from operation and use of subsequent development. According to the BCAQMD, the evaluation of the General Plan's air quality impacts should focus on an analysis of the plan's consistency with the most recently adopted Air Quality Attainment Plan/SIP. **Table 3.3-4** summarizes the emissions associated with 2035 projected growth conditions with implementation of the proposed General Plan. As shown in the table, the proposed General Plan would result in an increase of criteria air pollutants and precursors for which the air basin is in nonattainment (ROG, PM<sub>10</sub>, and PM<sub>2.5</sub>), which is not consistent with the reduction of precursor pollutants projected in the NSVPA 2009 Air Quality Attainment Plan by the year 2020. As a result, this impact is considered significant.



### Stationary Source Emissions

Implementation of the proposed General Plan could include stationary sources of pollutants that would be required to obtain permits to operate in compliance with BCAQMD rules. These sources include, but are not limited to, gasoline stations, dry cleaners, internal combustion engines, and surface coating operations. The permit process ensures that these sources would be equipped with the required emission controls and that, individually, these sources would result in a less than significant impact. However, the emissions from these sources would be additive to the area source and mobile source emissions noted above.

The proposed General Plan includes a number of policies and actions that would reduce the potential impacts associated with long-term operational emissions. Policy CIRC-4.1 seeks to develop an integrated, multimodal circulation system that provides opportunities to reduce air pollution, such as the development of non-polluting bicycle facilities. The General Plan Circulation Element contains more than 15 provisions instigating the improvement/expansion of bicycle and pedestrian facilities in the city. For example, Policy CIRC-4.2 will require that new development projects under the General Plan provide connections and facilities for bicycles, while Policy CIRC-1.4 ensures that all new streets in Biggs are constructed with curb, gutter, and sidewalks to support pedestrian travel.

The BCAQMD recommends general strategies for all projects and standard mitigation measures for residential, commercial, or industrial projects to reduce operational emissions (BCAQMD 2008). **Table 3.3-5** summarizes the level of compliance of the proposed General Plan with these recommended emissions reduction strategies and standard mitigation measures, including the reference to the relevant proposed General Plan policies and actions.

Proposed General Plan policies and actions direct maintaining consistency with BCAQMD standards and requirements (Policy CR-7.2 and Policy CR-7.3) and would reduce potential long-term operational air quality impacts. As previously mentioned, the BCAQMD's *CEQA Air Quality Handbook* identifies a list of best available mitigation strategies tailored to the type of project being proposed. For instance, mitigation measures to be implemented for a hypothetical future commercial development could include a provision for the minimum parking required in order to discourage vehicle trips and/or an increase in parking lot shading by 20 percent over the minimum requirement. However, these actions would not fully offset air pollutant emissions resulting from long-term operations consequential to the projected growth under the proposed General Plan. The region is nonattainment for federal O<sub>3</sub> and PM<sub>2.5</sub> standards and nonattainment for state O<sub>3</sub> and PM<sub>10</sub> and PM<sub>2.5</sub> standards. Even with implementation of relevant policies and actions from the proposed General Plan, the long-term, operational emissions resulting from the projected growth allowed under the proposed General Plan could violate or substantially contribute to a violation in O<sub>3</sub>, PM<sub>10</sub>, and/or PM<sub>2.5</sub> federal and state standards (the O<sub>3</sub> precursor emission ROG as well as PM<sub>10</sub> and PM<sub>2.5</sub> are expected to increase as compared to existing conditions in 2035 as shown in **Table 3.3-4**).

According to the BCAQMD, the evaluation of the General Plan's air quality impacts should focus on an analysis of the plan's consistency with the most recently adopted Air Quality Attainment Plan/SIP. As shown in **Table 3.3-4**, the proposed General Plan would result in an increase of criteria air pollutants and precursors for which the air basin is in nonattainment, which is not consistent with the reduction of precursor pollutants projected in the NSVPA 2009 Air Quality Attainment Plan by the year 2020. As a result and as described under Impact 3.3.1, the proposed General Plan would not be consistent with the NSVPA 2009 Air Quality Attainment Plan. Therefore, impacts associated with long-term emissions from operation and use of subsequent development are **significant and unavoidable**.

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### Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation: Short-Term, Construction Emissions

**Impact 3.3.3** Subsequent land use activities associated with implementation of the proposed General Plan could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards for ozone and coarse and fine particulate matter. This impact is considered **significant**.

Implementation of the proposed General Plan would result in short-term emissions from construction activities associated with subsequent development, including site grading, asphalt paving, building construction, and architectural coatings. Emissions commonly associated with construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. During construction, fugitive dust, the dominant source of PM<sub>10</sub> and PM<sub>2.5</sub> emissions, is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. Demolition and renovation of buildings can also generate PM<sub>10</sub> and PM<sub>2.5</sub> emissions. Off-road construction equipment is often diesel-powered and can be a substantial source of NO<sub>x</sub> emissions, in addition to PM<sub>10</sub> and PM<sub>2.5</sub> emissions. Worker commute trips, asphalt application, and architectural coatings are dominant sources of ROG emissions. According to the BCAQMD, a construction-related air quality impact is considered significant if the proposed project would expose receptors to substantial pollutant concentrations (25 pounds per day of ROG, 25 pounds per day of NO<sub>x</sub>, or 80 pounds per day of PM<sub>10</sub>).

The quantification of air quality emissions from future short-term, temporary construction activities in Biggs under the proposed General Plan is not possible due to project-level variability and uncertainties related to future individual projects. However, all construction projects can produce nuisance dust emissions. All future development projects under the proposed General Plan would be subject to BCAQMD rules and regulations in effect at the time of construction. The BCAQMD monitors air quality, prepares clean air plans, and responds to citizen complaints concerning air quality. All projects in Butte County and in Biggs are subject to applicable BCAQMD rules and regulations in effect at the time of construction. For instance, all stationary construction equipment, other than internal combustion engines less than 50 horsepower, require an Authority to Construct (ATC) and Permit to Operate (PTO) from the district, emissions must be prevented from creating a nuisance to surrounding properties as regulated under BCAQMD Rule 200, Nuisance, and 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. The proposed General Plan contains Policy CR-7.2 and Policy CR-7.3, which mandate that during project and environmental review, the City will evaluate air quality impacts and incorporate applicable mitigations to reduce impacts consistent with BCAQMD requirements. The BCAQMD's *CEQA Air Quality Handbook* (2008) identifies a list of best available mitigation strategies tailored to the type of project being proposed.

However, these actions might not fully offset air pollutant emissions resulting from construction activities or even guarantee that BCAQMD construction-related thresholds are not surpassed by a future development project under the General Plan. Potential growth under the General Plan (see **Table 2.0-1** in Section 2.0, Project Description) could add a significant amount of development and supporting infrastructure in Biggs. Construction of these projects could result in construction emission in excess of BCAQMD significance threshold levels, established by the district to determine the significance of and appropriate mitigation level for short-term, construction-related emissions from a project. Thus, this impact is considered **significant and unavoidable**.

### **Result in a Cumulatively Considerable Net Increase in Nonattainment Criteria Pollutants**

**Impact 3.3.7** Implementation of the proposed General Plan, in combination with cumulative development in the Sacramento Valley Air Basin, would result in a cumulatively considerable net increase of ozone and of coarse and fine particulate matter. This is considered a **cumulatively considerable** impact.

**Table 3.3-6** summarizes the emissions associated with theoretical buildout conditions with implementation of the proposed General Plan. As illustrated in **Table 3.3-6**, criteria air pollutants and precursors for which SVAB is in nonattainment are anticipated to increase.

As discussed throughout the section [Section 3.3, Air Quality], the General Plan contains several policy provisions to address air quality. Proposed General Plan Policy CR-7.2 and Policy CR-7.3 mandate that during project and environmental review, the City will evaluate air quality impacts and incorporate applicable mitigations to reduce impacts consistent with BCAQMD requirements. The BCAQMD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs. Other responsibilities include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality. All projects in Biggs are subject to applicable BCAQMD rules and regulations in effect at the time of construction. Descriptions of specific rules applicable to future construction and development operations resulting from implementation of the proposed General Plan have been identified throughout this section. However, the contribution of pollutant emission is still considered **cumulatively considerable** and thus a **significant and unavoidable** impact, as these actions might not fully offset air pollutant emissions resulting from construction and operational activities and could violate or substantially contribute to a violation in already nonattainment O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> federal and state standards. There are no feasible mitigation measures that can further offset air pollutant emissions from subsequent development and growth under the proposed General Plan.

### **Cumulative Biological Resource Impacts**

**Impact 3.4.4** The proposed General Plan, in combination with other reasonably foreseeable projects, would result in direct and indirect mortality and loss of habitat for special-status species and sensitive and/or critical habitat. This would be a **cumulatively considerable** impact.

There are several biological communities within the Biggs Planning Area and in the region that are critically important for the protection of several sensitive species. Implementation of the proposed General Plan may result in degradation of wildlife habitat through a variety of actions which, when combined with other habitat impacts occurring from development within surrounding areas, would result in significant cumulative impacts. Future development within Biggs and in the surrounding vicinity would contribute to cumulative impact on special-status species and sensitive and critical habitats. Furthermore, increased development and disturbance created by human activities (e.g., fires, increased nighttime lighting, reduced access to habitat and movement corridors) would result in direct mortality, habitat loss, and deterioration of habitat suitability. These impacts are considered **cumulatively considerable**.

Implementation of the proposed General Plan policies and actions described under Impacts 3.4.1 through 3.4.3 would reduce the proposed General Plan's impacts to these resources. However, the extent of sensitive and/or critical habitat loss that urban development, including roadway expansion and utility piping, would contribute to the considerable regional loss of these resources. It is anticipated that the eventual implementation of the proposed Butte Regional Conservation Plan would address and mitigate regional biological resource impacts.

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However, this plan has yet to be adopted. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable**.

### Exposure to Surface Transportation Noise

**Impact 3.10.2** Traffic conditions under the proposed General Plan could result in a substantial permanent increase in ambient noise levels that could adversely affect noise-sensitive land uses. This impact would be considered **significant**.

Surface transportation noise sources in the Biggs Planning Area include vehicle traffic on area roadways as well as trains traveling along the UPRR corridor. Noise-related impacts associated with roadway vehicle traffic and the UPRR are discussed in more detail below.

#### Roadway Vehicle Traffic

**Table 3.10-6** provides the forecast traffic volumes under existing conditions and with development allowed under the General Plan. As shown, traffic volumes are expected to increase in comparison to existing conditions and therefore would result in increases in traffic noise levels. Of the major roadways analyzed, implementation of the proposed General Plan would likely result in noticeable increases in traffic noise levels along most major roadway segments. Some of the roadway segments identified in **Table 3.10-6** would most likely exceed the maximum noise exposure for noise-sensitive land uses under proposed General Plan Policy N-1.1. It is important to note that the increases in traffic noise levels associated with the proposed General Plan would occur gradually over a period of approximately 20 years or more.

Significant increases in traffic noise levels along some smaller local roadways could also potentially occur, particularly in areas located near proposed future development projects. For these reasons, implementation of the proposed General Plan would be considered to result in a substantial permanent increase in ambient noise levels in the Planning Area above levels existing without the project and result in exposure of persons to or generation of noise levels in excess of standards established in the proposed General Plan as a result of increased traffic noise levels. As a result, exposure to vehicular traffic noise on area roadways would be considered a **significant** impact.

#### UPRR

As previously stated, the UPRR tracks extend in a north-south direction, parallel to and just east of Eighth Street. The UPRR is used for both freight transport and Amtrak passenger service. Approximately 23 freight trains and two Amtrak passenger trains travel along this rail line on a daily basis. The number of freight trains traveling along this segment can vary from day to day, depending on demand, and there are currently no hourly limitations pertaining to freight train travel. Amtrak passenger trains typically run during the early morning hours.

Projected volumes for future years are not currently available. Future train volumes would not be anticipated to increase substantially in comparison to existing conditions. However, as congestion on area roadways increases, it is conceivable that reliance on freight and Amtrak train service could increase.

In Biggs, railroad noise levels are highly influenced by the sounding of locomotive warning horns. The use of locomotive horns is typically required by law on approach to public at-grade crossings. The FTA's *Transit Noise and Vibration Impact Assessment Guidelines* (2006) were used to calculate wayside noise levels generated by the trains traveling along the UPRR corridor.

Wayside noise levels were calculated based, in part, on average train speeds, train length, and the number of trains traveling during the daytime and nighttime hours. Predicted noise levels were calculated with and without the sounding of warning devices at grade crossings. With the sounding of train horns, the projected 60 and 65 dBA CNEL noise contour at signalized grade crossings would extend to approximately 810 and 375 feet from the track centerline, respectively. At track locations in excess of approximately 660 feet from grade crossings, the projected 60 and 65 dBA CNEL noise contour would extend to approximately 700 and 325 feet from the track centerline, respectively. The projected noise contours do not include shielding or reflection of noise from intervening terrain or structures, and actual noise levels will vary depending on site-specific conditions. Although these predicted noise contours are not considered site-specific, they are useful for determining potential land use conflicts.

Policy N-1.5 requires site-specific noise studies for noise-sensitive projects that may be affected by railroad noise and the incorporation of noise attenuation measures into project design to reduce any impacts to those specified in Table N-2 (**Table 3.10-3** in this DEIR section). Similarly, where proposed projects are likely to expose noise-sensitive land uses to noise levels exceeding the City's standards, Policy N-1.3 requires an acoustical analysis as part of environmental review so that noise mitigation measures may be identified and included in the project design. The requirements for the content of an acoustical analysis are outlined in Table N-4 (**Table 3.10-5** in this DEIR section).

Implementation of the proposed General Plan noise policies identified above would reduce potential transportation noise impacts. Future development projects would be required to analyze project-related noise impacts and incorporate necessary noise reduction measures sufficient to achieve the applicable noise standards of the proposed Noise Element. Implementation of these policies and actions will help to reduce impacts associated with proposed development. Noise reduction measures typically implemented to reduce traffic noise include increased insulation, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. The feasibility of these measures would be determined on a project-by-project basis. However, it may not be possible to fully mitigate traffic and/or railroad noise in all areas, particularly in existing developed areas constrained due to age, placement, or other factors that limit the feasibility of mitigation such as residences fronting the right-of-way which limit the placement of noise barriers. As a result, increases in transportation noise associated with the proposed General Plan could result in a permanent increase in ambient noise levels in Biggs above levels existing without the project and would result in exposure of persons to or generation of noise levels in excess of standards established in the proposed General Plan, which is considered to be a **significant and unavoidable** impact.

### Exposure to Construction and Agricultural Noise

**Impact 3.10.4** Construction and agricultural activities associated with subsequent activities under the proposed General Plan could result in a substantial temporary or periodic increase in ambient noise levels. Therefore, such noise impacts would be **significant**.

Construction noise typically occurs intermittently and varies depending on the nature or phase (e.g., demolition/land clearing, grading and excavation, erection) of construction. Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Temporary increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption. Although noise ranges were found to be similar for all construction phases, the grading phase

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tends to involve the most equipment and resulted in slightly higher average-hourly noise levels. Typical noise levels for individual pieces of construction equipment and distances to predicted noise contours are summarized in **Table 3.10-7**. As depicted, individual equipment noise levels typically range from approximately 74 to 88 dBA  $L_{eq}$  at 50 feet. Typical operating cycles may involve 2 minutes of full power, followed by 3 or 4 minutes at lower settings. Intermittent noise levels can range from approximately 77 to 95 dBA  $L_{max}$ , the loudest of which include blasting and the use of pile drivers and impact devices (e.g., hoe rams, impact hammers).

Depending on distances from nearby noise-sensitive land uses, construction activities associated with buildout of the Planning Area may result in temporary and periodic increases in ambient noise levels at nearby receptors. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption to occupants of nearby dwellings.

In addition, as an agricultural community, there are existing agricultural-related operations that can be perceived as inconveniences or discomforts in terms of noise. While not specifically construction activities, noise generated by agricultural operations are similar to construction activities in that they are often temporary, intermittent and vary, yet can result in increased levels of annoyance. Current residents have generally accepted such existing agricultural noise issues as a normal and necessary aspect of living in a community with an active agricultural sector.

### Construction-Generated Groundborne Vibrations

With the exception of pavement breaking, blasting, and pile driving, construction activities and related equipment typically generate groundborne vibration levels of less than 0.20 in/sec, which is the architectural damage risk threshold recommended by Caltrans. Based on Caltrans measurement data, use of off-road tractors, dozers, earthmovers, and haul trucks generates groundborne vibration levels of less than 0.10 in/sec, or one-half of the architectural damage risk level, at 10 feet. The highest vibration level associated with a pavement breaker was 2.88 in/sec at 10 feet. During pile driving, vibration levels near the source depend mainly on the soil's penetration resistance as well as the type of pile driver used. Impact pile drivers tend to generate higher vibration levels than vibratory or drilled piles. Groundborne vibration levels of pile drivers can range from approximately 0.17 to 1.5 in/sec ppv. Caltrans indicates that the distance to the 0.2 in/sec ppv criterion for pile driving activities would be approximately 50 feet. However, as with construction-generated noise levels, pile driving can result in a high potential for human annoyance from vibrations, and pile-driving activities are typically considered potentially significant if these activities are performed within 200 feet of occupied structures (Caltrans 2002). Vibration levels associated with blasting are highly variable, site-specific, and dependent on various factors, such as the amount of explosive used, soil conditions between the blast site and the receptor, and the depth where blasting would take place. Blasting that occurs below the surface would typically produce lower vibration levels due to additional attenuation provided by distance to the receptor and transmission through soil and rock.

The City's Municipal Code (Chapter 7.40, Noise Regulation) establishes hourly restrictions and noise standards that pertain to construction-related activities that would address vibration impacts. Section 7.40.160 states that it is unlawful for any person to operate or cause the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between the hours of 7:00 p.m. and 6:00 a.m. on weekdays or at any time on Sundays or holidays in such a manner that creates noise clearly audible across a residential zoned or a commercial zoned real property boundary, except for emergency work being performed by a public agency or a public utility.

Short-term noise and ground vibrations from construction activities are inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term construction noise and vibrations at levels that they would not accept for permanent vibration sources. A more severe approach would be impractical and might preclude the kind of construction activities that are inevitable from time to time in urban environments. Most residents of urban areas recognize this reality and expect to experience noise and vibration from construction activities on occasion. Similarly, Biggs residents have generally accepted existing agricultural noise issues as a normal and necessary aspect of living in a community with an active agricultural sector. Noise and groundborne vibration generated from construction and agricultural activities are considered to be temporary in the sense that once the activities cease, so too would the noise and vibration impacts. Construction noise and vibrations are considered to be intermittent due to the type, location, and duration of construction equipment being used. Additionally, while not specifically construction activities, noise generated by agricultural operations are similar to construction activities in that they are often temporary, intermittent and vary.

Proposed General Plan Policy N-1.2 sets an intermittent noise threshold of 75 dBA during daytime hours, which would apply to both construction and agricultural activities. As shown in **Table 3.10-7**, there are many types of equipment that would be anticipated to operate at a higher noise level than the 75 dBA threshold. Short-term noise and ground vibrations from construction and agricultural activities are inevitable and cannot be mitigated beyond a certain level. While proposed General Plan Action N-1.6.2 requires the incorporation of noise mitigation techniques such as the movement of equipment staging areas, screening of portable noise sources, limits on amplified sound devices and use of noise baffling and reducing technologies, these measures would not be guaranteed to reduce intermittent noise levels to below 75 dBA. Therefore, temporary noise impacts associated with construction and agricultural noise activities would be **significant and unavoidable**.

### Cumulative Noise Impacts

**Impact 3.10.5** Implementation of the proposed General Plan, in combination with other development in nearby unincorporated areas of the county, would increase transportation noise along area roadways and construction noise throughout the Planning Area. This would be a **cumulatively considerable** impact.

### Transportation Noise

As identified in **Table 3.10-6**, implementation of the proposed General Plan, in combination with anticipated growth by the year 2035, would result in noticeable increases in traffic noise. In comparison to existing conditions, increases in traffic noise levels of up to approximately 5 dBA CNEL could occur along certain portions of area roadways. Of the major roadways analyzed, noticeable increases in traffic noise levels could occur along most major roadway segments. Increased traffic noise levels would also be experienced in the Planning Area outside of the urban development areas in the unincorporated area of Butte County.

The proposed General Plan policies include requirements that contain specific performance standards addressing transportation noise. These policies are listed under Impact 3.10.2. Implementation of the proposed General Plan noise policies identified under Impact 3.10.2 would reduce potential transportation noise impacts in the city. Additionally, future development projects would be required to analyze project-related noise impacts and incorporate necessary noise reduction measures sufficient to achieve applicable noise standards. Noise reduction measures typically implemented to reduce transportation noise include increased insulation and building requirements, setbacks, and construction of sound

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barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. The applicability of these measures would be determined on a project-by-project basis.

However, it may not be possible to fully mitigate transportation noise in all areas of the city, particularly for existing development that may be constrained due to age, placement, or other factors that limit the feasibility of mitigation, such as residences fronting on the roadway which limit the placement of noise barriers. In addition, the City does not have jurisdiction to implement noise mitigation outside of its boundaries (or may not be allowed to in Caltrans rights-of-way) to address potential noise impacts to the surrounding, nearby unincorporated areas of Butte County or along Caltrans facilities. It is important to note that the increases in traffic noise levels associated with buildout of the proposed General Plan would occur gradually over a period of approximately 20 years or more. Nonetheless, the proposed General Plan's contribution to cumulative traffic noise would be **cumulatively considerable** and a **significant and unavoidable** impact.

### Construction Noise

Short-term noise and ground vibrations from construction and agricultural activities are inevitable and cannot be mitigated beyond a certain level. While proposed General Plan Action N-1.6.2 requires the incorporation of noise mitigation techniques such as the movement of equipment staging areas, screening of portable noise sources, limits on amplified sound devices and use of noise baffling and reducing technologies, these measures would not be guaranteed to reduce intermittent noise levels to below 75 dBA. Therefore, temporary noise impacts associated with construction and agricultural noise activities would be **significant and unavoidable**.

### **Substantial Increase in Population and Housing**

**Impact 3.11.1** Subsequent land use activities associated with implementation of the proposed General Plan could potentially induce population growth by the year 2035 beyond that currently anticipated. This is considered a **significant** impact.

In January 2011, 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, which would result in the potential to double the current population size by the year 2035. It is noteworthy that the growth rates assumed within the BCAG projections are optimistic. Based on the city's historical growth rates and acknowledging the current market conditions, such growth rates may not be reflective of future growth trends. For instance, from 2000 to 2010, the city experienced a slow decrease in population from 1,793 to 1,707. A review of the population and growth figures from the California Department of Finance (DOF 2013) suggests that the population of Biggs continued to decrease from 1,707 in 2010 to 1,689 in 2012. As stated above, the 2013 population of the city is 1,692.

Unless regional conditions change significantly in coming years, an average growth rate of 0 percent to 1 percent annually is more likely. However, planning for a slightly higher rate of growth ensures that the General Plan will accommodate development should economic conditions in the region improve and helps to ensure the availability of land to accommodate future conditions. A 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.



The land use concept in the General Plan has been developed to accommodate projected population increases and make sure Biggs is strategically positioned to manage future growth and to capture positive growth opportunities. The proposed Land Use Diagram and policy orientation of the proposed General Plan seek to accommodate the need for a strong and vibrant downtown core as well as additional commercial service and employment-generating land use locations along major transportation routes. Unlike a population forecast such as that produced by BCAG described above, the theoretical buildout scenario does not have a time horizon, such as 2035, nor does it include transportation, demographic, existing land use, or economic assumptions typically used by a forecast model to provide more realistic land use planning data. Therefore, due to historic growth trends, regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely.

Future growth opportunities in Biggs are constrained by the small size of the city and its Sphere of Influence as well as the highly developed nature of the existing city. The analysis undertaken as part of the preparation of the City's Housing Element identified only a limited number of urban infill opportunities remaining within the existing city limits for new residential development and only one undeveloped infill site for new commercial development. As a result of the limited options remaining in the city for new development, the City will need to look beyond its existing developed core for new opportunities. The outward development of the city presents numerous challenges related to the installation of municipal services and infrastructure to support new development, as well as procedural and policy issues related to updating municipal services plans and the City's Sphere of Influence, annexation of property, and the undertaking of the necessary environmental analysis documents. Undertaking the necessary efforts to achieve the vision of the proposed General Plan will take a focused commitment by the City.

A key goal of proposed 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 proposed General Plan seeks to avoid the growth effects of sprawl development patterns.

Nonetheless, realization of full theoretical buildout under the General Plan, while incredibly 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. Full theoretical buildout under the General Plan would result in an increase of 15,922 people and 5,744 units for a total of 17,614 residents living in 6,359 dwelling units in Biggs. Since full theoretical buildout under the General Plan would result in growth beyond that anticipated by BCAG this impact is considered to be **significant and unavoidable**.

### **Cumulative Population and Housing Increases**

**Impact 3.11.3** Subsequent land use activities associated with implementation of the proposed General Plan, in addition to existing, approved, proposed, and reasonably foreseeable development, could result in a cumulative increase in population and housing growth in Biggs as well as in the surrounding Butte County region, along with associated environmental impacts. This cumulative

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increase in population and housing is beyond that projected by BCAG. Therefore, this is a **cumulatively considerable** impact.

The land use concept in the General Plan has been developed to accommodate projected population increases and make sure Biggs is strategically positioned to manage future growth and to capture positive growth opportunities. The proposed Land Use Diagram and policy orientation of the proposed General Plan seek to accommodate the need for a strong and vibrant downtown core as well as additional commercial service and employment-generating land use locations along major transportation routes. Unlike a population forecast such as that produced by BCAG described above, the theoretical buildout scenario does not have a time horizon, such as 2035, nor does it include transportation, demographic, existing land use, or economic assumptions typically used by a forecast model to provide more realistic land use planning data. Therefore, due to regulatory constraints, physical constraints, and foreseeable market conditions, realization of buildout is highly unlikely.

Nonetheless, realization of full theoretical buildout under the General Plan 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. Full theoretical buildout under the General Plan would result in an increase of 15,922 people and 5,744 units for a total of 17,614 residents living in 6,359 dwelling units in Biggs. Since full theoretical buildout under the General Plan would result in growth beyond that anticipated by BCAG this impact is considered to be **cumulative considerable** and **significant and unavoidable**.

### City Roadway Facilities

**Impact 3.13.1** Implementation of the proposed General Plan would increase traffic volume that would degrade operating conditions along local roadways. Therefore, the impact is considered **significant**.

**Figure 3.13-6** indicates resulting LOS associated with the projected growth rate associated with implementation of the proposed General Plan. **Table 3.13-4** provides the proposed roadway classification, number of lanes, forecast traffic volume, and resulting LOS of each study segment.

As shown in **Table 3.13-4**, 20 of the 22 local roadway segments are anticipated to operate at LOS C or better conditions consistent with the proposed General Plan threshold (Fehr & Peers 2013). Only the roadway segments of B Street between Eighth Street and Eleventh Street and West Rio Bonito Road between SR 99 and Milky Way are projected to operate below LOS C. In evaluating the roadway system, a lower vehicle LOS standard may be desired when balanced against other community values related to resource protection, social equity, economic development, and consideration of pedestrians, bicyclists, and transit users. In addition, roadway LOS is directly linked to roadway infrastructure costs. A higher LOS standard (i.e. LOS A or B) results in higher expenditure of infrastructure dollars to construct and maintain wider roadways that may not meet the needs of the City.

Proposed General Plan Action CIRC-1.6.1 specifically addresses LOS, as it ensures the preparation and adoption of enhanced LOS standards for the City's circulation system consistent with the Transportation Research Board's *Highway Capacity Manual* and local goals, policies, and objectives. Implementation of this General Plan provision will address multimodal measures of effectiveness. In addition, Policy CIRC-1.6 states that new development would be required to provide off-site street improvements as needed to avoid creating significant traffic

impacts on streets surrounding the proposed projects. This policy establishes LOS C 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 the General Plan.

Since only 20 of the 22 local roadway segments are anticipated to operate at LOS C or better conditions consistent with the proposed General Plan threshold, this impact is considered significant. The expansion of the roadway segments of B Street between Eighth Street and Eleventh Street and West Rio Bonito Road between SR 99 and Milky Way could potentially mitigate the projected LOS impacts by providing increased traffic capacity. Wider roadways, in general, are inconsistent with maintaining rural character and aesthetics, cause greater impacts to biological resources and agricultural land, and discourage use by pedestrians and bicyclists; nonetheless, the expansion of these roadway segments could potentially mitigate the projected LOS impacts. However, while roadway expansion may be possible in the case of West Rio Bonito Road as this segment is adjacent to agricultural land on either side and thus easily developed, the segment of B Street that is between Eighth Street and Eleventh Street is adjacent to existing residential development on either side, which results in a considerable constraint to potential widening. This existing residential development would have to be purchased at substantial cost and demolished in order to provide the needed space for facility expansion.

As there is no feasible mitigation that can be applied to reduce this impact and additionally, since Policy CIRC-1.6 would allow for the threshold of acceptable traffic operations to be surpassed if determined desirable by City policy makers, impacts to City roadway facilities are considered **significant and unavoidable**.

### State Highway Facilities

**Impact 3.13.2** Implementation of the proposed General Plan would increase traffic volume that would degrade operating conditions along the state highway. The resulting levels of service are within the levels adopted in applicable plans and policies. However, implementation of improvements to the state highway system is uncertain since the City of Biggs has no control over Caltrans actions regarding SR 99. Therefore, the impact is considered **significant**.

**Figure 3.13-6** indicates resulting LOS associated with implementation of the proposed General Plan. **Table 3.13-4** provides the proposed roadway classification, number of lanes, forecast traffic volume, and resulting LOS of each study segment.

All three SR 99 study segments are anticipated to operate at LOS E conditions. LOS E is the concept level of service established by Caltrans. The resulting level of service for the three SR 99 segments is due to a combination of cumulative traffic and implementation of the proposed General Plan.

Proposed General Plan Policy CIRC-1.4 identifies the collection of the fair-share cost of all feasible transportation improvements to reduce the severity of transportation impacts associated with SR 99. Caltrans accepts direct fair-share cost contributions from developers and has a preferred fair-share cost calculation methodology contained in the *Guide for the Preparation of Traffic Impact Studies*. While implementation of Policy CIRC-1.4 would ensure fair-share funding toward roadway impacts, there is no guarantee that Caltrans will agree to new funding mechanisms or construct roadway capacity expansion projects to reduce the identified impacts. Therefore, this impact would remain **significant and unavoidable**.

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### Roadway or Traffic Hazards

**Impact 3.13.4** Implementation of the proposed General Plan will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). However, buildout of the proposed General Plan could result in increased travel on roadways that do not meet current design standards and present hazards in their current state. Therefore, this impact is considered **significant**.

Because Biggs is an agricultural community, there are several existing aspects of living in Biggs that can be perceived as inconveniences or discomforts due to the prevalence of agricultural operations. For instance, slow-moving agricultural equipment can sometimes be found using city roadways, which can impede the standard flow of traffic and/or result in incompatibilities with typical automobile traffic. Currently Biggs residents accept such existing traffic issues as a normal and necessary aspect of living in a community with an active agricultural sector.

This assessment of transportation and circulation hazards is based on a review of locations where development would be allowed through implementation of the proposed General Plan. While the proposed General Plan would allow increased development relative to existing levels and would result in increased traffic volumes, the proposed General Plan includes policies to minimize traffic hazards, both existing and those that may occur with development. For instance, Policies S-6.1 and CIRC-6.1 would enhance the safety of railroad crossings in the city, as these policy provisions seek to establish safety measures at the at-grade crossings and improved emergency response and circulation with the implementation of grade-separated crossings. Additionally, Policies CIRC-3.2 and CIRC-4.5 establish that road maintenance and improvement projects which represent a safety hazard receive highest priority, and Policy CIRC-4.4 requires the identification of locations that present hazards to pedestrian, along with pursuing remedies to those hazards. As Biggs grows under the General Plan, there is a potential for new development to result in traffic hazards on roadways that are not yet constructed. Proposed General Plan Policy CIRC-1.2 and associated actions require new development to dedicate adequate rights-of-way to allow for construction of roadways and address the preparation of street improvement standards. Policy CIRC-2.1 mandates that 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. New development would not be allowed to proceed unless the identified impacts to circulation are effectively addressed.

Implementation of these policy provisions in the proposed General Plan would make this impact less than significant in terms of the existing and planned roadway network; however, funding has not been secured to improve existing deficiencies. Therefore, this impact is considered to be **significant and unavoidable**.

### Emergency Access

**Impact 3.13.5** Implementation of the proposed General Plan will result in inadequate emergency access unless improvements proposed in the document are implemented simultaneously with development. This impact is considered **significant**.

The lack of east-west connectivity and periodic road blockages presented by at-grade crossings of active railroad tracks compromise emergency response. Although the proposed General Plan proposes the development of grade-separated crossings, these improvements are

not funded and require implementation in coordination with other jurisdictions. Since there is uncertainty as to whether the existing crossings would be modified or new grade-separated crossings built, this impact is considered **significant and unavoidable**.

### Cumulative Traffic Impacts on Local Roadways

**Impact 3.13.7** When considered with existing, proposed, planned, and approved development in the region, buildout of the proposed General Plan would rely on future roadway capacity expansion projects for which full funding is not ensured. This is considered a **cumulatively considerable** impact.

The Circulation Element of the proposed General Plan identifies future roadway capacity expansion projects and new roadway connections, for which full funding is not ensured. The proposed General Plan includes policies that require new development to finance a project's off-site circulation improvements and contribute a fair share toward cumulative project impacts. For instance, Policy CIRC-1.3 states that 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. In addition, Action CIRC-1.3.1 calls for periodic review of the City's Development Impact Fee program to ensure that fees associated with the program are adequately supporting the City's current street design criteria and Capital Improvement Program. These requirements will be effective for ensuring that new development pays its fair share of planned improvements. Action CIRC-1.3.2 ensures full funding for improvements by establishing a funding mechanism to fund the planned roadway capacity expansion projects identified in the proposed Circulation Element.

While the City will require projects to either make improvements or pay their appropriate proportionate share of the cost of improvements through local, regional or special fees, and will hold the fees until needed for the improvement, the City cannot be certain that the sufficient funding will be collected to construct the improvement prior to occupancy of a given project. As such, the impact(s) may increase slightly over time while the City collects sufficient funds to construct the improvement. Further, some of the improvements will not be wholly within the City's jurisdiction and will require other agencies to permit the improvement. As the City cannot be certain that improvements will be approved or made by other agencies (i.e. Butte County, Caltrans) the City must conclude that the impact may remain and will therefore be **significant and unavoidable**.

### Cumulative Traffic Impacts on State Highways

**Impact 3.13.8** When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed General Plan would contribute to cumulative traffic volumes on State Route 99 that result in significant impacts to level of service and operations. This is considered a **cumulatively considerable** impact.

The traffic impact analysis provided in Impact 3.13.2 is based on cumulative conditions (year 2035) that take into account anticipated traffic volumes from development in the region. Buildout of the proposed General Plan would add substantial traffic volumes on state highway facilities that would result in significant traffic impacts to SR 99. Improvements to regional transportation facilities associated with cumulative traffic conditions are intended to be addressed through implementation of regional programs. Impacted facilities include segments of SR 99.

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Implementation of proposed General Plan policies and actions would assist in reducing its cumulative contribution to regional traffic effects. However, this impact would still be considered **cumulatively considerable** and **significant and unavoidable**, as the City does not have authority over improvements outside of the City's jurisdiction (e.g., Caltrans facilities), and the City cannot ensure that these improvements would be completed. With the exception of funding sources for regional traffic improvements associated with the BCAG Regional Transportation Improvement Program, there are no other regional traffic mitigation programs in which the City could participate to minimize regional traffic impacts resulting from the General Plan.

### Generate Greenhouse Gas Emissions That May Have a Significant Impact on the Environment

**Impact 3.14.1** Implementation of the proposed General Plan will result in greenhouse gas emissions that would further contribute to significant impacts on the environment. This is considered a **cumulatively considerable** impact.

#### Construction GHG Emissions

Subsequent development proposed under the General Plan would result in direct emissions of GHGs from construction. As noted in Section 3.3, Air Quality, the quantification of emissions resulting from future construction activities in Biggs under the proposed General Plan is not possible due to project-level variability and uncertainties related to future individual projects. However, all construction projects can produce GHG emissions. 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 also limit GHG emissions as both result from the same sources (i.e., motorized construction equipment). In addition, per Senate Bill 97, all future development projects under the proposed General Plan would be required to analyze and mitigate GHG emissions during development project review, pursuant to CEQA. Construction-related mitigation could include various measures such as an enforced limitation of off-road diesel equipment idling times below the state-mandated maximum of 5 minutes and/or an off-road construction equipment emissions reduction plan demonstrating that all off-road equipment (portable and mobile) meet or are cleaner than Tier 2 engine emission specifications.

Adherence to BCAQMD rules and regulations, which limit criteria air pollutants and thus GHG emissions during construction, as well as Senate Bill 97, would reduce construction-generated GHG emissions but would not offset GHG emissions resulting from construction activities.

#### Operational GHG Emissions

Future growth in Biggs is guided by the land uses identified in the proposed General Plan Land Use Diagram. **Table 3.14-4** summarizes the emissions associated with both existing conditions (2013) and buildout conditions in Biggs.

As shown in **Table 3.14-4**, under existing conditions (2013), Biggs generates 46,354 metric tons of CO<sub>2</sub>e annually. With theoretical buildout, GHG emissions are calculated to grow to 318,496 metric tons per year.

As noted in the Standards of Significance discussion, the proposed General Plan would result in a cumulatively considerable contribution if GHG emissions in 2020 associated with Biggs land uses and associated transportation factors are greater than 85 percent of current GHG emissions. As shown in **Table 3.14-4**, the majority of estimated GHG emissions generated at city buildout result from mobile emissions sources. The proposed General Plan seeks to reduce the environmental

impact (including GHG emissions) of land use development by increasing the amount of commercial and industrial services in the city, which are currently deficient. Increasing commercial service options and the availability of employment opportunities in Biggs would reduce reliance on the automobile, and thus reduce GHG emissions, as currently city residents are largely required to commute to other communities such as Gridley or Chico for employment and retail options.

The proposed General Plan also seeks to reduce the environmental impact (including GHG emissions) of land use development by increasing the viability of walking, biking, and transit by allowing mixed-use projects. For example, proposed Policy CR-7.1 seeks to design Biggs to encourage walking, bicycling, and the use of transit, and associated Action CR-7.1.1 is intended to 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.

The intent of proposed General Plan policies is to accommodate anticipated growth in a compact urban form, including mixed-use development. However, GHG calculations predict that emissions are greater than 85 percent of current (2013) GHG emissions; this is in excess of the AB 32 target and would result in a net increase in GHG emissions. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable**.

### **Conflict with Applicable Greenhouse Gas Reduction Plan (Standard of Significance 2)**

**Impact 3.14.2** Implementation of the proposed General Plan would not be consistent with the goals of AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, etc.), as thresholds would be surpassed. This is considered a **cumulatively considerable** impact.

The core mandate of AB 32 is that statewide GHG emissions in 2020 equal 1990 levels. AB 32 is anticipated to secure emission reductions through a variety of mechanisms, such as increasing energy efficiency and introducing more renewable energy sources. CARB has already begun to adopt strategies to reduce greenhouse gas emissions under AB 32. Strategies included in the Climate Change Scoping Plan, described in detail above, such as the California Light-Duty Vehicle GHG Standard, Renewables Portfolio Standard, and Low Carbon Fuel Standard, while applicable to land use projects, are generally not under the control of local agencies like the City of Biggs. Nonetheless, emission reductions from these strategies are anticipated to occur as CARB adopts and implements regulations under AB 32. Reductions are already taking place as of 2012 due to the newly adopted vehicle emission standards and the Low Carbon Fuel Standard.

It is the intent of AB 32 to reduce statewide GHG emissions by 15 percent below 2005 levels by 2020. As noted under Impact 3.14.1, buildout of Biggs would result in a net increase in cumulative GHG emissions. Two important steps in helping to reduce climate change impacts are the creation of an inventory of existing GHGs and a plan to reduce these emissions. A climate action plan (CAP) is a guiding document to identify ways in which a city, county, or community can reduce GHG emissions and adapt to the inevitable effects of climate change. A common goal for a CAP is a 15 percent reduction below 2005 levels by 2020 in order to comply with AB 32. A climate action plan outlines transportation, land use, energy use, and waste production measures to achieve its target and proposes a timeline for implementation. Climate action plans are becoming increasingly popular as a way to spread awareness of climate change, reduce an area's impact on the environment, and save money on energy bills. Additionally, when referenced in general plans and environmental documents, CAPs signify a public agency's efforts to combat climate change. Compliance with local GHG reduction measures in new

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development is critical to ensuring the City's ability to meet GHG reduction goals consistent with state and regional goals.

As the City of Biggs has not developed a climate action plan, the following mitigation is required.

### Mitigation Measures

**MM 3.14.2** Add the following policy to the Conservation and Recreation Element of the General Plan:

Policy CR-7.6: As funding permits, the City will prepare a greenhouse gas inventory and climate action plan designed to reduce greenhouse gases. The City may also participate in a regional climate action plan prepared by another jurisdiction. Until a climate action plan is adopted, each project shall evaluate its impact on greenhouse gases as part of the environmental process.

Climate action plans are representative of a way for jurisdictions to determine consistency with the state legislation, AB 32, which directs the State and other local agencies to reduce GHG emissions. Climate action plans encompass a jurisdiction's current and future efforts to reduce GHG emissions and the negative effects of global climate change. Climate action plans are an integral part of planning and development and serve as an analytical link between development in a municipality like Biggs, and state requirements and regional GHG-reducing efforts.

Mitigation measure **MM 3.14.2** requires the City to prepare a GHG inventory and CAP; however, embarking on this process, while mandated by this mitigation, will require additional funding that is not available at this time. While implementation of an upcoming CAP could potentially mitigate GHG emissions projected for buildout conditions consistent with the reduction goal of AB 32, the proposed General Plan acknowledges that the City is unable to embark on the process of CAP development at this time. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable**.



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## **7.0 REPORT PREPARERS**

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