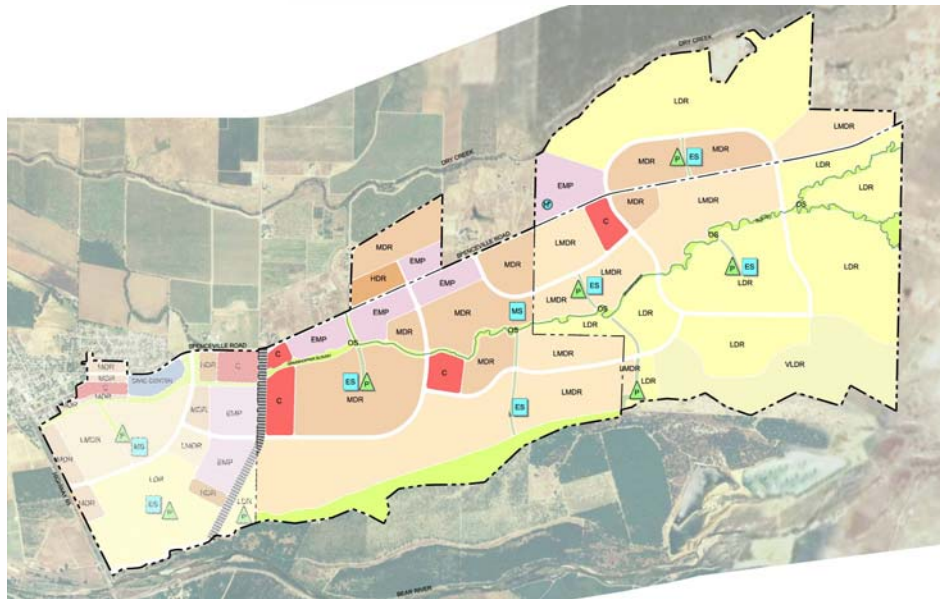

JOHNSON RANCHO AND HOP FARM ANNEXATION

SCH# 2008082127

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME I

PREPARED FOR
THE CITY OF WHEATLAND



JUNE 2011

PREPARED BY

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**Johnson Rancho and Hop Farm Annexation
Draft Environmental Impact Report**

SCH# 2008082127

Prepared for
the City of Wheatland

Prepared by
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1

INTRODUCTION

INTRODUCTION

The Johnson Rancho and Hop Farm Annexation project (proposed project) Draft Environmental Impact Report (Draft EIR) was prepared in accordance with the California Environmental Quality Act of 1970 (CEQA) as amended. The City of Wheatland is the lead agency for the environmental review of the Johnson Rancho and Hop Farm Annexation project evaluated herein and has the principal responsibility for approving the project. As required by Section 15121 of the CEQA Guidelines, this EIR will (a) inform public agency decision-makers, and the public generally, of the significant environmental effects of the project, (b) identify possible ways to minimize the significant adverse environmental effects, and (c) describe reasonable and feasible project alternatives that reduce environmental effects. The lead agency shall consider the information in the Draft EIR along with other written information, maps, or data that may be presented to the lead agency.

PROJECT DESCRIPTION

The proposed project is located south and east of the City of Wheatland, outside of the City limits, and within the Wheatland Sphere of Influence (SOI). The proposed project is located on approximately 4,149 acres of primarily agricultural land. The project site is generally bordered by the Yuba County/Placer County line to the south; Wheatland city limits, State Route 65 and the Union Pacific Railroad (UPRR) tracks to the west; Spenceville Road and Dry Creek to the north; and the eastern boundary of the Wheatland SOI to the east. The proposed project entitlements include annexation to the City of Wheatland, a General Plan Amendment, rezoning, and possible future development agreements.

The proposed project would include the development of up to 14,369 dwelling units on approximately 4,149 acres within Yuba County. The properties in the proposed project consist of Johnson's Crossing, AKT Wheatland Ranch, Dave Browne, and Browne Cattle Company; Bear River Hop Farm and Wheatland Hop Farm; and the five "Wheatland Parcels".

The area of the project site east of SR 65 Bypass alignment is composed of three major properties: Johnson Crossing (Assessor's Parcel Number [APN(s)]: 015-160-029, 015-160-098, 015-036-024, 015-036-025, 015-037-001, 015-080-020, 015-360-038, 015-160-095, and 015-160-096), AKT Wheatland Ranch (APNs: 015-360-026, 015-360-028, 015-360-029, 015-360-030, 015-360-031, and 015-360-032), Dave Browne (APN: 015-057-006), and Browne Cattle Company (APN: 015-056-005). The eastern and southern portion of the Hop Farm portion of the project site is owned by the Bear River Hop Farm Family (APNs: 015-360-033, 015-360-052, and 015-360-053). The northwestern portion of the Hop Farm portion of the project site is owned by Wheatland Hop Farm LLC (APN: 015-360-051).

The City is including a total of five parcels in the proposed annexation area for the project so as to avoid the creation of County “islands” once the applicant’s annexation area becomes part of the City of Wheatland. As a result, these parcels will also need to be rezoned with City zoning, as this is a standard requirement for annexation of properties only having County zoning. The Wheatland Parcels are identified as APNs: 015-213-009, 015-360-001, 015-360-007, 015-191-014, and 015-191-006 (See Chapter 3, Project Description, Figure 3-4, Wheatland Parcels).

PURPOSE OF THE EIR

As provided in the CEQA Guidelines, public agencies are charged with the duty to avoid or minimize environmental damage where feasible. The public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social issues.

The California Environmental Quality Act requires the preparation of an EIR 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, which 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]). In regard to the proposed project, the City has determined that the proposed development falls within the CEQA Guidelines definition of a project, and has the potential for resulting in significant environmental effects.

The EIR is an informational document that appries decision makers and the general public of the potential significant environmental effects of a proposed project. An EIR must describe a reasonable range of feasible alternatives to the project and identify possible means to minimize the significant effects. The lead agency, the City of Wheatland, is required to consider the information in the EIR, along with any other available information, in deciding whether to approve the application. The basic requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, alternatives, growth-inducing impacts, and cumulative impacts.

TYPE OF DOCUMENT

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This Draft EIR has been prepared as a program-level EIR. The California Environmental Quality Act requires the preparation of a program-level EIR to discuss a series of actions, rather than an individual action, that can be characterized as one large project. A program-level analysis allows for (a) exhaustive consideration of effects and alternatives beyond the format typically set for an individual action, (b) consideration of cumulative impacts, and (c) broad effect on applicable policy during the early stages of the project, when the lead agency has more flexibility to deal with basic problems or cumulative impacts. The program level-portion of this Draft EIR will identify potential impacts and will identify mitigation measures that would need to be implemented with future development applications.

EIR PROCESS

The EIR process begins with the decision by the lead agency to prepare an EIR, either during a preliminary review of a project or at the conclusion of an Initial Study. Once the decision is made to prepare an EIR, the lead agency sends a Notice of Preparation (NOP) to appropriate government agencies and, when required, to the State Clearinghouse (SCH) in the Office of Planning and Research (OPR), which will ensure that responsible State agencies reply within the required time. The SCH assigns an identification number to the project, which then becomes the identification number for all subsequent environmental documents on the project. Applicable agencies have 30 days to respond to the NOP indicating, at a minimum, reasonable alternatives and mitigation measures they wish to have explored in the Draft EIR and whether the agency will be a responsible agency or a trustee agency for the project. A public scoping meeting was originally scheduled to be held on September 17, 2008, but changed to October 1, 2008. The NOP was prepared and released for public review from August 29, 2008 to September 29, 2008 (See Appendix A, NOP). The comment period for the NOP was extended an additional two weeks to end on October 10, 2008. Comments received on the NOP are described below in this chapter and in Appendix B of the DEIR.

When the Draft EIR is completed, a notice of completion is filed with the OPR and a public notice is published to inform interested parties that a Draft EIR is available for agency and/or public review. The public notice also provides information regarding the location of copies of the Draft EIR and any public meetings or hearings that are scheduled. The Draft EIR is circulated for a period of 45 days, during which time reviewers may make comments. The lead agency must evaluate and respond to comments in writing, describing the disposition of any significant environmental issues raised and explaining in detail the reasons for not accepting any specific comments concerning major environmental issues. If comments received result in the addition of significant new information to an EIR, after public notice is given, the revised EIR or affected chapters must be recirculated for another public review period with related comments and responses.

Once the lead agency is satisfied that the EIR has adequately addressed the pertinent issues in compliance with CEQA, a Final EIR will be prepared and made available for review by the public or commenting agencies. Before approving a project, the lead agency shall certify that the Final EIR has been completed in compliance with CEQA, has been presented to the decision-making body of the lead agency, has been reviewed and considered by that body, and that the Final EIR reflects the lead agency's independent judgment and analysis.

The Findings of Fact prepared by the lead agency must be based on substantial evidence in the administrative record and must include an explanation that bridges the gap between evidence in the record and the conclusions required by CEQA.

Based on these findings, the lead agency may also prepare a Statement of Overriding Considerations (Statement) as part of the project approval process. If the decision-making body elects to proceed with a project that would have unavoidable significant impacts, then a statement explaining the decision to balance the benefits of the project against unavoidable environmental impacts must be prepared.

SCOPE OF THE DRAFT EIR

State CEQA Guidelines Section 15126.2(a) states, in pertinent part:

An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced.

Pursuant to these guidelines, the scope of this Draft EIR addresses specific issues and concerns identified as potentially significant. The specific issues and concerns were determined based on the review of comments received on the NOP and review of testimony received at the scoping hearing.

Resources identified in the NOP for evaluation in this Draft EIR include the following:

- Aesthetics;
- Land Use and Agricultural Resources;
- Transportation and Circulation;
- Air Quality and Climate Change;
- Noise;
- Biological Resources;
- Archaeological and Historical Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Mineral Resources;
- Population, Employment, and Housing; and
- Public Services and Utilities.

The evaluation of potential impacts is presented on a resource-by-resource basis in Chapters 4.1 through 4.13. Each chapter is divided into the following four sections: Introduction, Environmental Setting, Regulatory Context, and Impacts and Mitigation Measures.

Impacts that are determined to be significant in Chapter 4, for which feasible mitigation measures are not available to reduce the impacts to a less-than-significant level, are identified as significant and unavoidable. The Draft EIR presents a discussion and comprehensive list of all significant and unavoidable impacts (Chapter 6).

COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City of Wheatland received 14 comment letters during the open comment period on the NOP for the proposed project. A copy of each letter is provided in Appendix B of this EIR. In addition, an NOP scoping meeting was held for public input on the project on October 1, 2008. The following letters were authored by representatives of State and local agencies and other interested parties:

- Andersson, Sondra – Feather River Air Quality Management District
- Bastien, Lee – Resident
- Chadwick, Braiden – Downey Brand, LLP
- Costa, Janice and Perrie – Residents
- Ditto, Robert – California Regional Water Quality Control Board, Central Valley Region
- Eres, Thomas – Attorney at Law representing Hoffman Ranch
- Hartman, Wendy W. – Yuba County Community Development and Services Agency
- Johnson, Michael J. – Placer County Community Development Resource Agency
- Mendoza, Jr., Louie B. – Yuba County Agricultural Commissioner, Weights and Measures
- Read, Jerry – Yuba County Sheriff's Department
- Sanchez, Katy – Native American Heritage Commission
- Stites, Moses – Public Utilities Commission
- Takhar, Sukhvinder (Sue) – California Department of Transportation
- Young, J.R. – Department of California Highway Patrol

The following list, categorized by issue, summarizes the issues and concerns provided in the NOP comment letters and verbal comments received at the NOP scoping meeting:

<u>Project Description</u> (c.f. Chapter 3)	Concerns related to the following issues: <ul style="list-style-type: none">• Address the Bear River Hop Farm property in the project description.
<u>Aesthetics</u> (c.f. Chapter 4.1)	Concerns related to the following issues: <ul style="list-style-type: none">• Potential visual impacts to existing and planned uses in the area.• Evaluation of the use of down lighting on the project site.• A comprehensive analysis of the viewshed for the project site.• Compensation for the loss of rural feel in the project area.
<u>Land Use and Agricultural Resources</u> (c.f. Chapter 4.2)	Concerns related to the following issues: <ul style="list-style-type: none">• Evaluation of the Patterson Sand and Gravel Mine Expansion project.• Evaluation of the impacts of the project in regard to surrounding agricultural lands and Prime Farmland.• Evaluation of agricultural practices with regard to dust, pesticides, and burning.

	<ul style="list-style-type: none"> • Conversion of prime agricultural land. • Cumulative land use and agricultural impacts. • The exclusion of Eric Lane from annexation into the City of Wheatland. • The project site being located within the Beale Air Force Base (AFB) Area of Influence. • Sustainable design of buildings and landscaping for residential and non-residential uses. • Cumulative impacts to recently approved City of Wheatland and Yuba County projects near the project site. • Evaluation of “buffer zones” needed between agricultural and urban uses. • Evaluation of project site boundaries and potential agricultural conflicts of land uses. • Impacts from bees in proximity to residences. • Full project design for land use areas and, if necessary, adoption and utilization of a Planned Development (PD) ordinance. • Coordination with the Yuba County Agriculture Commission in regard to agricultural mitigation measures. • Evaluation of the development of housing adjacent to existing and future rail yards.
<p><u>Transportation and Circulation</u> (c.f. Chapter 4.3)</p>	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Traffic impacts for the City of Wheatland, Placer County, and the community of Sheridan. • Increased traffic on Spenceville Road creating a potential increase in response times by emergency service providers. • Increased traffic on Spenceville Road and McCurry Way. • Limiting access to adjoining properties. • Vehicle access to the proposed project site. • Cumulative traffic impacts for a 20-year horizon buildout both with and without the Wheatland Expressway. • Project trip generation, distribution, and assignment for State Route (SR) 65 and major arterials before and after the Wheatland Expressway. • Increased traffic on SR 65. • The triggering of traffic signal warrants on SR 65. • Reserving right-of-way for future interchanges for the Wheatland Expressway. • Traffic impacts on County roadways, including Placer Parkway, Base Line Road, Watt Avenue, Walerga Road, and Fiddymont Avenue, Marysville Bypass, Yuba River Parkway, South Beale Road, McGowan Parkway, Jasper Lane, Camp Far West Road, and Wheatland Road. • Pedestrian circulation. • Safety of the rail corridor as related to increased traffic volumes, pedestrian circulation patterns, and railroad rights-of-way.

	<ul style="list-style-type: none"> • At-grade rail crossings at Main Street, 4th Street, 3rd Street, and 2nd Street. • Compliance with payment of fair share impact fees for development near a railroad. • Compliance with Senate Bill 375 regarding regional transportation and planning.
<u>Air Quality and Climate Change</u> (c.f. Chapter 4.4)	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Emissions from both the construction and operational phases of the project. • The prohibition of woodburning fireplaces in the design of project homes. • Climate change and greenhouse gas emissions. • Project compliance with the policies in Assembly Bill 32. • Incorporation of alternative energy sources for the project.
<u>Biological Resources</u> (c.f. Chapter 4.6)	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Impacts to wetlands and sensitive wildlife species. • Impacts on the presence of, and potential habitats for, all State and federally listed species and species of concern. • Evaluation of habitat fragmentation and population isolation of plant and animal populations, specifically along the Bear River. • Consideration of implementation of open space areas from east to west throughout the project site.
<u>Archaeological and Historical Resources</u> (c.f. Chapter 4.7)	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Impacts to historical resources on the project site.
<u>Hydrology and Water Quality</u> (c.f. Chapter 4.10)	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Water quality and availability for the project site, as well as Placer County and the community of Sheridan. • Effects on the groundwater supply for domestic and agricultural wells for the project site and surrounding areas. • Internal and external drainage for the project and surrounding properties. • Drainage to Dry Creek, Bear River, and Best Slough. • Impacts to levee systems for both Bear River and Dry Creek. • Cumulative impacts related to internal and external drainage on a regional basis. • Impacts associated with flooding. • Impacts associated with vector control.
<u>Mineral Resources</u> (c.f.	<p>Concerns related to the following issues:</p>

Chapter 4.11)	<ul style="list-style-type: none"> • Compliance with the goals and policies in the Placer County General Plan regarding mineral resources and the impacts of future mining operations.
<u>Population, Employment, and Housing</u> (c.f. Chapter 4.12)	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Impacts to the jobs-to-housing ratio in the region. • Impacts related to job loss from the conversion of agricultural lands.
<u>Public Services and Utilities</u> (c.f. Chapter 4.13)	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Staffing levels of the Yuba-Sutter CHP relative to the development. • The need to analyze Placer County services and infrastructure. • Impacts related to schools. • Increased demand for police, jails, public administration, and other public services. • Regional park system fees should be included in the analysis of the EIR. • Compliance with the Yuba County LAFCo Municipal Service Review. • Incorporation of alternative energy sources for the project.
<u>Alternatives</u> (c.f. Chapter 5)	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Presenting an alternative that includes the protection of agricultural land.
<u>Statutorily Required Sections</u> (c.f. Chapter 6)	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Reasonably foreseeable growth inducement.
<u>Initial Study</u> (c.f. Appendix C)	<p>Concerns related to the following issues:</p> <ul style="list-style-type: none"> • Evaluation of the project in relation to conservation planning efforts, pursuant to the Natural Community Conservation Plan and Habitat Conservation Plan in Yuba County.

The preceding issues are addressed in this Draft EIR, in the relevant sections identified in the first column.

ORGANIZATION OF THE DRAFT EIR

The Johnson Rancho and Hop Farm Annexation project Draft EIR is organized into the following chapters:

Chapter 1 – Introduction

Provides an introduction and overview describing the intended use of the Draft EIR and the review and certification process, as well as summaries of the chapters included in the Draft EIR and summaries of the potential environmental resources impacted by the project.

Chapter 2 – Executive Summary

Summarizes the elements of the project and the environmental impacts that would result from implementation of the proposed project, describes proposed mitigation measures, and indicates the level of significance of impacts after mitigation. Acknowledges alternatives that would reduce or avoid significant impacts.

Chapter 3 – Project Description

Provides a detailed description of the proposed project, including the project's location, background information, major objectives, and technical characteristics.

Chapter 4 – Environmental Setting, Impacts, and Mitigation

Contains program-level and cumulative analyses of environmental issue areas associated with the proposed project. Each technical chapter contains an introduction and description of the existing setting of the project site, identifies impacts, and recommends appropriate mitigation measures.

Chapter 5 – Alternatives Analysis

Describes the alternatives to the proposed project, the alternatives' respective environmental effects, and a determination of the environmentally superior alternative.

Chapter 6 – Statutorily Required Sections

Provides discussions required by CEQA regarding impacts that would result from the proposed project, including a summary of cumulative impacts, potential growth-inducing impacts, significant and unavoidable impacts, and significant irreversible changes to the environment.

Chapter 7 – References

Provides bibliographic information for all references and resources cited.

Chapter 8 – EIR Authors / Persons Consulted

Lists report authors that provided technical assistance in the preparation and review of the Draft EIR.

Appendices

Includes the NOP, NOP comments received, the Initial Study for the project, and additional technical information.

2

EXECUTIVE SUMMARY

INTRODUCTION

The Executive Summary chapter of the EIR provides an overview of the Johnson Rancho and Hop Farm Annexation project (proposed project) and summarizes the conclusions of the environmental analysis, provided in detail in Chapters 4.1 through 4.13. In addition, this chapter summarizes the alternatives to the proposed project that are described in Chapter 5, Alternatives Analysis, and identifies the Environmentally Superior Alternative. Table 2-1, at the end of this chapter, provides a summary of the environmental effects of the proposed project identified in Chapters 4.1 through 4.13. The table contains the environmental impacts, the significance of the impacts for the proposed project, the proposed mitigation measures, and the significance of the impacts after the mitigation measures are implemented.

PROJECT DESCRIPTION AND LOCATION

The proposed project is located east of the City of Wheatland, outside of the City limits, and within the Wheatland Sphere of Influence (SOI). The proposed project is located on approximately 4,149 acres of primarily agricultural land. A total of 14,396 dwelling units are proposed for the entire project area, consisting of the following: 13,330 single-family dwelling units, 556 multi-family dwelling units, and an additional 500 dwelling units within non-residential land uses. The total proposed acreage consists of approximately 3,249 acres of residential, 131 acres of commercial, 274 acres of employment, 55 acres of elementary schools, 40 acres of middle schools, 24 acres of civic center, 50 acres of parks, 57 acres of linear parkway, approximately 238 acres of open space/drainage, and 31 acres for the future Wheatland Expressway (i.e., the “SR 65 Bypass” referred to in the Wheatland General Plan).

The project site is generally bordered by the Yuba County/Placer County line to the south; Wheatland city limits, State Route 65 and the Union Pacific Railroad (UPRR) tracks to the west; Spenceville Road and Dry Creek to the north; and the eastern boundary of the Wheatland SOI to the east. The project area east of the Wheatland Expressway alignment, outside of the General Plan Study Area, and currently designated as Urban Reserve, will be referred to in the Draft EIR as the “Johnson Rancho” portion of the project site. The area west of the Wheatland Expressway alignment, within the General Plan Study Area, will be referred to as the “Hop Farm” portion of the project site.

The City is including a total of five parcels in the proposed annexation area for the project so as to avoid the creation of County “islands” once the applicant’s annexation area becomes part of the City of Wheatland. As a result, these parcels will also need to be rezoned with City zoning, as this is a standard requirement for annexation of properties only having County zoning. Both the Johnson Rancho portion and the Hop Farm portion of the project are currently located outside the Wheatland city limits but within the existing Wheatland SOI. The Johnson Rancho

portion of the project would include the annexation of the entire 3,357-acre Johnson Rancho portion to the City of Wheatland. The Bear River Hop Farm and Wheatland Hop Farm properties would include the annexation of the 529-acre Bear River Hop Farm and 145-acre Wheatland Hop Farm to the City of Wheatland. For the discussed annexations to occur, the City Council must approve annexation resolutions for the project, authorizing the project applicant to subsequently submit annexation applications to the Yuba County Local Agency Formation Commission (LAFCo) for approval.

The General Plan Amendment request for the proposed project is only for the Johnson Rancho portion of the project site, which is currently designated Urban Reserve (UR) in the Wheatland General Plan. The General Plan Amendment requests to designate Johnson Rancho with the following City of Wheatland General Plan land use designations: Very Low Density Residential (VLDR), LDR, LMDR, MDR, EMP, C, Public/Quasi-Public, Park/Open Space, and School. The Hop Farm portion of the project's annexation area was included in the 2006 General Plan Study Area and has therefore already been assigned General Plan land use designations and evaluated for such development in the Wheatland General Plan EIR. Current land use designations for the Hop Farm portion of the project site will not be changed as part of the proposed project.

The proposed project involves a request to rezone the Johnson Rancho and Hop Farm portions of the property to Planned Development (PD) District to allow diversification in the relationship of various buildings, structures and open spaces in order to be relieved from the rigid standards of conventional zoning. The City anticipates negotiating a Development Agreement with River West Investments. The Development Agreement would apply only to the part of the Johnson Rancho portion of the property that is controlled by River West Investments.

ENVIRONMENTAL IMPACTS AND MITIGATION

Under CEQA, a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, mineral, flora, fauna, ambient noise, and objects of historic or aesthetic significance. Implementation of the proposed project could result in significant impacts on those resource areas listed below.

This Draft EIR discusses mitigation measures that could be implemented by the City to reduce potential adverse impacts to a level that is considered less-than-significant. Such mitigation measures are noted in this Draft EIR and are found in the following sections:

- Aesthetics;
- Land Use and Agricultural Resources;
- Transportation and Circulation;
- Air Quality and Climate Change;
- Noise;
- Biological Resources;
- Archaeological and Historical Resources;
- Geology and Soils;

- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Mineral Resources;
- Population, Employment, and Housing; and
- Public Services and Utilities.

If an impact is determined to be significant or potentially significant, applicable mitigation measures are identified as appropriate. These mitigation measures are also summarized in Table 2-1 at the end of this chapter. The mitigation measures presented in the Draft EIR will form the basis of the Mitigation Monitoring Plan. An impact that remains significant after including all feasible mitigation measures is considered an unavoidable adverse impact.

Aesthetics

The Aesthetics chapter of the Draft EIR describes the existing visual resources of the proposed project site and vicinity. In addition, an evaluation is provided of the potential impacts of the project with respect to urbanization of the area. The California Environmental Quality Act (CEQA) describes the concept of aesthetic resources in terms of scenic vistas, scenic resources (such as trees, rock outcroppings, and historic buildings within a state scenic highway), the existing visual character or quality of the project site, and light and glare impacts.

The Aesthetics chapter concludes that impacts relating to the generation of light and glare from the proposed project would be less-than-significant. Impacts related to scenic vistas and altering of the existing visual character of the project site would be considered significant and unavoidable because feasible mitigation measures do not exist at this time. Long-term cumulative impacts to the visual character of the region from the proposed project in combination with existing and future developments in the Wheatland area would be considered significant. Because feasible mitigation measures do not exist, the impact would remain significant and unavoidable.

Land Use and Agricultural Resources

The Land Use and Agricultural Resources chapter of the EIR is divided into two analyses – Land Use and Agricultural Resources. The purpose of the Land Use section is to examine the proposed project's compatibility with existing and planned land uses in the area. Consistency with applicable General Plan goals and policies is also evaluated. The purpose of the Agricultural Resources section is to describe the soils of the project site and determine whether or not the site is identified as Prime Farmland.

The Land Use and Agricultural Resources chapter concludes that impacts related to the proposed project's compatibility with surrounding residential uses, as well as consistency with the Wheatland General Plan, existing zoning, and Yuba County LAFCo Standards would be considered less-than-significant. In addition, the cumulative increase in the intensity of land uses in the region from the proposed project and all other projects in the Wheatland area is considered a less-than-significant impact. The proposed project's compatibility with surrounding

agricultural operations was found to be a significant impact. Implementation of mitigation measures included in the Land Use and Agricultural Resources chapter would inform prospective residents of the potential for a nuisance from adjacent agricultural operations, but would not reduce or remove the potential for conflict. Therefore, the project would result in a short-term significant and unavoidable impact. Eventual buildout of the Johnson Rancho portion of the property, as well as the overall General Plan area, would replace the existing agricultural operations with urban uses which would not conflict with the proposed residences; therefore, under the long-term scenario, impacts would be less-than-significant.

Conversion of Prime Farmland to urban uses for the proposed project is considered a significant impact. Although mitigation could include purchasing agricultural conservation easements outside of the project area, such mitigation would not create new agricultural land; it would only preserve agricultural land elsewhere. Therefore, consistent with the Wheatland General Plan EIR, feasible mitigation measures do not exist to reduce the impact to a less-than-significant level and the impact would remain significant and unavoidable. The cumulative loss of agricultural land in the area would be considered a significant impact. Feasible mitigation measures do not exist to reduce the impact to a less-than-significant level and the impact would remain significant and unavoidable.

Transportation and Circulation

The Transportation and Circulation chapter of the EIR analyzes transportation impacts that would result from the implementation of the proposed Johnson Rancho and Hop Farm Annexation project. The chapter is based on a traffic impact analysis prepared for the proposed project. Potential impacts to off-site roadways and bicycle, pedestrian, and transit systems are evaluated, as well as site access, on-site circulation, and parking. Mitigation measures are suggested to reduce or eliminate potential significant impacts of the project.

The Transportation and Circulation chapter concludes that the addition of the approximately 224,062 new daily trips that would result with implementation of the Johnson Rancho and Hop Farm Annexation project would greatly exceed the capacity of the existing City of Wheatland roadway network, which would be a significant impact. In addition, the proposed project would result in a significant impact to the following roadways and intersections: the portion of SR 65 from Wheatland's northern Ring Road intersection to the Wheatland Expressway; the Wheatland Expressway; Spenceville Road from the planned Ring Road intersection east over the Wheatland Expressway to Camp Far West Road; future A and C Streets within the proposed project area; the Spenceville Road / NB Wheatland Expressway Bypass intersection; the proposed Wheatland Expressway / A Street intersection; and over the UPRR until the Ring Road and Wheatland Expressway are constructed. Various intersections in the plan area would eventually carry traffic volumes that would satisfy warrants for signalization; therefore, this impact is also considered significant. Implementation of the mitigation measures included in the Transportation and Circulation chapter of the EIR would reduce these impacts, but not to a less-than-significant level. Therefore, these impacts would remain significant and unavoidable.

Impacts related to the proposed project potentially causing an increase in LOS on roadways in the extended region (i.e., Yuba County and Placer County) to levels that exceed existing

thresholds are considered to be significant. Mitigation for the impacts is infeasible because the roadways are outside the City of Wheatland's jurisdiction and any existing regional program for the construction of traffic improvements to mitigate the impacts would also be outside the City's jurisdiction. Moreover, such a program may not currently exist where the improvements are needed. Therefore, impacts related to development of the proposed project adding traffic to roadways in the extended region would remain significant and unavoidable.

Finally, the proposed project would generate new pedestrian and bicycle traffic and could result in the demand for expanded transit services, both of which would result in potentially significant impacts. However, implementation of the mitigation measures in the Draft EIR would reduce pedestrian, bicycle, and transit impacts to a less-than-significant level.

Air Quality and Climate Change

The Air Quality and Climate Change chapter of the EIR describes the impacts of the proposed project on local and regional air quality, impacts to sensitive receptors on or adjacent to the project site, and impacts related to greenhouse gas (GHG) emissions and global climate change. The chapter was prepared using methodologies and assumptions recommended within the guidelines of the Feather River Air Quality Management District (FRAQMD). In keeping with these guidelines, the chapter describes existing air quality, construction-related impacts, direct and indirect emissions associated with the project, the impacts of these emissions on both the local and regional scale, and mitigation measures warranted to reduce or eliminate any identified significant impacts.

The Draft EIR considered the impacts regarding the contribution to local mobile-source concentrations of CO to be less-than-significant. Impacts found to be potentially significant include impacts to nearby sensitive receptors from odors associated with the project and construction-related impacts resulting in temporary increases in criteria air pollutants that would violate any air quality standard or contribute substantially to an existing or projected air quality violation. With implementation of the mitigation measures in the Draft EIR, the impacts would be reduced to less-than-significant levels. Cumulative impacts to regional air quality and concerning the production of greenhouse gases would be considered significant. Operational impacts resulting in long-term increases of criteria air pollutants that would violate any air quality standard or contribute substantially to an existing or projected air quality violation would be considered significant as well. Implementation of mitigation measures would reduce the impacts; however, the impacts would remain significant and unavoidable.

Noise

The Noise chapter of the EIR discusses the existing noise environment in the immediate project vicinity and identifies potential noise-related impacts and mitigation measures associated with the proposed project. Specifically, this chapter analyzes potential noise impacts due to and upon development within the project site relative to applicable noise criteria and to the existing ambient noise environment.

The Noise chapter found that impacts pertaining to construction vibration to existing receptors or sensitive structures and aviation noise exposure to sensitive receptor from the Beale Air Force

Base (AFB) that exceeds the acceptable noise standards would be less-than-significant. Potentially significant impacts to noise from the proposed project include the following: construction noise impacts, impacts regarding exposure of project-generated noise levels exceeding applicable noise standards to existing or proposed receptors, impacts related to the exposure of transportation noise levels that exceed the City of Wheatland exterior and interior noise level standards to new noise-sensitive uses, and impacts related to exposure of aviation noise from the Beale AFB that would cause sleep disturbance to sensitive receptors. However, the impacts would be reduced to a less-than-significant level with implementation of mitigation measures set forth in the Noise chapter of the Draft EIR. Significant impacts from increased traffic noise levels to existing receptors would be significant and unavoidable after mitigation. Cumulative noise levels in the project vicinity were found to be significant and unavoidable after implementation of mitigation measures.

Biological Resources

The Biological Resources chapter of the EIR evaluates the potential impacts to biological resources associated with implementation of the Johnson Rancho and Hop Farm Annexation project (proposed project) and includes a discussion of the mitigation measures necessary to reduce impacts to a less-than-significant level. The chapter describes the existing biological resources within the Johnson Rancho and Hop Farm Annexation area based on the results of rare plant surveys, wetland delineations, biological assessments, preliminary site assessments, and/or information derived from the interpretation of aerial photography.

The Draft EIR finds that implementation of the proposed project would result in less-than-significant impact to essential fish habitat. Impacts identified as potentially significant include those pertaining to: special-status plants, pallid bat, townsend's big-eared bat, Yuma myotis bat, fringed myotis bat, greater western mastiff-bat, long-eared myotis bat, and Pacific western big-eared bat, Swainson's hawk, western burrowing owl and other raptors, passerines/migratory songbirds, western spadefoot toad, giant garter snake, northwestern pond turtle, valley elderberry longhorn beetles, special-status brachiopods, wetlands and other waters of the U.S, and woodland resources. The Draft EIR finds that these potentially significant impacts would be reduced to a less-than-significant level with implementation of the mitigation measures identified in the chapter. Cumulative loss of biological resources in the City of Wheatland and the effects of ongoing urbanization in the region would be considered a significant and unavoidable impact after mitigation.

Archaeological and Historical Resources

The Archaeological and Historical Resources chapter of the EIR describes cultural (prehistoric and historic) resources known to be located on the project site. Prehistoric resources are those sites and artifacts associated with indigenous, non-Euroamerican populations, generally prior to contact with people of European descent. Historical resources include structures, features, artifacts and sites that date from Euroamerican settlement of the region. The extent to which development of the proposed project could remove, damage, or destroy existing historic or prehistoric resources is evaluated.

The proposed project was found in the Archaeological and Historical Resources chapter of the Draft EIR to have less-than-significant impacts to gold dredging tailings. Impacts considered potentially significant include impacts to Johnson's Crossing, Camp Far West, the California Emigrant Trail, Webster's Ranch, Hop Ranches, and levees and dams. In addition, disturbance or destruction of previously unknown archaeological resources on the project site would be a potentially significant impact. With the incorporation of mitigation measures included in the Draft EIR, these impacts would be reduced to a less-than-significant level. Disturbance or destruction of previously unknown archaeological resources from buildout of the proposed project in combination with other developments in the Wheatland area would also be less-than-significant.

Geology and Soils

The Geology and Soils chapter of the EIR describes the geologic and soil characteristics of the project site and evaluates the extent to which implementation of the proposed project could be affected by seismic hazards such as ground shaking, liquefaction, and expansive soil characteristics. The analysis also addresses potential effects of the proposed project on erosion.

The Draft EIR finds that project-related impacts associated with expansive soils, liquefaction-prone soils, corrosive soils, and soil erosion would be considered less-than-significant after implementation of mitigation measures. In addition, the Geology and Soils chapter finds that impacts pertaining to seismic activity, as well as long-term cumulative geologic and seismic impacts, would be less-than-significant.

Hazards and Hazardous Materials

The Hazards and Hazardous Materials chapter of the EIR describes existing and potentially occurring hazards and hazardous materials on the project site, and discusses potential impacts posed by those hazards to the environment, as well as to workers, visitors, and residents within and adjacent to the project site. More specifically, the chapter describes potential effects on human health that could result from soil contamination stemming from past uses of the site, or from exposure to hazardous materials used during previous agricultural operations on the property sites.

The Hazards and Hazardous Materials chapter of the Draft EIR found that impacts from facility storage tanks, polychlorinated biphenyls (PCBs), and pesticide and/or herbicide residues in site soils would be less-than-significant on the Johnson's Crossing property. Potentially significant impacts on the property from the proposed project include impacts related to the following: water supply wells, debris and other on-site farm implements, septic systems, and existing on-site structures and exposure to asbestos and lead-based paint. The impacts would be reduced to less-than-significant levels with mitigation.

Impacts from debris and other on-site farm implements, PCBs, and the presence of pesticide and/or herbicide residues in AKT Wheatland Ranch property site soils were considered to be less-than-significant. The following impacts were found to be potentially significant but would be reduced to a less-than-significant level with implementation of mitigation measures in the

Draft EIR: impacts from water supply wells, impacts from presence of a septic system, and impacts from existing on-site structures and exposure to asbestos and lead-based paint.

The following less-than-significant impacts would be associated with the Wheatland Hop Farm property: impacts related to water supply wells; impacts related to facility storage tanks; impacts related to debris and other on-site farm implements; impacts related to PCBs; impacts related to septic systems; and impacts related to existing on-site structures and exposure to asbestos and lead-based paint. In addition, impacts related to the presence of pesticide and/or herbicide residues in the property site soils would be less-than-significant after mitigation.

The following potentially significant impacts would be associated with the Dave Browne, Browne Cattle Company, and Wheatland Parcels: impacts from PCBs, impacts from water supply wells, impacts from debris and other on-site farm implements, impact from presence of a septic system, impacts from existing on-site structures and exposure to asbestos and lead-based paint, and impacts from the presence of pesticide and/or herbicide residues in property site soils. However, the impacts would be reduced to less-than-significant levels after mitigation.

Overall, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school nor create potential hazards associated with emergency response and evacuation plans. Therefore the impacts would be considered less-than-significant. Cumulative long-term hazard-related impacts from the proposed project in combination with existing and future developments in the Wheatland area would also be less-than-significant.

Hydrology and Water Quality

The Hydrology and Water Quality chapter of the EIR describes existing drainage pattern and water resources for the project site and the region, and evaluates potential impacts of the project with respect to drainage and water quality concerns.

The Draft EIR found that the proposed project would result in less-than-significant impacts related to groundwater recharge. Impacts related to regional flooding, project stormwater runoff, degradation of water quality and detention basin maintenance would be considered potentially significant. However, the impacts would be reduced to a less-than-significant level with the mitigation measure identified in the chapter. Cumulative impacts related to water quality and the increase in peak stormwater flows into the existing drainage system and regional flooding would be less-than-significant.

Mineral Resources

The Mineral Resources chapter of the EIR describes the mineral characteristics of the project site and evaluates the extent to which implementation of the proposed project could affect the availability of locally and regionally valuable mineral resources.

The Draft EIR found the impact related to the loss of availability of a known State, regional, and/or locally valuable mineral resource to be less-than-significant, as the proposed project is not

located within a known mineral resource area and the project would comply with the City of Wheatland goals and policies protecting natural resources. Cumulative impacts related to the long-term loss of mineral resource availability from the proposed project in combination with existing and future developments in the City of Wheatland study area would be considered less-than-significant as well.

Population, Employment, and Housing

The Population, Employment, and Housing Chapter of the EIR describes existing and projected population, housing, and employment conditions in the City of Wheatland.

The Draft EIR found that impacts related to the jobs to housing ratio would be considered less-than-significant. Buildout of the proposed project would create a substantial increase in population in the area; therefore, impacts related to a substantial increase in population were found to be significant and unavoidable. Cumulative long-term impacts to population, housing, employment, and jobs-to-housing ratio from the proposed project in combination with existing and future developments in the Wheatland area would be considered significant and unavoidable as well.

Public Services and Utilities

The Public Services and Utilities chapter of the EIR summarizes setting information and identifies potential new demands resulting from the proposed project on water supply, wastewater systems, solid waste disposal, law enforcement, fire protection, schools, libraries, and parks and recreation.

The Draft EIR finds that implementation of the proposed project would result in increased demands for public services and utilities. Specifically, the Draft EIR finds potentially significant impacts pertaining to adequate water supply and delivery for new residents, need for additional waste disposal/recycling services, adequate ratio of law enforcement personnel to residents, adequate fire protection services available to new residents, number of enrolled students exceeding capacity, adequate provision of parks and recreation space for new residents, and increase in electricity and natural gas demand. However, with implementation of mitigation measures included in the Draft EIR, the impacts to public services and utilities would be reduced to a less-than-significant level. Impacts related to the adequate provision of wastewater treatment facilities for new residents would be significant as the current facility would not meet the increase of demand. A new facility or improvements to the existing facility would be required; however, because a program has not been established to determine adequate funding sources and schedule of completion is uncertain, the impact remains significant and unavoidable. Cumulative impacts from an increase in demand for additional public services and utilities as a result of the proposed project and other projects proposed in the Wheatland area would be considered significant and unavoidable.

SUMMARY OF PROJECT ALTERNATIVES

The following summary provides brief descriptions of the three alternatives to the proposed project that are evaluated in this Draft EIR. For a more thorough discussion of project alternatives, please refer to Chapter 5, Alternatives Analysis.

No Project/No Build Alternative

A No Project/No Build alternative means that the site would remain located in Yuba County and in its current state; therefore, the development activity associated with the proposed project would not occur.

Clustered Development Alternative

The Clustered Development Alternative would still include the annexation of the entire Johnson Rancho and Hop Farm project site to the City of Wheatland. However, the land use plan for the Johnson Rancho and Hop Farm portions of the proposed project would cluster the development utilizing higher densities than the proposed project in order to maximize the open space portions of the proposed project. Therefore, the Clustered Development Alternative would include the same number of dwelling units (du) as the proposed project (14,396 du), but on 1,056.9 fewer acres. The 1,056.9 acres would be added to the proposed project open space acreage of 238.2 acres for a total of 1,295.1 acres of open space in the Clustered Development Alternative. The additional open space would be strategically located throughout the project to allow the avoidance and preservation of known cultural resources (archeological and historical) as well as sensitive biological features on the site. All other project components stay the same.

Reduced Density Alternative

The Reduced Density Alternative would involve the development of 8,638 dwelling units on the approximately 4,194-acre project site, as opposed to the 14,396 units planned for the proposed project. The components of the Reduced Density Alternative for the Johnson Rancho and Hop Farm portions of the project are described below.

Hop Farm

The Hop Farm portion of the project is designated with existing Wheatland General Plan land use designations. In order to achieve a reduced intensity and remain consistent with the land use designations for the Hop Farm portion of the site, a reduction of total acreage would be required. Therefore, the Reduced Density Alternative would result in the development of 60 percent of the Hop Farm portion of the project. The remainder of the Hop Farm portion of the site would be preserved as open space.

For example, under the proposed project, approximately 688.4 acres would be annexed and developed, including 454.9 acres of residential and 211.5 of commercial, public, and open space uses. Under the Reduced Density Alternative, approximately 413 acres would be annexed and developed, including 272.9 acres of residential and 126.9 of commercial, public, and open space

uses. The total number of dwelling units developed would decrease from approximately 1,912 under the proposed project to approximately 1,149 dwelling units.

Johnson Rancho

Similar to the Hop Farm portion of the project, the Reduced Density Alternative would develop only 60 percent of the non-residential acreage of the Johnson Rancho portion of the project. The proposed project includes the development of approximately 101 acres of commercial uses within the Johnson Rancho portion of the project. Under the Reduced Density Alternative, approximate 60 acres of commercial would be developed. However, Reduced Density Alternative would develop a similar amount of residential acreage and reduce the residential density of the Johnson Rancho portion of the project by 40 percent. For example, under the proposed project, approximately 11,981 residential units and 500 mixed-use residential units would be developed over 2,794 acres. Therefore, under the Reduced Density Alternative, approximately 7,189 residential units and 300 mixed-use residential units would be developed over 2,794 acres. The Reduced Density Alternative would provide a gradual transition from the low density Camp Far West area, east of the proposed Johnson Rancho development, to the higher densities associated with urban development at the core of the City of Wheatland.

Environmentally Superior Alternative

An EIR typically identifies the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. In addition, Section 15126.6(e)(2) of the CEQA Guidelines states, “[...] if the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” Generally, the environmentally superior alternative is the one that would result in the fewest or least unmitigable impacts or less environmental impact overall.

For the Johnson Rancho and Hop Farm Annexation Project, the Reduced Density Alternative would be considered the environmentally superior alternative, aside from the No Project Alternative. The Reduced Density Alternative has the potential to reduce environmental impacts pertaining to aesthetics, land use/agricultural resources, transportation and circulation, air quality, noise, biological resources, archeological and historical resources, geology and soils, hazards, hydrology and water quality, population, employment, and housing, and public services and utilities, because the Alternative reduces the total number of units from 14,396 to 8,638. However, although aesthetic, transportation and circulation, air quality, noise, biological resources, population, employment, and housing, and public services and utilities impacts would be reduced compared to the proposed project, impacts would be expected to remain potentially significant and in some cases significant and unavoidable.

Similarly, due to the decreased number of vehicle trips, which would be generated by the Reduced Density Alternative, traffic impacts would be expected to be less intense than with implementation of the proposed project.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.1 Aesthetics			
4.1-1 Impacts related to scenic vistas and altering of the existing visual character of the project site.	S	<i>None feasible.</i>	SU
4.1-2 Impacts related to light and glare.	LS	<i>None required.</i>	N/A
4.1-3 Long-term impacts to the visual character of the region from the proposed project in combination with existing and future developments in the Wheatland area.	S	<i>None feasible.</i>	SU
4.2 Land Use and Agricultural Resources			
4.2-1 Compatibility with surrounding agricultural operations.	S	4.2-1 <i>The project applicant shall inform and notify prospective buyers in writing, prior to purchase, about existing and on-going agriculture activities in the immediate area in the form of a disclosure statement. The notifications shall disclose that the Wheatland area is an agriculture area subject to ground and aerial applications of chemical and early morning or nighttime farm operations, which may create noise, dust, et cetera, and provide that such agricultural operations shall not be considered a nuisance. The language and format of such notification shall be reviewed and approved by the City Attorney prior to recording the first final map. Each disclosure statement shall be acknowledged with the signature of each prospective property owner.</i>	SU

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.2-2 Compatibility with surrounding residential uses.	LS	<i>None required.</i>	N/A
4.2-3 Consistency with the Wheatland General Plan.	LS	<i>None required.</i>	N/A
4.2-4 Consistency with existing zoning.	LS	<i>None required.</i>	N/A
4.2-5 Consistency with Yuba County LAFCo Standards.	LS	<i>None required.</i>	N/A
4.2-6 Increases in the intensity of land uses in the region due to the proposed project and all other projects in the Wheatland area.	LS	<i>None required.</i>	N/A
4.2-7 Conversion of Prime Farmland to urban uses.	S	<i>None feasible.</i>	SU
4.2-8 Cumulative loss of agricultural land.	S	<i>None feasible.</i>	SU
4.3 Transportation and Circulation			
4.3-1 The addition of the approximately 224,062 new daily trips that would result with implementation of the Johnson Rancho and Hop Farm Annexation project would greatly exceed the capacity of the existing City of Wheatland roadway network.	S	<p><i>Hop Farm</i></p> <p>4.3-1(a) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Hop Farm area:</i></p> <p><i>“In conjunction with the submittal of each Tentative Map, the applicant(s) shall pay the City’s Traffic Impact Fees in force at the time of application, as determined by the City Engineer.”</i></p>	SU

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>Compliance with this condition shall be ensured by the City Engineer.</i></p> <p><i>Johnson Rancho</i></p> <p><i>4.3-1(b) In conjunction with the submittal of the first zoning or tentative map application for any development within the Johnson Rancho portion of the project, the project applicant(s) shall provide funding to the City for the preparation of an updated Traffic and Circulation Master Plan for the Johnson Rancho and Hop Farm Annexation area. The updated Traffic and Circulation Master Plan shall evaluate and identify the potential traffic impacts and the future street and circulation system improvements necessary to mitigate said traffic impacts. These street and circulation system improvements could include, but would not be limited to, the following improvements:</i></p> <ul style="list-style-type: none"> <i>• Widen SR 65 to four lanes in the area between the Northern Ring Road and the Wheatland;</i> <i>• Construct the Ring Road crossing over the UPRR;</i> <i>• Construct the Wheatland Expressway as a four-lane freeway facility;</i> <i>• Widen Spenceville Road from planned four lanes to six lanes from Ring Road to Wheatland Expressway;</i> 	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • <i>Widen Spenceville Road to six lanes from Wheatland Expressway to B Street;</i> • <i>Widen Spenceville Road to four lanes from B Street to F Street;</i> • <i>Improve Spenceville Road to a two-lane standard arterial street from F Street to Camp Far West Road;</i> • <i>Prior to approval of any Tentative Map(s) that would include the following roadways, the Tentative Map(s) shall include the following street sections:</i> <ul style="list-style-type: none"> • <i>A Street – indicate five lanes from Ring Road to C Street;</i> • <i>A Street – indicate three lanes from Spenceville Road to C Street;</i> • <i>C Street – indicate four lanes from A Street to C Street (eastern portion);</i> • <i>C Street – indicate three lanes from C Street (eastern portion) to F Street;</i> • <i>Widen the planned Ring Road from a four-lane arterial to a five-lane divided arterial from Spenceville Road to McDevitt Road;</i> • <i>Construct necessary improvements to the Spenceville Road / Ring Road intersection;</i> • <i>Construct a partial cloverleaf interchange on Spenceville Road at the Wheatland Expressway;</i> • <i>Construct an interim at-grade A Street / Wheatland Expressway intersection;</i> 	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • Construct a grade separation over the Wheatland Expressway at A Street; and • Install traffic signals at the following five intersections: Spenceville Road / A Street; Spenceville Road / B Street; Spenceville Road / D Street; Spenceville Road / F Street; and A Street / C Street. Traffic signals shall be constructed when warranted, either as a condition of individual development proposals or by the City. <p><i>In addition, the project applicant(s) shall provide funding to the City for the preparation of an update to the City's Traffic Impact Fee Program, based on the findings of the updated Traffic and Circulation Master Plan.</i></p> <p><i>The updated Traffic and Circulation Master Plan and updated Traffic Impact Fee Program must be completed and adopted by the City Council prior to recording the final subdivision map for the project. The revised Traffic Impact Fee shall be collected from each project applicant within the Johnson Rancho portion of the project at the time of issuance of each building permit, unless otherwise provided by a Development Agreement entered into between the City and the project applicant(s).</i></p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>4.3-1(c) <i>Any project applicant within the Johnson Rancho annexation area shall be responsible for their project's fair share of all feasible physical improvements necessary and available to reduce the severity of the project's significant traffic-related impacts within the City of Wheatland and its Sphere of Influence, as determined in the updated Traffic and Circulation Master Plan, and consistent with the policies and exceptions set forth in the Wheatland General Plan. In cases where the project's fair share contribution is identified, the share will be based on the project's relative contribution to traffic growth.</i></p> <p><i>The project's contribution toward such improvements may take any or some combination of the following forms:</i></p> <ol style="list-style-type: none"> <i>1. Construction of roads and related facilities within and adjacent to the boundaries of the project, which may be subject to fee credits and or reimbursement, coordinated by the City, from other fee-paying development projects if available.</i> <i>2. Construction of roads, road improvements or other transportation facilities outside of the project boundaries but within the incorporated Wheatland limits, subject in some instances to fee credit against other improvements necessitated by the project or future reimbursement, coordinated by the City, from other fee-paying development</i> 	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>projects.</i></p> <p>3. <i>The payment of impact fees to the City of Wheatland in amounts that constitute the project's fair share contributions to the construction of transportation facilities to be built or improved within the City, consistent with the City's updated Traffic Impact Fee Program.</i></p>	
4.3-2 Development of the proposed project would increase the volume of traffic over the UPRR until the Ring Road and Wheatland Expressway are constructed.	S	<p><i>Hop Farm</i></p> <p>4.3-2(a) <i>Implement Mitigation Measure 4.3-1(a).</i></p> <p><i>Johnson Rancho</i></p> <p>4.3-2(b) <i>Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).</i></p>	SU
4.3-3 Development of the proposed project would add traffic to the portion of SR 65 from Wheatland's northern Ring Road intersection to the Wheatland Expressway.	S	<p><i>Hop Farm</i></p> <p>4.3-3(a) <i>Implement Mitigation Measure 4.3-1(a).</i></p> <p><i>Johnson Rancho</i></p> <p>4.3-3(b) <i>Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).</i></p>	SU
4.3-4 Development of the proposed project would add traffic to the Wheatland Expressway.	S	<p><i>Hop Farm</i></p> <p>4.3-4(a) <i>Implement Mitigation Measure 4.3-1(a).</i></p> <p><i>Johnson Rancho</i></p> <p>4.3-4(b) <i>Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).</i></p>	SU

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.3-5 Development of the proposed project would increase the volume of traffic on Spenceville road from the planned Ring Road intersection east over the Wheatland Expressway to Camp Far West Road.	S	<p><i>Hop Farm</i></p> <p>4.3-5(a) Implement Mitigation Measure 4.3-1(a).</p> <p><i>Johnson Rancho</i></p> <p>4.3-5(b) Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).</p>	SU
4.3-6 Development of the proposed project would result in LOS E or worse conditions on A Street and C Street within the proposed project area.	S	<p><i>Hop Farm</i></p> <p>4.3-6(a) Implement Mitigation Measure 4.3-1(a).</p> <p><i>Johnson Rancho</i></p> <p>4.3-6(b) Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).</p>	SU
4.3-7 Development of the proposed project would increase traffic at the Spenceville Road / NB Wheatland Expressway intersection, and the LOS at this intersection would drop to LOS E.	S	<p><i>Hop Farm</i></p> <p>4.3-7(a) Implement Mitigation Measure 4.3-1(a).</p> <p><i>Johnson Rancho</i></p> <p>4.3-7(b) Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).</p>	SU
4.3-8 Development of the proposed project would result in LOS F conditions at the proposed Wheatland Expressway / A Street intersection.	S	<p><i>Hop Farm</i></p> <p>4.3-8(a) Implement Mitigation Measure 4.3-1(a).</p> <p><i>Johnson Rancho</i></p> <p>4.3-8(b) Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).</p>	SU

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.3-9 Development of the proposed project would result in various intersections in the area of the proposed project eventually carrying traffic volumes that would satisfy warrants for signalization.	S	<p><i>Hop Farm</i></p> <p>4.3-9(a) Implement Mitigation Measure 4.3-1(a).</p> <p><i>Johnson Rancho</i></p> <p>4.3-9(b) Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).</p>	SU
4.3-10 Development of the proposed project would generate new pedestrian and bicycle traffic within the project area and on existing City of Wheatland streets.	PS	<p>4.3-10 In conjunction with the submittal of the first zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall prepare a Bicycle and Pedestrian Plan for the annexation area, and identified facilities shall be constructed by development in the plan area. The plan shall include Class I bicycle paths along Spenceville Road. Prior to approval of the first Tentative Map within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall fund the preparation of the Bicycle and Pedestrian Master Plan. All subsequent development applications in the project area shall demonstrate consistency with this plan.</p>	LS
4.3-11 Development of the proposed project could result in the demand for expanded transit services.	PS	<p>4.3-11 In conjunction with the submittal of the first zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall consult Yuba-Sutter Transit regarding transit stop planning for both the Johnson Rancho and Hop Farm properties. The Stage One Development Plans for the Hop Farm and Johnson Rancho properties shall discuss and illustrate the location</p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>of planned transit stops for each development, for review and approval by the City Engineer and Yuba-Sutter Transit.</i>	
4.3-12 Development of the proposed project would add traffic to roadways in the extended region (i.e., Yuba County and Placer County), potentially increasing the LOS on these roadways to a level that exceeds existing thresholds.	S	4.3-12 <i>At the time of submittal of the first tentative map application within the Johnson Rancho and Hop Farm Annexation area, if the City of Wheatland is a participant in any new Yuba County and/or Placer County regional traffic fee program(s) and the new fee program(s) include the improvements identified in the Traffic and Circulation Master Plan as necessary to mitigate the significant impacts to roadways in the region(s) generated by the project, the project applicant(s) shall pay the applicable fees toward the improvements prior to final map approval.</i>	SU
4.4 Air Quality and Climate Change			
4.4-1 Construction-related impacts resulting in temporary increases in criteria air pollutants that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.	PS	4.4-1(a) <i>In conjunction with the submittal of each zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, an air quality analysis shall be performed. The analysis shall include, but not be limited to, a determination of air quality impacts, quantification of construction and operational emissions, an assessment of impacts related to CO emissions and TACs, an assessment of impacts related to GHG emissions, and identification of mitigation measures needed to reduce any significant impacts. The mitigation measures shall include, but not necessarily be limited to, the FRAQMD's standard mitigation measures for all projects within the</i>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>FRAQMD. The applicant shall be required to implement all mitigation measures recommended in the air quality impact analysis, pursuant to the review and approval of the Planning Commission and/or City Council in conjunction with the review of the development project.</i></p> <p>4.4-1(b) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“Prior to recording any Final Map within the Johnson Rancho and Hop Farm Annexation area, pursuant to the FRAQMD Indirect Source Review Guidelines, a Fugitive Dust Control Plan shall be submitted for the review and approval of the Community Development Department. The developer shall implement the approved plan.”</i></p> <p><i>Compliance with this condition shall be ensured by the Community Development Department prior to the recording of any Final Map.</i></p> <p>4.4-1(c) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>“Prior to issuance of any grading permit, all construction contracts shall stipulate the following:</i></p> <ul style="list-style-type: none"> <i>• Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringelmann 2.0).</i> <i>• The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of on-site operation.</i> <i>• Idling time for construction vehicles shall be limited to five minutes.</i> <i>• Existing power sources (e.g., power poles) or clean fuel generators shall be utilized instead of temporary power generators.</i> <i>• A traffic plan shall be developed to minimize traffic flow interference from construction activities. Portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, may require California Air Resources Board (ARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the ARB or the District to determine registration and permitting requirements prior to equipment</i> 	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>operation at the site.</i></p> <ul style="list-style-type: none"> • <i>All grading operations on a project shall be suspended when winds exceed 20 miles per hour or when winds carry dust beyond the property line despite implementation of all feasible dust control measures.</i> • <i>Construction sites shall be watered as directed by the Department of Public Works or Air Quality Management District and as necessary to prevent fugitive dust violations.</i> • <i>An operational water truck shall be available at all times. Water shall be applied to control dust, as needed, to prevent visible emissions violations and off-site dust impacts.</i> • <i>On-site dirt piles or other stockpiled particulate matter shall be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce windblown dust emissions. The use of approved non-toxic soil stabilizers shall be incorporated, according to manufacturer's specifications, to all inactive construction areas.</i> • <i>All transfer processes involving a free fall of soil or other particulate matter shall be operated in such a manner as to minimize the free fall distance and fugitive dust emissions.</i> • <i>Approved chemical soil stabilizers shall be applied, according to the manufacturers' specifications, to all inactive construction areas</i> 	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>(previously graded areas that remain inactive for 96 hours) including unpaved roads and employee/equipment parking areas.</i></p> <ul style="list-style-type: none"> <i>• To prevent track-out, wheel washers shall be installed where project vehicles and/or equipment exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed prior to each trip. (Alternatively, a gravel bed may be installed as appropriate at vehicle/equipment site exit points to effectively remove soil buildup on tires and tracks to prevent/diminish track-out.)</i> <i>• Paved streets shall be swept frequently (water sweeper with reclaimed water recommended; wet broom) if soil material has been carried onto adjacent paved, public thoroughfares from the project site.</i> <i>• Temporary traffic control shall be provided, as needed, during all phases of construction to improve traffic flow, as deemed appropriate by the Department of Public Works and/or Caltrans and to reduce vehicle dust emissions. An effective measure is to enforce vehicle traffic speeds at or below 15 mph.</i> <i>• Traffic speeds on all unpaved surfaces shall not exceed 15 miles per hour and unnecessary vehicle traffic shall be reduced by restricting access to unpaved surfaces. In addition,</i> 	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>appropriate training, on-site enforcement, and signage shall be provided in order to enforce the speed limit.</i></p> <ul style="list-style-type: none"> <i>Ground cover on the construction site shall be reestablished as soon as possible and prior to final occupancy, through seeding and watering.</i> <i>Open burning of vegetative waste (natural plant growth wastes) or other legal or illegal burn materials (trash, demolition debris, et. al.) shall not be conducted at the project site. Vegetative wastes shall be chipped or delivered to waste-to-energy facilities (permitted biomass facilities) or mulched or composted. Waste materials shall not be hauled off-site for disposal by open burning."</i> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the issuance of any grading permit.</i></p>	
4.4-2 Operational impacts resulting in long-term increases of criteria air pollutants that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.	S	<p>4.4-2(a) <i>Implement Mitigation Measure 4.4-1(a). If operational impacts associated with emissions of ROG, NOX, or PM₁₀ are determined to be significant for a particular project, the air quality impact analysis shall require implementation of Mitigation Measure 4.4-2(b).</i></p> <p>4.4-2(b) <i>In conjunction with the submittal of each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the applicant(s)</i></p>	SU

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>shall submit an Operational Emissions Reduction Plan for review and approval of the FRAQMD. The Plan shall be the applicant's commitment to feasible mitigation measures from the FRAQMD's current list of Best Available Mitigation Measures (BAMM), recommended measures from FRAQMD staff, or voluntary off-site mitigation projects sufficient to provide a minimum 35 percent reduction in emissions. The applicant shall be required to implement all mitigation measures recommended in the Operational Emissions Reduction Plan, pursuant to the review and approval of the Planning Commission and/or City Council in conjunction with the review of the tentative map.</i>	
4.4-3 Contribution to local mobile-source concentrations of CO.	LS	None required.	N/A
4.4-4 Impacts to nearby sensitive receptors from odors associated with the project.	PS	4.4-4(a) <i>In conjunction with the submittal of each zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s), in consultation with the Community Development Department, shall take into consideration any odor-producing potential facilities that would occupy the proposed project site. To the extent feasible, proposed land uses that have the potential to emit objectionable odorous emissions shall be located as far away as possible from existing and proposed sensitive receptors. The location of potential facilities shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of the</i>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>development application.</i></p> <p>4.4-4(b) <i>The City shall include the following as a condition of approval on each tentative map application for any non-residential development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“If an odor-emitting facility is to occupy space in the proposed project site, odor control devices shall be installed for the review and approval of the Community Development Department prior to the issuance of occupancy permits to reduce the exposure of receptors to objectionable odorous emissions.”</i></p> <p><i>Compliance with this condition shall be ensured by the Community Development Department prior to the issuance of a certificate of occupancy for any odor-emitting facility.</i></p>	
4.4-5 Cumulative impacts to regional air quality.	S	4.4-5 <i>Implement Mitigation Measure 4.4-2(a).</i>	SU
4.4-6 Project impacts concerning the production of greenhouse gases.	S	4.4-6(a) <i>In conjunction with the submittal of the first zoning or tentative map application for development within the Johnson Rancho and Hop Farm Annexation area, a Climate Action Plan that includes the proposed project area, in addition to the Wheatland Planning Area, shall be prepared by the developer in cooperation with the FRAQMD and the City Community Development Department. The Climate Action Plan shall include</i>	SU

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>feasible mitigation measures that, in combination with existing and future regulatory measures developed under AB 32, would reduce emissions associated with operation of the proposed project and supporting infrastructure by 15 percent from business-as-usual emissions levels projected for the year 2020 or the applicable percent reduction as adopted by FRAQMD and/or CARB at the time of application submittal. Furthermore, if a Climate Action Plan has previously been adopted by the City of Wheatland and is in place at the time of submittal of the first zoning or tentative map application, the proposed project shall adhere to the emission reduction requirements within the Climate Action Plan.</i></p> <p>4.4-6(b) <i>After the Climate Action Plan has been adopted by the City of Wheatland, all future project applicants within the Johnson Rancho and Hop Farm Annexation area shall demonstrate compliance with the Climate Action Plan at the time of submittal of each development application. Compliance shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of the development application.</i></p> <p>4.4-6(c) <i>At the time of submittal of each zoning or tentative map application within the Johnson Rancho and Hop Farm Annexation area, a GHG reduction strategy shall be</i></p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>prepared that shall describe how the following measures (or alternate measures as approved by the Planning Commission) will be implemented to achieve the reduction in GHG emissions that is required in Mitigation Measure 4.4-6(a):</i></p> <p><i>Residential Development</i></p> <ul style="list-style-type: none"> <i>All homes within the proposed subdivision will utilize AC units that are two points above the Seasonal Energy Efficient Ratio (SEER) energy efficiency rating in effect at the time of the approval of the Tentative Map. Any plans submitted to the Community Development Department must clearly show that this condition is being met.</i> <i>All homes within the subdivision will include “whole house fans.” Any plans submitted to the Community Development Department must clearly show that this condition is being met.</i> <i>All homes within the subdivision will include, at the builder’s discretion, one of the following: a) a “tankless” water heater, or b) upgraded insulation in all walls and ceilings to exceed the Title 24 requirements in place at the time of building permit issuance. Any plans submitted to the Community Development Department must clearly show that this condition is being met.</i> 	

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p style="text-align: center;"><i>Commercial and Office Development</i></p> <ul style="list-style-type: none"> • Provide plentiful short-term and long-term bicycle parking facilities to meet peak season maximum demand; • Provide “end-of-trip” facilities including showers, lockers, and changing space; • Provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site; • Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances; • Provide safe and convenient bicycle/pedestrian access to transit stop(s) and provide essential transit stop improvements (i.e., shelters, route information, benches, and lighting); and • Provide employee carpool parking stalls. <p style="text-align: center;"><i>The GHG reduction strategy shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of the development applications.</i></p>	
4.5 Noise			
4.5-1 Impacts related to construction noise.	PS	4.5-1 In conjunction with submittal of each tentative map application within the Johnson Rancho and Hop Farm	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>Annexation area, a site-specific noise mitigation plan shall be prepared. The noise mitigation plan shall be required to show that the project would be consistent with the Wheatland General Plan and shall include, but not be limited to, the following mitigation measures:</i></p> <ul style="list-style-type: none"> • <i>Construction activities shall occur between the hours of 7 a.m. to 6 p.m. weekdays and 8 a.m. to 5 p.m. on the weekends;</i> • <i>All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturers installed mufflers;</i> • <i>Fixed construction equipment shall be located as far as possible from sensitive receptors;</i> • <i>Consideration of temporary sounds curtain and noise barriers for long-term stationary equipment;</i> • <i>Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible; and</i> • <i>A disturbance coordinator shall be designated to receive all public complaints regarding construction noise disturbances and responsible for determined the cause of the complaint and implement any feasible measures to alleviate the problem. The coordinator contact information</i> 	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>shall be conspicuously posted around the project site and adjacent public spaces.</i></p> <p><i>The noise mitigation plan shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of each tentative map. The developer shall implement and comply with the approved noise mitigation plan.</i></p>	
4.5-2 Impacts related to construction vibration to existing receptors or sensitive structures.	LS	None required.	N/A
4.5-3 Impacts related to exposure of existing receptors to significant increases in traffic noise levels.	S	None feasible.	SU
4.5-4 Impacts related to exposure of existing or proposed receptors to project-generated noise levels exceeding applicable noise standards.	PS	<p>4.5-4 Implement Mitigation Measure 4.5-1.</p> <p><i>The noise mitigation plan shall include, but not be limited to, the following additional mitigation measures:</i></p> <ul style="list-style-type: none"> • <i>Loading docks and truck delivery areas shall maintain a minimum distance of 30 feet from residential property lines;</i> • <i>Property line barriers should be six to eight feet in height. Circulation routes for trucks should be located a minimum of 30 feet from residential property lines;</i> • <i>All heating, cooling and ventilation equipment shall be located within mechanical rooms where</i> 	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>possible;</i></p> <ul style="list-style-type: none"> • <i>All heating, cooling and ventilation equipment shall be shielded from view with solid barriers;</i> • <i>Emergency generators shall comply with the local noise criteria at the nearest noise-sensitive receivers;</i> • <i>In cases where loading docks or truck delivery circulation routes are located less than 100 feet from residential property lines, an acoustical evaluation shall be submitted to verify compliance with the City of Wheatland General Plan Noise Element standards; and</i> • <i>Six-foot-tall sound walls should be constructed where neighborhood parks or school playgrounds abut rear yards of residential uses.</i> <p><i>The noise mitigation plan shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of the tentative map. The developer shall implement and comply with the approved plan.</i></p>	
4.5-5 Impacts related to exposure of new noise-sensitive uses to transportation noise levels that exceed the City of Wheatland exterior and interior noise level standards.	PS	<p>4.5-5(a) <i>Implement Mitigation Measure 4.5-1.</i></p> <p>4.5-5(b) <i>In conjunction with the submittal of each zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, a site-specific noise analysis shall be performed. The site-specific noise analysis shall address interior and</i></p>	LS

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>exterior traffic noise levels and recommend mitigation measures to reduce the noise to acceptable levels. The applicant shall be required to implement all mitigation measures recommend in the noise analysis, pursuant to review and approval by the Planning Commission and/or City Council in conjunction with the review of the development project.</i>	
4.5-6 Impacts related to exposure of sensitive receptors to aviation noise from the Beale AFB that exceeds the acceptable noise standards.	LS	None required.	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.5-7 Impacts related to exposure of sensitive receptors to aviation noise from the Beale AFB that would cause sleep disturbance.	PS	<p>4.5-7 The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</p> <p><i>“The applicant shall inform and notify prospective buyers, prior to purchase, about existing and on-going noise generating aviation activities in the immediate area. The notice shall be in the form of a note recorded with the Deed for each property. The notifications shall disclose that the project area is south of the Beale Air Force Base and is subject to aircraft overflights, which may cause sleep disturbance. The language and format of such notification shall be reviewed and approved by the City Attorney prior to recording final map.”</i></p> <p><i>Compliance with this condition shall be ensured by the Community Development Department prior to the recording of any Final Map.</i></p>	LS
4.5-8 Impacts related to cumulative noise levels in the project vicinity.	S	None feasible.	SU
4.6 Biological Resources			
4.6-1 Impacts to special-status plants.	PS	<p>4.6-1(a) In conjunction with the submittal of the first zoning or tentative map application for development within the Johnson Rancho and Hop Farm Annexation area, a Resource Corridor Conservation Plan shall be prepared for the Johnson Rancho and Hop Farm Annexation area. The Resource Corridor Conservation Plan shall</p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>demonstrate the preservation of open space corridors within the portions of the Johnson Rancho and Hop Farm Annexation area that are considered to have high-value habitat for special-status plant and wildlife species (i.e., Grasshopper Slough, Dry Creek, other waters of the U.S. or jurisdictional wetlands). In addition, the Resource Corridor Conservation Plan shall outline a long-term maintenance/funding strategy for biological resources within the Johnson Rancho and Hop Farm Annexation area. The Resource Corridor Conservation Plan shall be prepared by a qualified biologist and shall be submitted for the review and approval of the Planning Commission and/or City Council in conjunction with their review of the development application. The zoning or tentative map approval shall be conditioned to require implementation of the Resource Corridor Conservation Plan.</i></p> <p>4.6-1(b) <i>In conjunction with the submittal of each future zoning or tentative map applications (after submittal of the first zoning or tentative map), should the pending Yuba-Sutter Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) be adopted by the City of Wheatland, the project applicant(s) shall participate and incorporate all applicable mitigation measures set forth in the NCCP/HCP. If the Yuba-Sutter NCCP/HCP has not yet been adopted, Mitigation Measures 4.6-1(c) and 4.6-1(d) shall be implemented.</i></p>	

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>4.6-1(c) <i>In conjunction with the submittal of each future zoning or tentative map applications (after submittal of the first zoning or tentative map) for development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall demonstrate compliance with the Resource Corridor Conservation Plan for the Johnson Rancho and Hop Farm Annexation area, subject to review and approval by the City Community Development Department.</i></p> <p>4.6-1(d) <i>In conjunction with the submittal of each future zoning or tentative map applications (after submittal of the first zoning or tentative map) for development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall have a site-specific biological resources evaluation prepared by a qualified biologist, and shall comply with all mitigation measures included in the biological resources evaluation, including, but not limited to, preconstruction surveys for any special-status plant or wildlife species that the biological resources evaluation determined to have the potential to exist on-site. The biological resources evaluation shall be subject to review and approval by the Planning Commission and/or City Council in conjunction with their review of the development application.</i></p>	
4.6-2 Impacts to pallid bat, townsend's big-eared bat, Yuma myotis bat, fringed myotis bat, greater	PS	4.6-2 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS

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Impact		Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
western mastiff-bat, long-eared myotis bat, and Pacific western big-eared bat.				
4.6-3	Impacts to Swainson's hawk.	PS	4.6-3 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS
4.6-4	Impacts to western burrowing owl.	PS	4.6-4 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS
4.6-5	Impacts to other raptors.	PS	4.6-5 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS
4.6-6	Impacts to passerines/migratory songbirds.	PS	4.6-6 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS
4.6-7	Impacts to western spadefoot toad.	PS	4.6-7 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS
4.6-8	Impacts to giant garter snake.	PS	Johnson Rancho Property 4.6-8 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS
4.6-9	Impacts to northwestern pond turtle.	PS	Johnson Rancho Property 4.6-9 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS
4.6-10	Impacts to essential fish habitat.	LS	None required.	N/A
4.6-11	Impacts to valley elderberry longhorn beetles.	PS	4.6-11 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS
4.6-12	Impacts to special-status brachiopods.	PS	4.6-12 Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).	LS

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4.6-13 Impacts to wetlands and other waters of the U.S.	PS	<p>4.6-13(a) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“The project applicant(s) shall consult with the USACE with respect to potential impacts to any on-site wetlands. If the USACE determines that jurisdictional waters on or off the project site would not be impacted by the proposed project, no further mitigation is necessary. If the USACE determines that jurisdictional waters that may be impacted by the project are present on- or off-site, the appropriate CWA Section 404 permit shall be acquired by the applicant for the construction of the proposed project and the filling of the existing ditches, if applicable. CWA Section 401 water quality certification or waiver will also be required. An individual permit under Section 404 of the Clean Water Act is required for impacts to waters of the U.S., including wetlands greater than 0.5 acres. As part of the individual permit, National Environmental Protection Act (NEPA) compliance and a Section 404(b) (1) Alternatives Analysis must be completed. In addition, Regional Water Quality Control Board certification is required pursuant to Section 401 of the Clean Water Act to obtain an individual permit. A copy of the approved Section 404 permit shall be provided to the Planning Director prior to the issuance of grading permits.”</i></p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>Compliance with this condition shall be ensured by the City Engineer prior to the approval of each tentative map.</i></p> <p>4.6-13(b) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“The project applicant(s) shall submit to the California Department of Fish and Game (CDFG) a formal wetland delineation based on current regulations of the USACE. If the CDFG determines that jurisdictional waters on or off the project site would not be impacted by the proposed project, no further mitigation is necessary. If the CDFG determines that jurisdictional waters are present on- or off-site, which may be impacted by the project, a Streambed Alteration Agreement shall be obtained from CDFG, pursuant to Section 1600 of the California Fish and Game Code, for any activities affecting the bed, bank, or associated riparian vegetation. If required, the project applicant shall coordinate with CDFG in developing agreements or appropriate mitigation, and shall abide by the conditions of any executed agreements or permits for any work related to the development.”</i></p>	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>Compliance with this condition shall be ensured by the City Engineer prior to the approval of each tentative map.</i></p> <p>4.6-13(c) <i>If the project would result in impacts to any jurisdictional wetlands identified within either the Hop Farm Property or the Johnson Rancho Property, the acreage of jurisdictional habitat removed shall be replaced on a “no-net-loss” basis in accordance with USACE and CDFG regulations. A conceptual on-site wetlands mitigation plan shall be submitted, including a wetlands replacement ratio, agreed upon with the USACE. The mitigation plan shall quantify the total jurisdictional acreage lost, describe creation/replacement ratio for acres filled, annual success criteria, potential mitigation-sites, and monitoring and maintenance requirements. The plan shall be prepared by a qualified biologist pursuant to, and through consultation with, USACE. The plan may include funding mechanisms for future maintenance of the wetland and riparian habitat, which may include an endowment or other funding from the project applicant.</i></p> <p>4.6-13(d) <i>Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).</i></p>	
4.6-14 Impacts to woodland resources.	PS	4.6-14 <i>In conjunction with the submittal of each zoning or tentative map application for any development within the</i>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall prepare and submit an arborist report, at the discretion of the Planning Director. The report shall evaluate the structure and vigor of each tree six inches or greater in dbh, as well as include recommendations for preservation of trees and removal of trees, which may be hazardous due to nature and extent of defects, compromised health, and/or structural instability and proximity to planned development activities. The applicant(s) shall comply with and implement the approved arborist report.</i>	
4.6-15 Cumulative loss of biological resources in the City of Wheatland and the effects of ongoing urbanization in the region.	S	4.6-15 <i>Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).</i>	SU
4.7 Archaeological and Historical Resources			
4.7-1 Disturbance or destruction of previously unknown archaeological resources within the proposed project site.	PS	4.7-1(a) <i>At the time of submittal of the first tentative map application within the Johnson Rancho and Hop Farm Annexation area, a Cultural Resources Master Plan shall be prepared for the project site by a qualified archaeologist and submitted for the City's review and approval. The Cultural Resources Master Plan shall include, but not be limited to, all of the recommendations included in the Cultural Resources Sensitivity Report. The Cultural Resources Master Plan shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the</i>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>tentative map application review. In addition, in conjunction with the submittal of each tentative map application within the Johnson Rancho and Hop Farm Annexation area, site-specific cultural resources reports shall be prepared by a qualified archaeologist and submitted for the City's review and approval. The required mitigation measures shall be implemented by the project applicant(s).</i></p> <p>4.7-1(b) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“During ground disturbance activities, an archeological monitor shall be present to oversee operations both on- and off-site. If any earth-moving activities uncover any concentrations of stone, bone or shellfish, any artifacts of these materials, or any evidence of fire (ash, charcoal, fire altered rock, or earth), work shall be halted in the immediate area of the find and shall not be resumed until after a qualified archaeologist has inspected and evaluated the deposit and determined the appropriate means of curation. The appropriate mitigation measures may include as little as recording the resource with the California Archaeological Inventory database or as much as excavation, recordation, and preservation of the sites that have outstanding cultural or historic</i></p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>significance.”</p> <p>4.7-1(c) The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</p> <p>“In the event that any archaeological deposits are discovered during construction or grading, further grading or trenching within 50 feet of the discovery shall be halted until a plan has been submitted to the Planning Director for the evaluation of the resource as required under current CEQA Guidelines. If evaluation concludes the archaeological deposit is eligible for inclusion on the California Register of Historic Resources, a plan for the mitigation of impacts to the resource shall also be submitted to the Community Development Department for approval.”</p> <p>4.7-1(d) The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</p> <p>“During construction, if bone is uncovered that may be human, the California Native American Heritage Commission, located in Sacramento, and the Yuba County Coroner shall be notified. Should human remains be found, all work shall be halted until final</p>	

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		<i>disposition by the Coroner. Should the remains be determined to be of Native American descent, the Native American Heritage Commission shall be consulted to determine the appropriate disposition of such remains."</i>	
4.7-2 Impacts to prehistoric sites within the project area.	PS	4.7-2 <i>In conjunction with the submittal of the first tentative map application within the Johnson Rancho and Hop Farm Annexation area, the prehistoric site that is indicated in the Cultural Resources Sensitivity Report shall be relocated and re-recorded. Efforts shall be made to avoid this resource and, if impacts cannot be avoided, the resource shall be evaluated for significance and integrity according to criteria set forth for the California Register of Historic Places. If the resource is eligible for the CRHP, mitigation including, but not limited to, the following shall be implemented: A qualified archaeologist shall conduct intensive surveys as project plans are refined and future environmental reviews are conducted. Special care shall be taken along Grasshopper Slough and the old Bear River channel. A program of augering shall be implemented in the bottomlands to estimate the thickness of mining debris layer, which will help refine expectations regarding the possibility of, and depth of, buried cultural deposits. Systematic sampling, by hand and or mechanical auger, shall be implemented according to a grid pattern across the bottomlands (roughly 4,800 meters long by 1,200 meters deep). The sampling data shall be supplemented by existing geotechnical borelogs taken as part of</i>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>previous Bear River levee investigations.</i>	
4.7-3 Impacts to Johnson's Crossing.	PS	4.7-3 Implement Mitigation Measures 4.7-1(a-d).	LS
4.7-4 Impacts to Camp Far West.	PS	4.7-4(a) Implement Mitigation Measure 4.7-1(a-d). 4.7-4(b) In conjunction with the submittal of the first tentative map application within the Johnson Rancho and Hop Farm Annexation area, historical documentation of Camp Far West by a qualified historian shall be prepared for review and approval of the Community Development Department. The historical documentation shall include, but not be limited to, for evidence of Camp Far West on-site and use of geophysical methods to research the absence of Camp Far West remains on-site. If resources are found and impacts anticipated, a research design/work plan, and formal evaluations should be completed to assess significance and integrity. The historical documentation, evaluations, and any preservation-related recommendations shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the tentative map review. The recommendations shall be implemented by the project applicant(s).	LS
4.7-5 Impacts to the California Emigrant Trail.	PS	4.7-5(a) Implement Mitigation Measures 4.7-1(a-d). 4.7-5(b) In conjunction with the submittal of the first tentative map application within the area of the California Emigrant Trail, historical documentation of the California Emigrant Trail shall be prepared by a	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>qualified historian, for review and approval of the Community Development Department, Bureau of Land Management, and National Park Service. The historical documentation shall include, but not be limited to, review and documentation of the California Emigrant Trail. The historical documentation and any preservation-related recommendations shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the tentative map review. The recommendations shall be implemented by the project applicant(s).</i>	
4.7-6 Impacts to Webster's Ranch.	PS	<p>4.7-6(a) <i>Implement Mitigation Measures 4.7-1(a-d).</i></p> <p>4.7-6(b) <i>In conjunction with the submittal of the first tentative map application within the area including Webster's Ranch, an archaeological report shall be prepared by a qualified archaeologist, for review and approval of the Community Development Department. The report shall include, but not be limited to, a site record of Webster's Ranch, and archaeological subsurface testing. The archaeological report and recommended mitigation measures shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the tentative map review. The recommended mitigation measures shall be implemented by the project applicant(s).</i></p>	LS
4.7-7 Impacts to Hop Ranches.	PS	4.7-7(a) <i>Implement Mitigation Measures 4.7-1(a-d).</i>	LS

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		<p>4.7-7(b) <i>In conjunction with the submittal of the first tentative map application within the Wheatland Hop Farm area, historical documentation and preservation of the Wheatland hop growers by a qualified historian shall be prepared for review and approval of the Community Development Department. The historical documentation shall include, but not be limited to, architectural structure recordation, historic photographs and other memorabilia including hop-specific machinery to be collected for preservation and displayed in a local museum exhibit. In addition, hop kilns shall be evaluated and considered for restoration and preservation. The historical documentation, evaluations, and any preservation-related recommendations shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the tentative map review. The recommendations shall be implemented by the project applicant(s).</i></p>	
4.7-8 Impacts to levees and dams.	PS	<p>4.7-8(a) <i>Implement Mitigation Measures 4.7-1(a-d).</i></p> <p>4.7-8(b) <i>In conjunction with the submittal of the first tentative map application within the Johnson Rancho and Hop Farm Annexation area, proof of recordation of the levees and dams shall be prepared by a qualified archaeologist. The historical documentation and any preservation-related recommendations shall be reviewed and approved by the Planning Commission and/or City</i></p>	LS

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		<i>Council in conjunction with the tentative map review. The recommendations shall be implemented by the project applicant(s).</i>	
4.7-9 Impacts to gold dredging tailings.	LS	<i>None required.</i>	N/A
4.7-10 Disturbance or destruction of previously unknown archaeological resources in combination with other development in the Wheatland area.	LS	<i>None required.</i>	N/A
4.8 Geology and Soils			
4.8-1 Damage to foundations, pavement, and other structures from expansive soils.	PS	<p>4.8-1(a) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“In conjunction with submission of Improvement Plans for any development application within the Johnson Rancho and Hop Farm Annexation area, a final design-level geotechnical report shall be prepared and submitted to the City for review and approval. The geotechnical consultant shall consider the recommendations made in the Preliminary Geotechnical Engineering Reports prepared by Wallace-Kuhl & Associates, Inc. (April 2004) and ENGEO, Inc. (April 2005) including, but not limited to, the recommendations regarding expansive soils. The recommendations in the design-level geotechnical report shall be incorporated</i></p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>into the design of the infrastructure improvements.” Compliance with this condition shall be ensured by the City Engineer prior to the approval of Improvement Plans.</i></p> <p>4.8-1(b) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“Prior to issuance of building permits, the recommendations of the final geotechnical report shall be incorporated into the individual building designs for the review and approval of the City Building Official.”</i></p> <p><i>Compliance with this condition shall be ensured by the City Building Official prior to the issuance of building permits.</i></p>	
4.8-2 Impacts related to corrosive soils on-site.	PS	4.8-2 Implement Mitigation Measures 4.8-1(a) and (b).	LS
4.8-3 Loss of structural support due to liquefaction.	PS	4.8-3 Implement Mitigation Measures 4.8-1(a) and (b).	LS
4.8-4 Impacts related to seismic activity.	LS	None required.	N/A
4.8-5 Construction-related increases in soil erosion.	PS	4.8-5 The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:	LS

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		<p><i>“In conjunction with submission of Improvement Plans for any development application within the Johnson Rancho and Hop Farm Annexation area, the project applicant shall prepare and submit an erosion control plan for the City Engineer’s review and approval. The erosion control plan shall be in compliance with the State Water Resources Control Board requirements established pursuant to the State General Construction Permit. The erosion control plan shall utilize standard construction practices to limit the erosion effects during construction. Measures could include, but are not limited to, the following:</i></p> <ul style="list-style-type: none"> • <i>Hydro-seeding;</i> • <i>Placement of erosion control measures within drainageways and ahead of drop inlets;</i> • <i>The temporary lining (during construction activities) of drop inlets with “filter fabric” (a specific type of geotextile fabric);</i> • <i>The placement of straw wattles along slope contours;</i> • <i>Directing subcontractors to a single designation “wash-out” location (as opposed to allowing them to wash-out in any location they desire);</i> • <i>The use of siltation fences; and</i> • <i>The use of sediment basins and dust palliatives.</i> 	

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>Compliance with this condition shall be ensured by the City Engineer prior to the approval of Improvement Plans.</i>	
4.8-6 Long-term geologic and seismic impacts from the proposed project in combination with existing and future developments in the Wheatland area.	LS	<i>None required.</i>	N/A
4.9 Hazards and Hazardous Materials			
4.9-1 Impacts from water supply wells.	PS	<p>4.9-1(a) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson's Crossing and AKT Wheatland Ranch area, as well any development on the Dave Browne Property, Browne Cattle Company Property, or the Wheatland Parcels:</i></p> <p><i>"Prior to the issuance of a grading permit within 50 feet of a well, the applicant shall hire a licensed well contractor to obtain a well abandonment permit from Yuba County Environmental Health Department, and properly abandon the on-site wells, pursuant to review and approval of the City Engineer and the Yuba County Environmental Health Department."</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the issuance of grading permits.</i></p>	LS

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		<p>4.9-1(b) <i>In conjunction with submittal of each zoning or tentative map application for any development within the Dave Browne Property, Browne Cattle Company Property, and Wheatland Parcels, a Phase I Environmental Site Assessment shall be prepared to determine if any on-site structures contain hazards and to identify soil contamination, potential hazards related to nearby properties, and the location of wells, aboveground storage tanks, stored items and debris. The Phase I Environmental Site Assessment shall identify and include mitigation measures necessary to reduce significant hazardous and hazardous materials impacts. The Phase I Environmental Site Assessment's recommendations and mitigation measures shall be implemented by the project applicant, and shall be reviewed and approved, and Planning Commission and/or City Council prior to approval of each zoning or tentative map application.</i></p>	
4.9-2 Impacts from facility storage tanks.	PS	<p>AKT Wheatland Ranch</p> <p>4.9-2(a) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the AKT Wheatland Ranch area:</i></p> <p style="padding-left: 40px;"><i>"If the area of the ranch operations hub is redeveloped, prior to issuance of grading permit, the aboveground and underground storage tanks shall be removed and properly abandoned, pursuant to review and approval of</i></p>	LS

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		<p><i>the City Engineer and the Yuba County Environmental Health Department.”</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the issuance of grading permits.</i></p> <p><i>Dave Browne, Browne Cattle Company, and Wheatland Parcels</i></p> <p><i>4.9-2(b) Implement Mitigation Measure 4.9-1(b).</i></p>	
4.9-3 Impacts from debris and other on-site farm implements.	PS	<p><i>Johnson’s Crossing</i></p> <p><i>4.9-3(a) The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson’s Crossing area:</i></p> <p><i>“If during removal of all on-site debris by the project contractor visual or olfactory evidence of potential soil contamination is observed, the project applicant shall contact Wallace Kuhl & Associates, Inc. (or other similarly qualified firm), the property owner, the City, and the Yuba County Environmental Health Department for further assessment. If these parties determine that the items are not hazardous, they shall be removed and discarded in accordance with local standards at the expense of the applicant. If these parties determine that subsurface hazardous substances are located on-site, these substances shall be removed and the soil remediated to the satisfaction of the City of Wheatland</i></p>	LS

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		<p><i>and the Yuba County Environmental Health Department, at the expense of the applicant.”</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer during site clearing.</i></p> <p><i>Dave Browne, Browne Cattle Company, and Wheatland Parcels</i></p> <p><i>4.9-3(b) Implement Mitigation Measure 4.9-1(b).</i></p> <p><i>If the Phase I Environmental Site Assessment determines the presence of soil contamination under debris piles, the project contractor shall implement Mitigation Measure 4.9-3(a) to the satisfaction of the City of Wheatland and the Yuba County Environmental Health Department, at the expense of the applicant(s).</i></p>	
4.9-4 Impacts from Polychlorinated Biphenyls (PCBs).	PS	<p><i>Dave Browne, Browne Cattle Company, and Wheatland Parcels</i></p> <p><i>4.9-4 Implement Mitigation Measure 4.9-1(b).</i></p> <p><i>If the Phase I Environmental Site Assessment determines the presence of PCB transformers, the transformers shall be disposed of subject to the regulations of the Toxic Substances Control Act (TSCA) under the authority of the Yuba County Environmental Health Department.</i></p>	LS
4.9-5 Impact from presence of a septic system.	PS	<p><i>Johnson’s Crossing and AKT Wheatland Ranch</i></p> <p><i>4.9-5(a) The City shall include the following as a condition of</i></p>	LS

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		<p><i>approval on each tentative map application for any development within the Johnson's Crossing and AKT Wheatland Ranch area:</i></p> <p><i>"Prior to the issuance of grading permits within 50 feet of a septic tank, the applicant shall hire a qualified geotechnical engineer, and properly abandon the on-site septic systems, pursuant to review and approval of the City Engineer and the Yuba County Environmental Health Department."</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the issuance of grading permits.</i></p> <p><i>Dave Browne, Browne Cattle Company, and Wheatland Parcels</i></p> <p><i>4.9-5(b) Implement Mitigation Measure 4.9-1(b).</i></p> <p><i>If septic systems are located on-site, the applicant shall implement Mitigation Measure 4.9-5(a) to the satisfaction of the City of Wheatland and the Yuba County Environmental Health Department, at the expense of the applicant(s).</i></p>	
4.9-6 Impacts from existing on-site structures and exposure to asbestos and lead-based paint.	PS	4.9-6 The City shall include the following as a condition of approval on each tentative application for any development within the Johnson Rancho and Hop Farm Annexation area:	LS

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		<p><i>“Prior to issuance of a demolition permit by the City for any on-site structures, the project proponent shall provide a site assessment that determines whether any structures to be demolished contain lead-based paint. If structures do not contain lead-based paint, further mitigation is not required. If lead-based paint is found, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with federal, State, and local regulations. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint in accordance with federal, State, and local regulations subject to approval of the City Engineer.”</i></p> <p><i>And</i></p> <p><i>“Prior to issuance of a demolition permit by the City for any on-site structures, the project proponent shall provide a site assessment that determines whether any structures to be demolished contain asbestos. If structures do not contain asbestos, further mitigation is not required. If any structures contain asbestos, the application for the demolition permit shall prepare and</i></p>	

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		<p><i>implement an asbestos abatement plan consistent with federal, State, and local standards, subject to approval by the City Engineer."</i></p> <p><i>Compliance with these conditions shall be ensured by the City Engineer prior to the issuance of a demolition permit.</i></p>	
<p>4.9-7 Impacts from the presence of pesticide and/or herbicide residues in property site soils.</p>	<p>PS</p>	<p><i>Wheatland Hop Farm</i></p> <p>4.9-7(a) <i>In conjunction with the submittal of each zoning or tentative map application for any development within the Wheatland Hop Farm area, a soil assessment shall be prepared with surficial soil samples to determine the presence of pesticides. If pesticide concentrations are higher than the allowable threshold are detected, the assessment shall include the appropriate mitigation including, but not limited to, soil remediation to an acceptable TTLC level per applicable State and federal regulations. The soil assessment and recommended mitigation measures shall be implemented by the project applicant, and shall be reviewed and approved, and Planning Commission and/or City Council prior to approval of each zoning or tentative map application.</i></p> <p><i>Dave Browne, Browne Cattle Company, and Wheatland Parcels</i></p> <p>4.9-7(b) <i>Implement Mitigation Measure 4.9-1(b).</i></p>	<p>LS</p>

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		<i>The Phase I Environmental Site Assessment shall include surficial soil samples to determine the presence of pesticides. If pesticide concentrations are higher than the allowable threshold are detected, the assessment shall include the appropriate mitigation including, but not limited to, soil remediation to an acceptable TTLC level per applicable State and federal regulations, as identified in the Phase I Environmental Site Assessment.</i>	
4.9-8 Impacts related to emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	None required.	N/A
4.9-9 Impacts related to potential impairment of emergency response and evacuation plans.	LS	None required.	N/A
4.9-10 Long-term hazard-related impacts from the proposed project in combination with existing and future developments in the Wheatland area.	LS	None required.	N/A
4.10 Hydrology and Water Quality			
4.10-1 Impact from project stormwater runoff.	PS	4.10-1(a) <i>In conjunction with submittal of first zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the applicant shall submit a Master Drainage Plan for the Johnson</i>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>Rancho and Hop Farm Annexation project area for review and approval of the City Engineer. The drainage study shall incorporate recommendations set forth in the Johnson Rancho and Hop Farm Annexation Draft Master Drainage Study, dated July 2010. The Master Drainage Plan shall also incorporate a fee mechanism for the City to collect from future tentative map applications and reimburse for the preparation of the Master Drainage Plan. The Master Drainage Plan and fee mechanism shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of the zoning or tentative map application.</i></p> <p>4.10-1(b) <i>In conjunction with submittal of first zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the applicant(s) shall submit a long-term maintenance and funding strategy for the necessary improvements for detention basin and POND R3 for the Johnson Rancho and Hop Farm Annexation project area. The maintenance and funding strategy shall include coverage of the City's ongoing costs for maintenance and capital replacement, as well as regulatory compliance. The maintenance and funding strategy shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of the zoning or tentative map application.</i></p>	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>4.10-1(c) <i>In conjunction with submittal of each subsequent zoning or tentative map application for development within the Johnson Rancho and Hop Farm Annexation area, the applicant shall be required to submit a site-specific drainage plan. The site-specific drainage plan shall be reviewed to ensure consistency with the Master Drainage Plan. The site-specific drainage plan shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of the zoning or tentative map application.</i></p> <p>4.10-1(d) <i>The City shall include the following as a condition of approval on each zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“Prior to the issuance of building permits, the applicant shall pay fair-share fees for the Master Drainage Plan as well as for the necessary improvements for detention basin and POND R3, for review and approval of the Community Development Department.”</i></p> <p><i>Compliance with this condition shall be ensured by the Community Development Department prior to the issuance of building permits.</i></p>	
4.10-2 Detention basin maintenance.	PS	4.10-2 <i>In conjunction with the submittal of the first tentative map for any development within the Johnson Rancho</i>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>and Hop Farm Annexation area, the applicant(s) shall submit a long-term maintenance and funding strategy for the drainage improvements. The strategy shall include, but not be limited to, the following:</i></p> <ul style="list-style-type: none"> • <i>Dispersion of alluvial sediment deposition at inlet structures, thus limiting the extended localized ponding of water;</i> • <i>Periodic sediment removal;</i> • <i>Monitoring of the facility to ensure the site is completely and properly drained;</i> • <i>Outlet riser cleaning;</i> • <i>Vegetation management to prevent marsh vegetation from taking hold, and to limit habitat for disease-carrying fauna;</i> • <i>Removal of graffiti, grass trimmings, weeds, tree pruning, leaves, litter, and debris;</i> • <i>Preventative maintenance on monitoring equipment;</i> • <i>Vegetative stabilization of eroding banks and basal areas;</i> • <i>Animal and vector control;</i> • <i>Structural inspection; and</i> • <i>Funding plan for the above strategies.</i> <p><i>The long-term maintenance and funding strategy for the drainage improvements shall be reviewed and approved by the Planning Commission and/or City Council in</i></p>	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>conjunction with the review of the zoning or tentative map application.</i>	
4.10-3 Degradation of water quality.	PS	<p>4.10-3 <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“Prior to issuance of grading permits, the applicant(s) shall obtain an NPDES Construction General Permit from the Regional Water Quality Control Board. The permit is required to control both construction and operation activities that may adversely affect water quality. To obtain coverage under this General Permit, the appropriate Legally Responsible Person (LRP) must electronically file Permit Registration Documents (PRDs), which include a Notice of Intent (NOI), a Storm Water Pollution Prevention Plan (SWPPP), and other documents required by the General Permit, and mail the appropriate permit fee to the SWRCB. In addition, a Risk Level Assessment shall be completed in accordance with SWRCB Order No. 2009-0009-DWQ. The SWPPP shall describe the erosion and sediment controls using Best Management Practices (BMPs) and Best Available Technologies (BATs). The SWPPP shall also include means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control. Typical BMPs that could be used during construction of the proposed projects include, but are</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>not limited to temporary facilities such as straw wattles and sandbags. Temporary facilities will capture a majority of the siltation resulting from construction activities prior to discharging into existing natural channels. The construction contractor shall be required to comply with the permit and implement, monitor, and maintain all BMPs during construction to ensure they function properly for review and approval of the City Engineer."</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the issuance of grading permits and during construction.</i></p>	
4.10-4 Impacts to groundwater recharge.	LS	<i>None required.</i>	N/A
4.10-5 Impacts related to regional flooding.	PS	<p><i>4.10-5(a) The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>"Prior to recording any Final Map, the applicant(s) shall prepare and submit a grading plan with hydraulic analysis that demonstrates that the developable area would no longer be in a special flood hazard area (as defined by the then-applicable City Floodplain Management Ordinance [Wheatland Municipal Code chapter 15.12]) in accordance with the then-applicable City Floodplain Management Ordinance. The plan will be subject to review and approval by the City Engineer</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>and the final map will not be approved until after the City Engineer has approved the plan.</i></p> <p><i>Or</i></p> <p><i>Prior to recording any Final Map, the applicant(s) shall show proof that all structures are designed to be at least two feet above the base flood elevation in accordance with the then-applicable City Floodplain Management Ordinance, for review and approval by the City Engineer."</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the recording of any Final Map.</i></p> <p><i>4.10-5(b) Project development and subsequent project-related approvals shall comply with and be subject to the Central Valley Flood Protection Plan to be adopted by the State, pursuant to Government Code section 65302.9, the related implementing amendments to the Wheatland General Plan and zoning code, and the limitations of Government Code sections 65865.5, 65962 and 66474.5.</i></p>	
4.10-6 Cumulative increases in peak stormwater flows into the existing drainage system and regional flooding.	LS	None required.	N/A
4.10-7 Cumulative adverse impacts to	LS	None required.	N/A

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
water quality.			
4.11 Mineral Resources			
4.11-1 Loss of availability of a known State, regional, and/or locally valuable mineral resource.	LS	<i>None required.</i>	N/A
4.11-2 Long-term loss of mineral resource availability from the proposed project in combination with existing and future developments in the City of Wheatland study area.	LS	<i>None required.</i>	N/A
4.12 Population, Employment, and Housing			
4.12-1 Impacts to jobs-to-housing ratio.	LS	<i>None required.</i>	N/A
4.12-2 Long-term impacts to population, housing, employment, and jobs-to-housing ratio from the proposed project in combination with existing and future developments in the Wheatland area.	S	<i>None feasible.</i>	SU
4.13 Public Services and Utilities			
4.13-1 Adequate water supply and delivery for new residents.	PS	<p><i>Hop Farm and Johnson Rancho Properties</i></p> <p><i>4.13-1(a) In conjunction with the submittal of the first zoning or tentative map application for development within the Johnson Rancho and Hop Farm Annexation area, to ensure proper management of groundwater supply, the applicant(s) shall submit a long term groundwater</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>monitoring plan for the project wells to ensure that the new concentration of urban supply wells is not causing groundwater depletion, nor adversely affecting the City's water supply. The monitoring plan shall include an appropriate funding mechanism for the implementation of the plan. The groundwater monitoring plan and funding mechanism shall be reviewed and approved by the Planning Commission and/or City Council prior to approval of the first zoning or tentative map application.</i></p> <p>4.13-1(b) <i>In conjunction with the submittal of each zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, a Water Supply Verification (SB 221) shall be conducted to ensure that sufficient water supply needed for the project is available and can be provided by the City. The Water Supply Verification showing adequate supply for the Hop Farm portion of the project shall be reviewed and approved by the Planning Commission and/or City Council prior to approval of the each zoning or tentative map application.</i></p> <p><i>Hop Farm Property</i></p> <p>4.13-1(c) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Hop Farm area:</i></p>	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>“Prior to issuance of building permits, the applicant(s) shall pay the City’s Development Water Impact Fees, as determined by the City Engineer and Department of Public Works.”</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the issuance of building permits.</i></p> <p><i>Johnson Rancho Property</i></p> <p><i>4.13-1(e) The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho area:</i></p> <p><i>“Prior to issuance of building permits for any future development within the Johnson Rancho portion of the project, the City of Wheatland Public Facilities Financing Plan shall be updated to include the water supply and conveyance improvements, and their associated costs, needed to provide the water required by the Johnson Rancho portion of the proposed project. The project applicant(s) within the Johnson Rancho portion of the project site shall be required to pay the City’s updated Water Impact Fees, as determined by the City Engineer and Department of Public Works.”</i></p> <p><i>Compliance with this condition shall be ensured by the</i></p>	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>City Engineer prior to the issuance of building permits.</i>	
4.13-2 Adequate wastewater facilities for new residents.	S	<p><i>Johnson Rancho and Hop Farm Properties</i></p> <p>4.13-2(a) <i>Should plans and a fee program for a new regional WWTP that includes the City of Wheatland be approved prior to submittal of the first zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall comply with the plans and fee program for the WWTP including, but not limited to, payment of any applicable fees. If plans for a new regional WWTP that includes the City of Wheatland have not been approved prior to submittal of the first zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, Mitigation Measures 4.13-2(b) through 4.13-2(f) shall be implemented.</i></p> <p>4.13-2(b) <i>The City shall not approve any tentative map for the proposed project until after the City has approved and implemented a WWTP construction plan and related financing plan.</i></p> <p><i>Hop Farm Property</i></p> <p>4.13-2(c) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Hop Farm area:</i></p>	SU

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>“Prior to issuance of building permits, the project applicant(s) shall be required to pay the City’s Wastewater Development Impact Fees, as determined by the City Engineer.”</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the issuance of a building permit.</i></p> <p>4.13-2(d) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Hop Farm area:</i></p> <p><i>“Prior to occupancy, adequate wastewater treatment and sewer collection system capacity shall exist to accommodate the project, as determined by the City Engineer.”</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the occupancy of any buildings.</i></p> <p><i>Johnson Rancho Property</i></p> <p>4.13-2(e) <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho area:</i></p> <p><i>“Prior to issuance of building permits for any future</i></p>	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>development within the Johnson Rancho portion of the project, the City of Wheatland Public Facilities Financing Plan shall be updated to include the sewer treatment and conveyance improvements, and their associated costs, needed to accommodate the 3.832 MGD ADWF sewer demand created by the Johnson Rancho portion of the proposed project. The project applicant(s) within the Johnson Rancho portion of the project site shall be required to pay the City's updated Wastewater Development Impact Fees, as determined by the City Engineer."</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the issuance of building permits.</i></p> <p><i>4.13-2(f) The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho area:</i></p> <p><i>"Prior to occupancy, adequate wastewater treatment and sewer collection system capacity shall exist to accommodate the project, as determined by the City Engineer."</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the occupancy of any buildings.</i></p>	
4.13-3 Need for additional waste disposal/recycling services.	PS	<p><i>4.13-3 The City shall include the following as a condition of approval on each tentative map application for any</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“Prior to the issuance of grading permits for the Johnson Rancho and Hop Farm Annexation project, the project applicant(s) shall submit a recycling plan for construction materials to the City for review and approval. The plan shall include that all materials that would be acceptable for disposal in the sanitary landfill be recycled/reused. Documentation of the material type, amount, where taken and receipts for verification and certification statements shall be included in the plan. The project applicant(s) shall cover all staff costs related to the review, monitoring and enforcement of this condition through the deposit account.”</i></p> <p><i>Compliance with this condition shall be ensured by the Community Development Department prior to the issuance of grading permits.</i></p>	
4.13-4 Adequate ratio of law enforcement personnel to residents.	PS	<p><i>Hop Farm Property</i></p> <p><i>4.13-4(a) The City shall include the following as a condition of approval on each tentative map application for any development within the Hop Farm area:</i></p> <p><i>“Prior to issuance of building permits, the applicant(s) shall be required to pay the City’s Police Development Impact Fees.”</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>Compliance with this condition shall be ensured by the Community Development Department prior to the issuance of building permits.</i></p> <p><i>Johnson Rancho Property</i></p> <p><i>4.13-4(b) The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho area:</i></p> <p><i>“Prior to issuance of building permits for any future development within the Johnson Rancho portion of the project, the City of Wheatland Public Facilities Financing Plan shall be updated to include the law enforcement personnel and equipment, and their associated costs, needed to provide adequate service to the Johnson Rancho portion of the proposed project. The project applicant(s) within the Johnson Rancho portion of the project site shall be required to pay the City’s updated Police Development Impact Fees.”</i></p> <p><i>Compliance with this condition shall be ensured by the Community Development Department prior to the issuance of building permits.</i></p>	
4.13-5 Adequate fire protection services available to new residents.	PS	<p><i>Hop Farm Property</i></p> <p><i>4.13-5(a) The City shall include the following as a condition of</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>approval on each tentative map application for any development within the Hop Farm area:</i></p> <p><i>“Prior to issuance of building permits, the applicant(s) shall be required to pay the City’s Fire Protection Development Impact Fees.”</i></p> <p><i>Compliance with this condition shall be ensured by the Community Development Department prior to the issuance of building permits.</i></p> <p><i>4.13-5(b) The City shall include the following as a condition of approval on each zoning or tentative map application for any development within the Hop Farm area:</i></p> <p><i>“Prior to approval of Improvement Plans for any subsequent development applications within the Hop Farm portion of the project site, the plans shall include fire sprinkler systems in all buildings per UFC and UBC standards, as determined by the WFA Fire Chief and City Engineer. In addition, the improvement plans shall demonstrate that minimum fire flows can be provided, as follows (unless otherwise approved by the WFA Fire Chief): <u>3,500 gpm for business and commercial areas and 1,000 gpm for all single family dwellings</u>. Greater flows shall be required by the Fire Chief and/or Uniform Fire Code for multiple-family dwellings.”</i></p>	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>Compliance with the condition shall be ensured by the City Engineer and Fire Chief prior to the approval of Improvement Plans.</i></p> <p><i>Johnson Rancho Property</i></p> <p><i>4.13-5(c) The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho area:</i></p> <p><i>“Prior to issuance of building permits for any future development within the Johnson Rancho portion of the project, the City of Wheatland Public Facilities Financing Plan shall be updated to include the fire protection personnel and equipment, and their associated costs, needed to provide adequate service to the Johnson Rancho portion of the proposed project, including but not limited to a new three-bay fire station. The project applicant(s) within the Johnson Rancho portion of the project site shall be required to pay the City’s updated Fire Protection Development Impact Fees.”</i></p> <p><i>Compliance with this condition shall be ensured by the Community Development Department prior to the issuance of building permits.</i></p>	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>4.13-5(d) <i>The City shall include the following as a condition of approval on each zoning or tentative map application for any development within the Johnson Rancho area:</i></p> <p><i>“Prior to approval of Improvement Plans for any subsequent development applications within the Johnson Rancho portion of the project site, the plans shall include fire sprinkler systems in all buildings per UFC and UBC standards, as determined by the WFA Fire Chief and City Engineer. In addition, the improvement plans shall demonstrate that minimum fire flows can be provided, as follows (unless otherwise approved by the WFA Fire Chief): <u>3,500 gpm for business and commercial areas and 1,000 gpm for all single family dwellings.</u> Greater flows shall be required by the Fire Chief and/or Uniform Fire Code for multiple-family dwellings.”</i></p> <p><i>Compliance with the condition shall be ensured by the City Engineer and Fire Chief prior to the approval of Improvement Plans.</i></p>	
4.13-6 Number of enrolled students exceeding capacity.	PS	<p>4.13-6 <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“The applicant(s) shall be required to pay all applicable</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>school impact fees in effect at the time of building permit issuance.”</i></p> <p><i>Compliance with the condition shall be ensured by the Community Development Department prior to the issuance of building permits.</i></p>	
4.13-7 Adequate provision of parks and recreation space for new residents.	PS	<p>4.13-7(a) <i>In conjunction with the submittal of the first zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the map shall indicate that a ratio of at least five acres of park for every 1,000 residents is provided, for the review and approval of the Wheatland Community Development Director.</i></p> <p>4.13-7(b) <i>The project applicant for each subsequent zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, shall pay the appropriate in lieu park fee at the time of recording the Final Map, as determined by the Wheatland Community Development Director.</i></p>	LS
4.13-8 Increase in electricity and natural gas demand.	PS	<p>4.13-8 <i>The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:</i></p> <p><i>“Prior to issuance of building permits, the applicant shall coordinate with PG&E and the City of Wheatland to determine the electrical and gas utilities and/or</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>easements needed to serve the project. The Improvement Plans for the project(s) shall incorporate the necessary easements and improvements for the review and approval by the City Engineer. The applicant(s) shall be responsible for all costs associated with the identified improvements.”</i></p> <p><i>Compliance with this condition shall be ensured by the City Engineer prior to the issuance of building permits.</i></p>	
4.13-9 Increase in demand for additional public services and utilities as a result of the proposed project and other projects proposed in the Wheatland area.	S	None feasible.	SU

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3

PROJECT DESCRIPTION

INTRODUCTION

The Project Description chapter of the EIR provides a comprehensive description of the Johnson Rancho and Hop Farm Annexation project (proposed project) components. More specifically, this description identifies the current characteristics of the project site, including current property owners, as well as proposed annexation boundaries and the type and intensity of proposed land uses. The Project Description chapter also includes a list of comprehensive entitlements for the project and the purposes and objectives of the project.

SITE CHARACTERISTICS

The proposed project is located east of the City of Wheatland, outside of the City limits, and within the Wheatland Sphere of Influence (SOI) (See Figure 3-1, Regional Location Map). The proposed project is located on approximately 4,149 acres of primarily agricultural land, which contains scattered residences. The project site is generally bordered by the Yuba County/Placer County line to the south; Wheatland city limits, State Route (SR) 65 and the Union Pacific Railroad (UPRR) tracks to the west; Spenceville Road and Dry Creek to the north; and the eastern boundary of the Wheatland SOI to the east (See Figure 3-2, Annexation Boundaries).

The project site is currently made up of the following ownerships: Johnson's Crossing, AKT Wheatland Ranch, Dave Browne, and Browne Cattle Company; Bear River Hop Farm and Wheatland Hop Farm; and the five "Wheatland Parcels" (See Figure 3-3, Property Owner Exhibit). For ease of discussion throughout the remainder of this Draft EIR, the project area east of the Wheatland Expressway alignment, outside of the General Plan Study Area, and currently designated as proposed Urban Reserve, will be referred to as the "**Johnson Rancho**" portion of the project site. The area west of the Wheatland Expressway alignment, within the General Plan Study Area, will be referred to as the "**Hop Farm**" portion of the project site.

Johnson Rancho

The area of the project site east of the Wheatland Expressway alignment is composed of the following three sets of major properties: Johnson Crossing (Assessor's Parcel Number [APN(s)]: 015-160-029, 015-160-098, 015-036-024, 015-036-025, 015-037-001, 015-080-020, 015-360-038, 015-160-095, and 015-160-096), AKT Wheatland Ranch (APNs: 015-360-026, 015-360-028, 015-360-029, 015-360-030, 015-360-031, and 015-360-032), Dave Browne (APN: 015-057-006), and Browne Cattle Company (APN: 015-056-005).

**Figure 3-1
Regional Location Map**

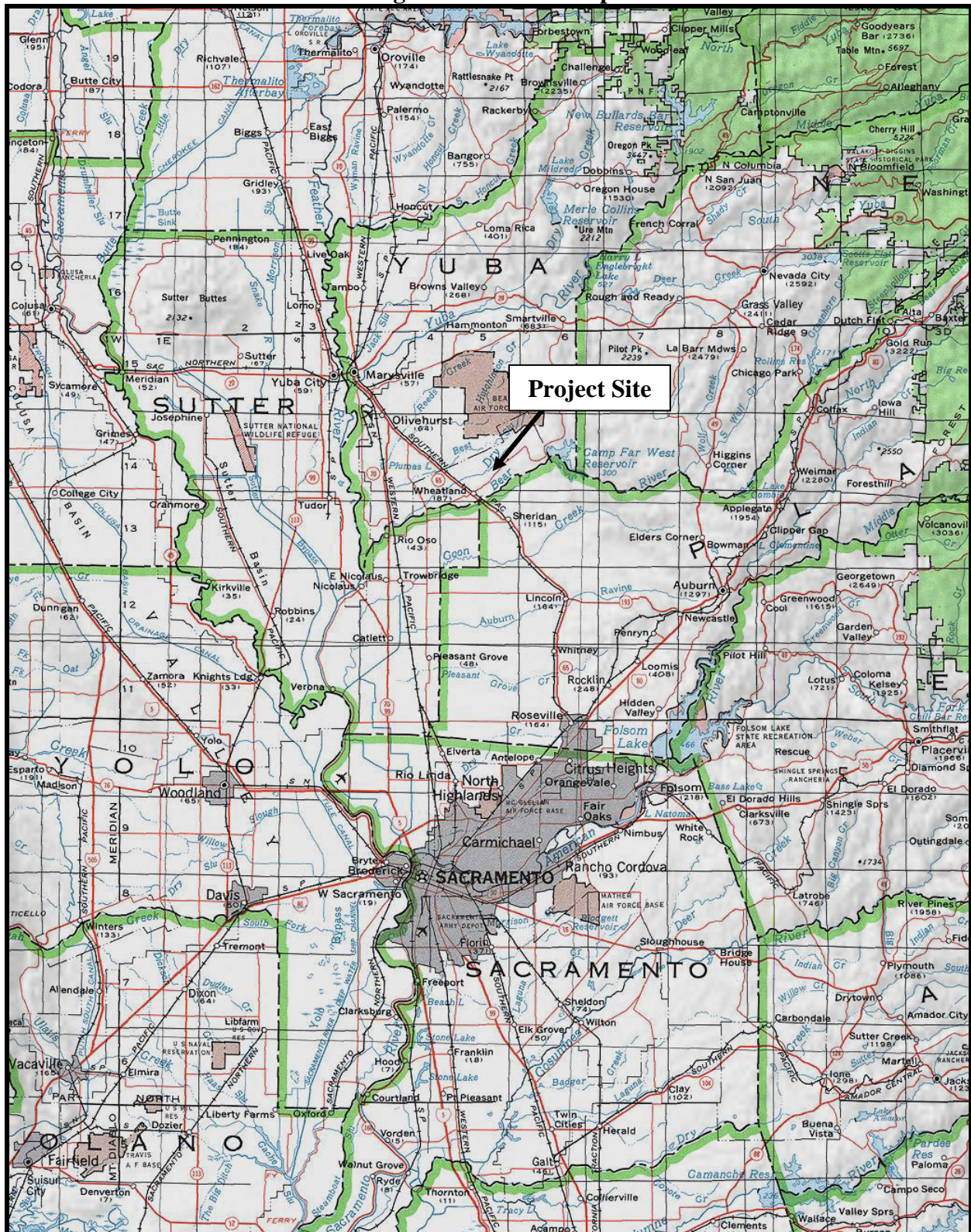


Figure 3-2
Annexation Boundaries

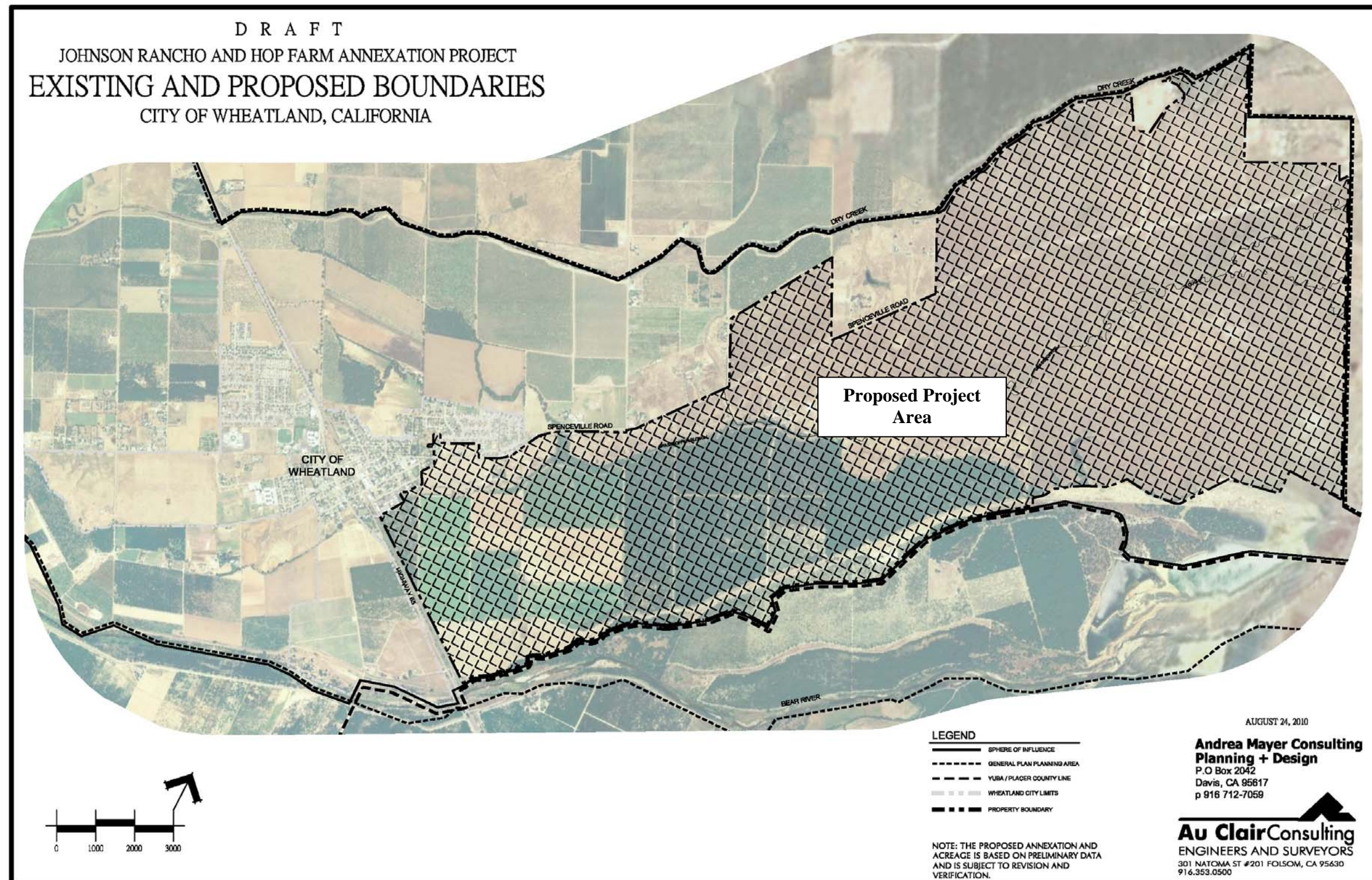
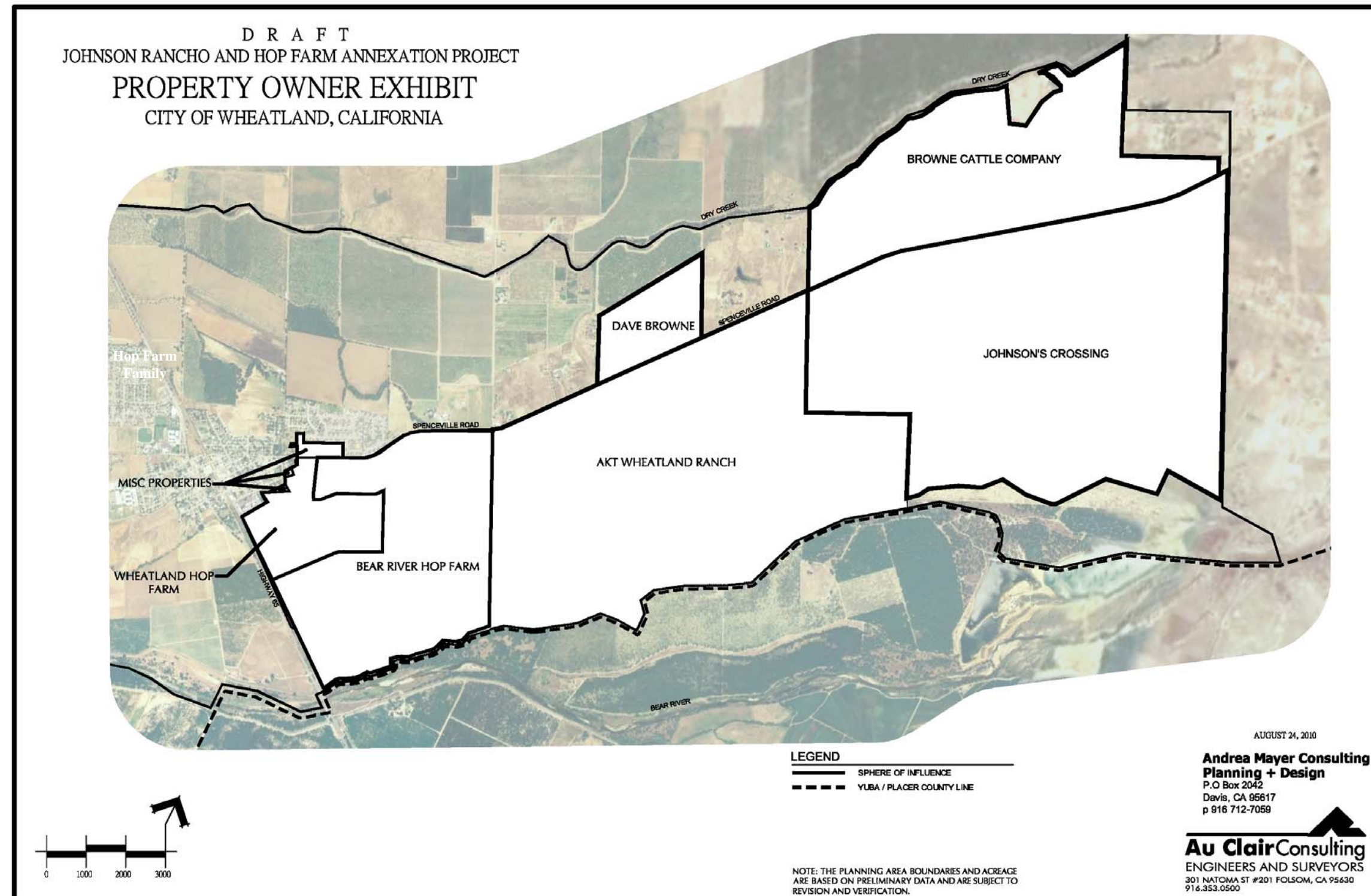


Figure 3-3
Property Owner Exhibit



Hop Farm

Bear River Hop Farm

The eastern and southern portion of the Hop Farm portion of the project site is owned by the Bear River Hop Farm Family (APNs: 015-360-033, 015-360-052, and 015-360-053).

Wheatland Hop Farm

The northwestern portion of the Hop Farm portion of the project site is owned by Wheatland Hop Farm LLC (APN: 015-360-051).

Wheatland Parcels

The City is including a total of five parcels in the proposed annexation area for the project so as to avoid the creation of “islands” of unincorporated territory once the applicant’s annexation area becomes part of the City of Wheatland. As a result, these parcels will also need to be rezoned with City zoning, as this is a standard requirement for annexation of properties only having County zoning. The Wheatland Parcels are identified as APNs: 015-213-009, 015-360-001, 015-360-007, 015-191-014, and 015-191-006 (See Figure 3-4, Wheatland Parcels). The Wheatland Parcels are described generally in the following section.

APN 015-191-006 and APN 015-191-014

The abovementioned parcels are located immediately outside of the city limits and just northwest of the project site. The two properties are currently designated Low Density Residential in the Wheatland General Plan, with a buildout potential of six dwelling units. APN 015-191-006 is 0.13-acre and is currently vacant. APN 015-191-014 is 2.08 acres and currently includes a house, shed, and garage.

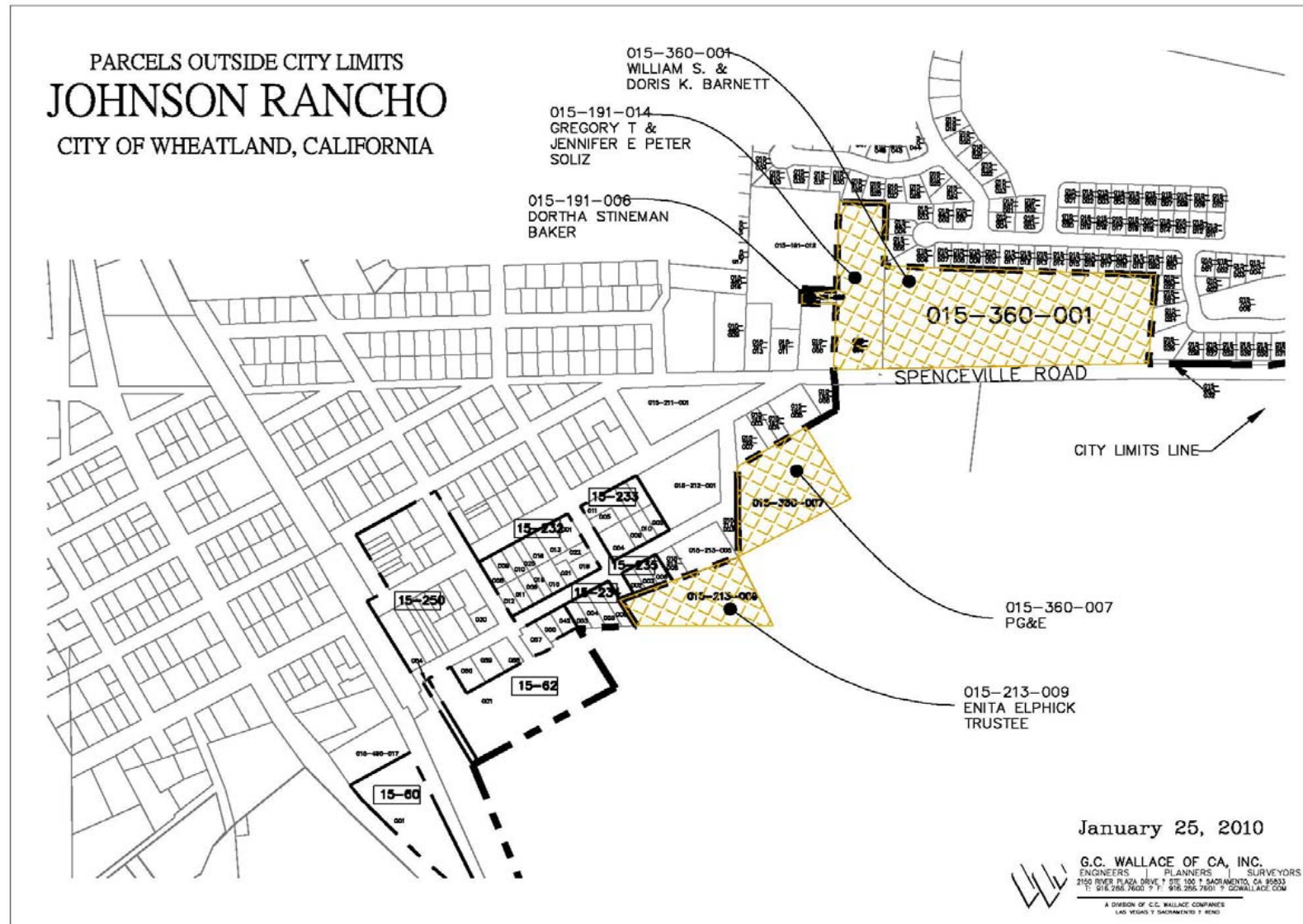
APN 015-213-009 and APN 015-360-001

The abovementioned parcels are located immediately outside of the city limits and just northwest of the project site. The two properties are currently designated Medium Density Residential in the Wheatland General Plan, with a buildout potential of 72 dwelling units. APN 015-213-009 is 2.21 acres and APN 015-360-001 is nine acres, both of which are currently vacant.

APN 015-360-007

The abovementioned parcel is located immediately outside of the city limits and just northwest of the project site. This property, also just outside the city limits, is designated Commercial in the General Plan. APN 015-360-007 is a one-acre parcel and is currently used as a PG&E substation.

**Figure 3-4
Wheatland Parcels**



PROJECT COMPONENTS

Annexation

Johnson Rancho

The Johnson Rancho portion is currently located outside the Wheatland city limits but within the existing Wheatland SOI. The Johnson Rancho portion would include the annexation of the entire 3,357-acre Johnson Rancho portion to the City of Wheatland. For this annexation to occur, the City Council or property owner must approve and submit an annexation application to the Yuba County Local Agency Formation Commission (LAFCo) for approval.

Hop Farm

Bear River Hop Farm and Wheatland Hop Farm

The Hop Farm portion is currently located outside the Wheatland city limits but within the existing Wheatland SOI. The Bear River Hop Farm and Wheatland Hop Farm properties would include the annexation of the 529-acre Bear River Hop Farm and 145-acre Wheatland Hop Farm to the City of Wheatland. For this annexation to occur, the City Council or property owner must approve and submit an annexation application to Yuba County LAFCo for approval.

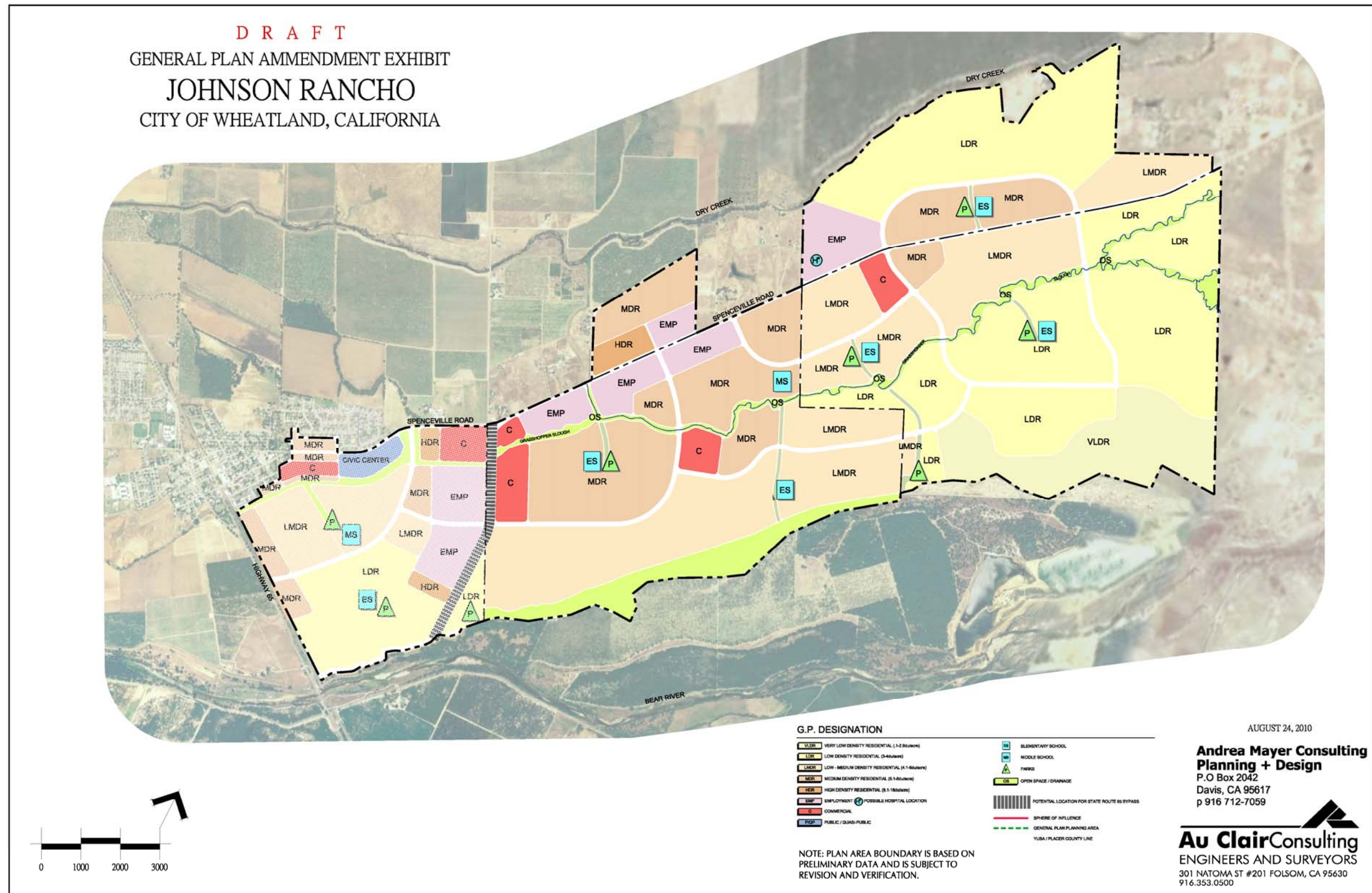
General Plan Amendment

Johnson Rancho

The General Plan Amendment request for the proposed project is only for the Johnson Rancho portion of the project site, which is currently designated Urban Reserve (UR) in the Wheatland General Plan. UR is generally defined in the General Plan Policy Document as land that may be considered for future development with urban uses.¹

The proposed project includes a General Plan Amendment request to designate Johnson Rancho with the following City of Wheatland General Plan land use designations: Very Low Density Residential (VLDR), Low Density Residential (LDR), Low to Medium Density Residential (LMDR), Medium Density Residential (MDR), Employment (EMP), Commercial (C), Public (PUBLIC), and Park and Open Space (PARK) (See Figure 3-5, General Plan Amendment Exhibit). It should be noted that the 2006 General Plan Land Use Diagram does not include a VLDR designation. Therefore, as part of the General Plan Amendment for the proposed project, a new VLDR designation will need to be adopted and reflected on the General Plan Land Use Diagram accordingly. The proposed language for the VLDR designation is as follows:

Figure 3-5
General Plan Amendment Exhibit



Very Low Density Residential

This designation provides for single family detached homes, secondary residential units, public and quasi-public uses, and similar and compatible uses. Residential densities shall be in the range of 0.1 to 2.9 units per gross acre.

Hop Farm

Bear River Hop Farm and Wheatland Hop Farm

The Hop Farm portion of the project's annexation area (consisting of the Bear River Hop Farm, Wheatland Hop Farm, and five Wheatland Parcels) was included in the 2006 General Plan Study Area and has therefore already been assigned General Plan land use designations and evaluated for such development in the Wheatland General Plan EIR. The existing Wheatland General Plan land use designations for the Hop Farm portion are as follows: Low Density Residential (LDR), Low-Medium Density Residential (LMDR), Medium Density Residential (MDR), High Density Residential (HDR), Employment (EMP), Commercial (C), Civic Center, Park (P), and School (S). The General Plan designations for the five Wheatland Parcels are LDR, MDR, and Commercial (See Figure 3-5). Current land use designations for the Hop Farm portion of the project site will not be changed as part of the proposed project.

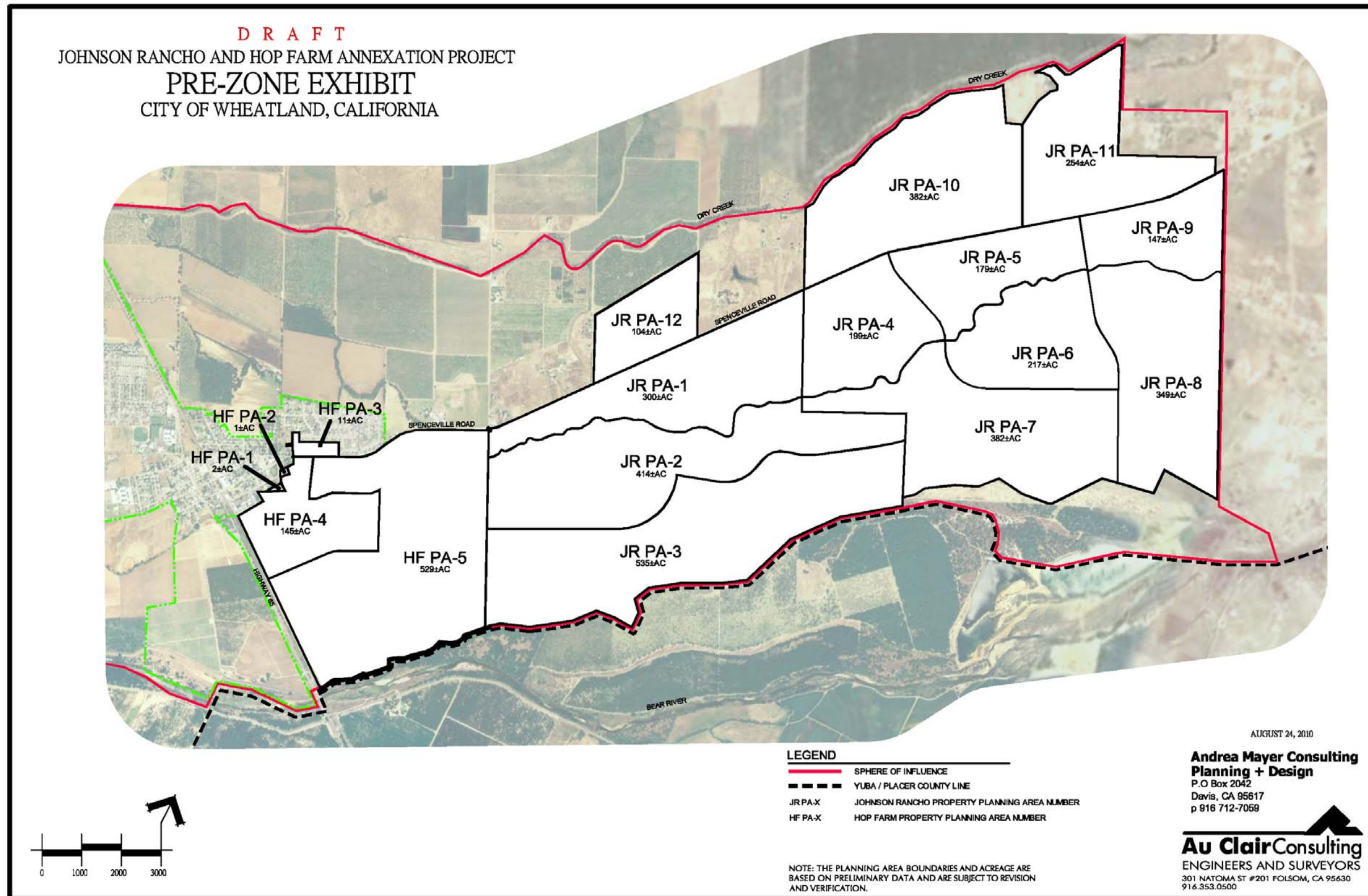
Prezone

Johnson Rancho

The existing parcels on the Johnson Rancho portion have various Yuba County agricultural zoning designations, including Agricultural Exclusive with a 10-acre minimum (AE-10), Agricultural Exclusive with a 40-acre minimum (AE-40), and Agricultural Exclusive with an 80-acre minimum (AE-80). The proposed project involves a request to prezone the Johnson Rancho portion to Planned Development (PD) District (See Figure 3-6, Prezone Exhibit).

The purpose of the PD District is to allow diversification in the relationship of various buildings, structures and open spaces in order to be relieved from the rigid standards of conventional zoning. The PD is required to comply with the regulations and provisions of the General Plan and the City of Wheatland PD Ordinance. The proposed project has developed adequate standards to promote the public health, safety and general welfare without unduly inhibiting the advantages of modern building techniques and planning for residential, commercial or industrial purposes; these standards are in the form of a Stage 1 Development Plan that has been prepared for the Johnson Rancho portion of the project. As is allowable under the PD Ordinance regulations, the applicant(s) will submit, at a later date, Stage 2 Development Plan(s) for portions of the entire Planned Development Zoning District as separate zoning ordinance amendment(s).

Figure 3-6
Prezone Exhibit



A Stage 2 Development Plan shall include and establish permitted, conditionally permitted, and accessory uses; Stage 2 site plan, site area and maximum proposed densities; maximum numbers of residential units by type and non-residential square footage for each use; development regulations and standards for all development within the area, which may include lot areas, lot square footage per dwelling unit, lot width and frontage, lot depth, setbacks, distances between buildings and structures, maximum lot coverage, common useable outdoor space, floor area ratios, height limits, parking, driveways, loading areas, signage, fencing, grading standards, and trash enclosures; architectural standards; and master landscape plan.

Hop Farm

Bear River Hop Farm and Wheatland Hop Farm

The existing parcels on the Hop Farm portion have various Yuba County agricultural zoning designations, including Agricultural Exclusive with a 10-acre minimum (AE-10), Agricultural Exclusive with a 40-acre minimum (AE-40), and Agricultural Exclusive with an 80-acre minimum (AE-80). The proposed project involves a request to prezone the Hop Farm portion to PD District (See Figure 3-6, Prezone Exhibit).

As previously stated, the purpose of the PD District is to allow diversification in the relationship of various buildings, structures and open spaces in order to be relieved from the rigid standards of conventional zoning. A distinct Stage 1 Development Plan has been prepared for the Hop Farm portion of the project. The Hop Farm Stage 1 Development Plan includes adequate standards to promote the public health, safety and general welfare without unduly inhibiting the advantages of modern building techniques and planning for residential, commercial or industrial purposes. As is allowable under the PD Ordinance regulations, the applicant(s) will submit, at a later date, development plans for portions of the entire Planned Development Zoning District as separate zoning ordinance amendment(s).

Wheatland Parcels

The existing five Wheatland Parcels have the following County zoning designations: APN 015-360-001 = AE-10; APN 015-191-014 and -006; 015-360-007; and 015-213-009 = AE-40. Given the parcels' current Wheatland General Plan Land Use Designations assigned in 2006, the parcels would be rezoned as shown in Table 3-1, Wheatland Parcels – Prezoning Designations.

Table 3-1		
Wheatland Parcels – Prezoning Designations		
APN	Existing Wheatland General Plan Designation	Prezone
015-360-001	Medium Density Residential	R-2
015-191-014	Low Density Residential	R-1
015-191-006	Low Density Residential	R-1
015-360-007	Commercial	C-2
015-213-009	Medium Density Residential	R-2

Development Agreement

The City anticipates negotiating a development agreement with River West Investments. The Development Agreement would apply only to the part of the Johnson Rancho portion of the property that is controlled by River West Investments. The development agreement, which is not drafted at this time, would implement and be consistent with this project description. In reviewing a future development agreement, the City would utilize this EIR.

Proposed Project Land Use Summary

With the land uses shown on Figure 3-5, a total of 14,396 dwelling units (dus) are proposed for the entire project area, consisting of 13,330 single-family dus, 556 multi-family dus, and an additional 500 dus within non-residential land uses. The total proposed acreage consists of approximately 3,249 acres of residential, 131 acres of commercial, 274 acres of employment, 55 acres of elementary schools, 40 acres of middle schools, 24 acres of civic center, 50 acres of parks, 57 acres of linear parkway, approximately 238 acres of open space/drainage, and 31 acres for the proposed Wheatland Expressway.

Johnson Rancho

The Johnson Rancho portion would include the development of up to approximately 12,481 dus, varying from single-family, multi-family, and mixed use residential on 3,461 acres located within Yuba County. Development of the Johnson Rancho portion would include other land uses such as Employment/Office, Commercial, Elementary and Middle Schools, Parks, Linear Parkway, and Open Space. The proposed project would result in the following land use total as shown in Table 3-2, Land Use Matrix.

Hop Farm

Bear River Hop Farm

The Bear River Hop Farm property would include the development of up to approximately 1,265 dus, varying from Low to High Density Residential, on approximately 529 acres. Development of the proposed project would include other land uses such as Employment/Office, Commercial, Civic Center, Elementary School, Parks, and Linear Parkway. The proposed project would result in the following land use total as shown in Table 3-2, Land Use Matrix.

Wheatland Hop Farm

The Wheatland Hop Farm property would include the development of up to approximately 572 dus, varying from Low-Medium to Medium Density Residential, on approximately 145 acres. Development of the proposed project would include other land uses such as Commercial, Middle School, Parks, and Linear Parkway. The proposed project would result in the following land use total, as shown in Table 3-2, Land Use Matrix.

**Table 3-2
Land Use Matrix**

	Johnson Crossing			Bear River Hop Farm			Wheatland Hop Farm			Dave Browne			Wheatland Parcels			Total	
	Acres (±)		Units (du)	Acres (±)		Units (du)	Acres(+)		Units (du)	Acres (±)		Units (du)	Acres (±)		Units (du)	Acres (±)	Units (du)
Very Low Density Residential (.1-2.9du/acre)	245.0	1.5 du/ac	367 du	0.0	1.5 du/ac		0	1.5 du/ac	0	0.0			0.0			245.0	367.0 du
Low Density Residential (3-4du/acre)	1,097.0	3 du/ac	3,291 du	218.0	2.26 du/ac	493 du	0	3 du/ac	0	0.0			2.2	3.0 du/ac	6 du	1,317.2	3,790.0 du
Low-Medium Density Residential (4.1-6du/acre)	853.0	5 du/ac	4,265 du	56.8	5 du/ac	284 du	78	5 du/ac	390	0.0						987.8	4,939.0 du
Medium Density Residential (6.1-8du/acre)	515.0	6.5 du/ac	3,347 du	43.5	6.5 du/ac	282 du	28	6.5 du/ac	182	54.0	6.5 du/ac	351 du	11.2	6.5 du/ac	72 du	651.7	4,234.0 du
High Density Residential (8.1-16du/acre)	0.0	12 du/ac		17.2	12 du/ac	206 du	0	12 du/ac	0	30.0	12 du/ac	360 du	0.0			47.2	566.0 du
SUBTOTAL	2,710.0		11,270 du	335.5		1,265 du	106		572	84.0		711 du	13.4		78 du	3,248.9	13,896.0 du
Employment/Office	177.0		300 du*	77.3			0			20.0						274.3	300.0 du
Village Center* (COMM/OFFICE/MF/POTENTIAL HOSPITAL)	0.0			0.0			0.0									0.0	
Commercial	101.0		200 du*	25.0			4						1.0 (015-360-007)			131.0	200.0 du
Elementary School	45.0			10.0			0									55.0	
Middle School	20.0			0.0			20									40.0	
Recreation Center/Clubhouse	0.0			0.0			0									0.0	
Civic Center	0.0			24.0			0									24.0	
SUBTOTAL	343.0		500 du*	136.3			24			20.0			1.0			524.3	500.0 du
Parks	35.0			10.0			5									50.0	
Linear Parkway	28.0			19.0			10									57.0	
Open Space/Drainage	225.0			13.2			0									238.2	
SUBTOTAL	288.0			42.2			15									345.2	
Potential Highway 65 Bypass	16.0			15.0			0									31.0	
SUBTOTAL	16.0			15.0			0									31.0	
SUBTOTAL:	3,357.0		11,770 du	529.0		1,265 du	145		572 du	104.0		711 du	14.4		78 du	4,149.4	14,396.0 du

* Includes Potential for Mixed Use Dwelling Units

Residential

The proposed project includes a mix of residential land uses, including single family residential at varying densities, as well as multi-family residential and mixed use residential. The proposed project includes approximately 13,330 single-family dus. The proposed project would offer a variety of residential lot sizes, allowing for a blend of housing styles, sizes, and price ranges within a single community. Single-family residential is the largest land use component of the proposed project. Single-family homes are dispersed throughout the planning area, defined by landforms, street systems, and other land uses to create cohesive neighborhoods. The proposed project contains single-family residential designated as VLDR (0.1-2.9 du/acre), LDR (3-4 du/acre), LMDR (4.1-6 du/acre), or MDR (6.1-8 du/acre) and multi-family residential designated as HDR (8.1-16 du/acre). There is an element of intentionality to the land use plan whereby the largest lot residences are proposed in the southeastern corner of the project site, along the expansive bluff area that contains interspersed woodland and natural intermittent drainage features. Consistent with principles of smart-growth, denser residential areas are proposed in near proximity to commercial and employment nodes, centered around the Wheatland Expressway and Spenceville Road.

Commercial

The proposed project includes approximately 131 acres of Commercial. A total of four commercial lots are proposed for the Johnson Rancho portion of the site, and two commercial lots have already been designated in the General Plan for the Hop Farm portion. In general, the commercial areas are proposed in areas of the project Land Use Plan with high visibility and circulation, so as to attract not only residents and employees within the project and throughout the City of Wheatland, but also travelers along the proposed Wheatland Expressway passing through.

Employment and Civic Center

The proposed project includes approximately 274 acres of Employment and 24 acres of Civic Center land use area. A total of five employment lots are proposed for the Johnson Rancho portion of the site, and two lots have already been designated in the General Plan for the Hop Farm portion. The two employment lots are located east of the Hop Farm portion and along the Wheatland Expressway. The five employment lots proposed for the Johnson Rancho portion are located along the northern boundary of the project site and centered around Spenceville Road. The Employment land use acreage is intended to provide needed jobs for both existing City residents and future residents in the Johnson Rancho and Hop Farm Annexation Project. A Civic Center lot has already been designated in the General Plan for the Hop Farm portion. The Civic Center is surrounded by open space, commercial, and residential uses.

School Sites

The proposed project includes approximately 95 acres for future schools. A total of five elementary schools and one middle school are proposed for the Johnson Rancho portion of the site, and one elementary school and one middle school have already been designated in the General Plan for the Hop Farm portion. The schools located in the overall project area are intentionally surrounded by

residential uses. All elementary and middle schools within the proposed project are dispersed accordingly to serve the population from new residential developments. It should be noted that the final locations of the school sites will be determined in consultation with the Wheatland school districts.

Transportation and Circulation

The proposed project includes an amendment to the General Plan Circulation Diagram to extend the major roadway network from the existing General Plan Study Area throughout the proposed project. The following arterials and collectors identified in Figure 3-7 would constitute the major roadway network for the project site (See Figure 3-7, Johnson Rancho and Hop Farm Annexation Circulation Exhibit).

Arterials

The proposed project would include three major arterials, one of which, Spenceville Road, currently exists. Spenceville Road would continue to provide the primary east-west access through the project site. Another arterial would provide access to the western portion of the project area, including the Wheatland Expressway from the proposed “ring road” (west) and Spenceville Road (east). The third arterial would provide primary neighborhood access to the eastern area of the Johnson Rancho portion of the project site, south of Spenceville Road.

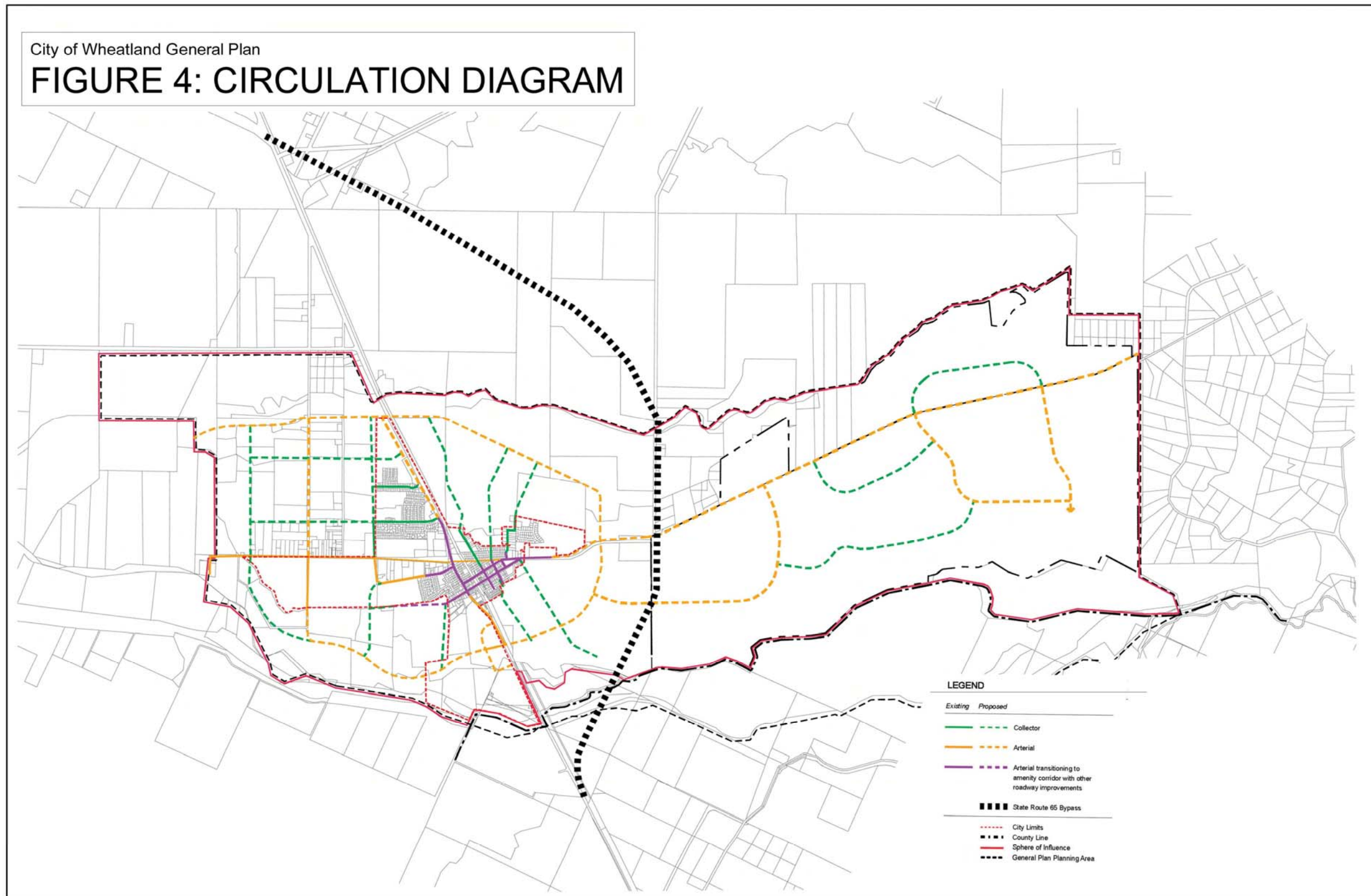
Collectors

The proposed project would include three collectors in the Johnson Rancho portion of the site. The three collectors would be generally oriented in an east-west direction, serving various neighborhoods. For the Hop Farm portion of the project site, two northwest to southeast collectors have been identified in the General Plan Circulation Diagram.

Wheatland Expressway

The Wheatland Expressway is located generally between the Hop Farm and Johnson Rancho portions of the project site, along the existing Jasper Lane alignment. The total area of the planned expressway is approximately 31 acres. The expressway alignment shown in Figure 3-7 is the alignment adopted in the 2006 General Plan Update; this alignment would not be changed as part of the proposed project. Initially, the proposed Wheatland Expressway would include at-grade intersections with Spenceville Road and the proposed arterial to the south.

Figure 3-7
Johnson Rancho and Hop Farm Annexation Circulation Exhibit



Open Space, Parks, and Trails

The proposed project includes a mix of open space, parks, and trails. The proposed project includes a total of approximately 238 acres of open space/drainage, eight parks totaling 50 acres, and 57 acres of linear parkway. The open space includes an extensive corridor along existing Grasshopper Sough, which would have open space trail junctions at intermittent points throughout the corridor, leading to parks. In addition, the AKT Wheatland Ranch property within the Johnson Rancho portion of the site includes an open space area at its southern boundary to serve as a buffer from adjacent orchards.

The proposed parks would provide various recreational activities and would be paired with schools or open space areas. Parks paired with the designated open space areas would serve as a conduit for pedestrian and bike traffic from the nearby trails. At various junctures along the trail system, access points would be made to the street and sidewalk network within the proposed project. The proposed open space, parks, and trails are all closely linked so as to provide a sense of connectivity throughout the project site.

Public Services

The following discussion includes a brief description of the project's infrastructure systems. A more detailed description of utilities is included in Chapter 4.13, *Public Services and Utilities*, of this EIR.

Johnson Rancho

Water Supply

The water supply for the Johnson Rancho portion would be provided by groundwater wells and reserves connected to the City's existing system. The project includes the installation of four new wells located throughout the Johnson Rancho portion of the project site (See Figure 3-8, Proposed Water System Infrastructure). It should be noted that Figure 3-8 is an update to the original figure included in the *Water Master Plan* prepared for the 2006 Wheatland General Plan Update. The figure has been updated to account for the provision of water to the Johnson Rancho portion of the project, as the *Water Master Plan* already accounted for water demand associated with buildout of the Hop Farm portion of the proposed project. Other alternatives for water supply, such as surface water or recycled water, may be available. Please refer to Chapter 4.13, *Public Services and Utilities*, of this Draft EIR for a more detailed discussion and analysis of water.

Wastewater

Sanitary sewer service to the Johnson Rancho portion of the project is proposed to be conveyed through trunk mains along major project roadways via a sanitary sewer outfall to either the City's existing wastewater treatment plant (WWTP) (See Figure 3-9, Proposed Wastewater System Option – Conveyance to Existing WWTP) or to a new WWTP (See Figure 3-10, Proposed Wastewater System Option – Conveyance to New WWTP).

Figure 3-8
Proposed Water System Infrastructure

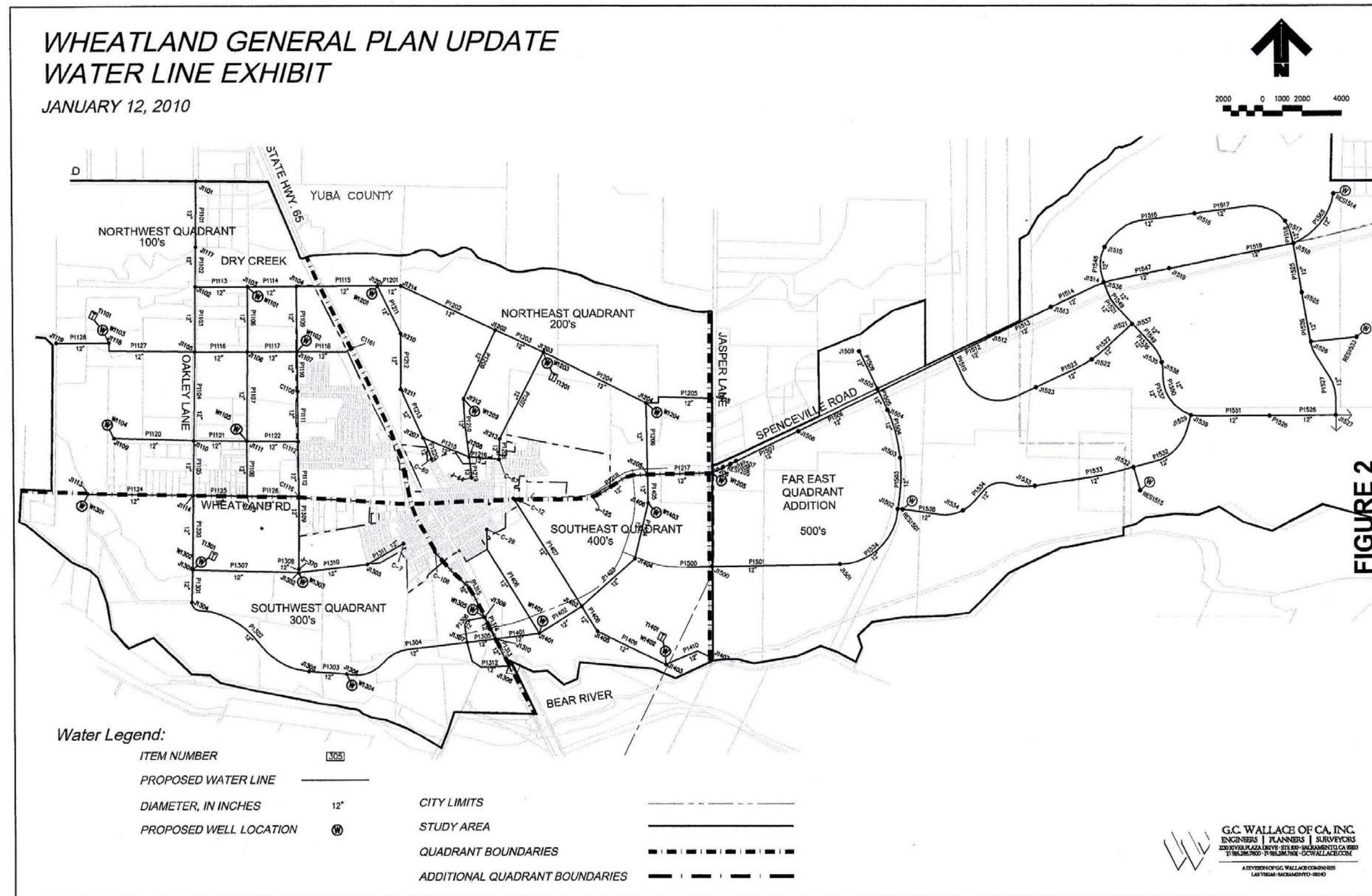


Figure 3-9
Proposed Wastewater System Option – Conveyance to Existing WWTP

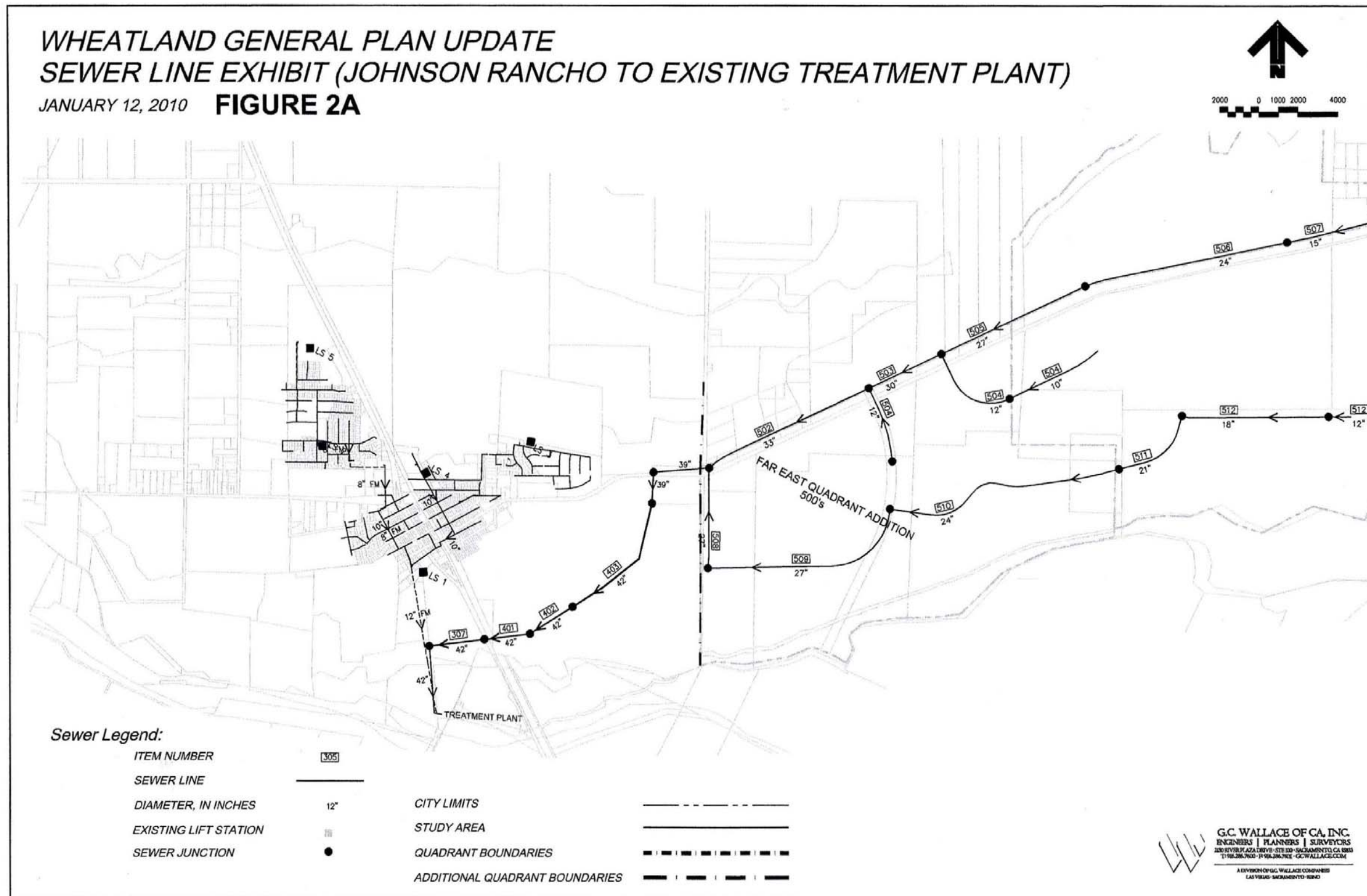
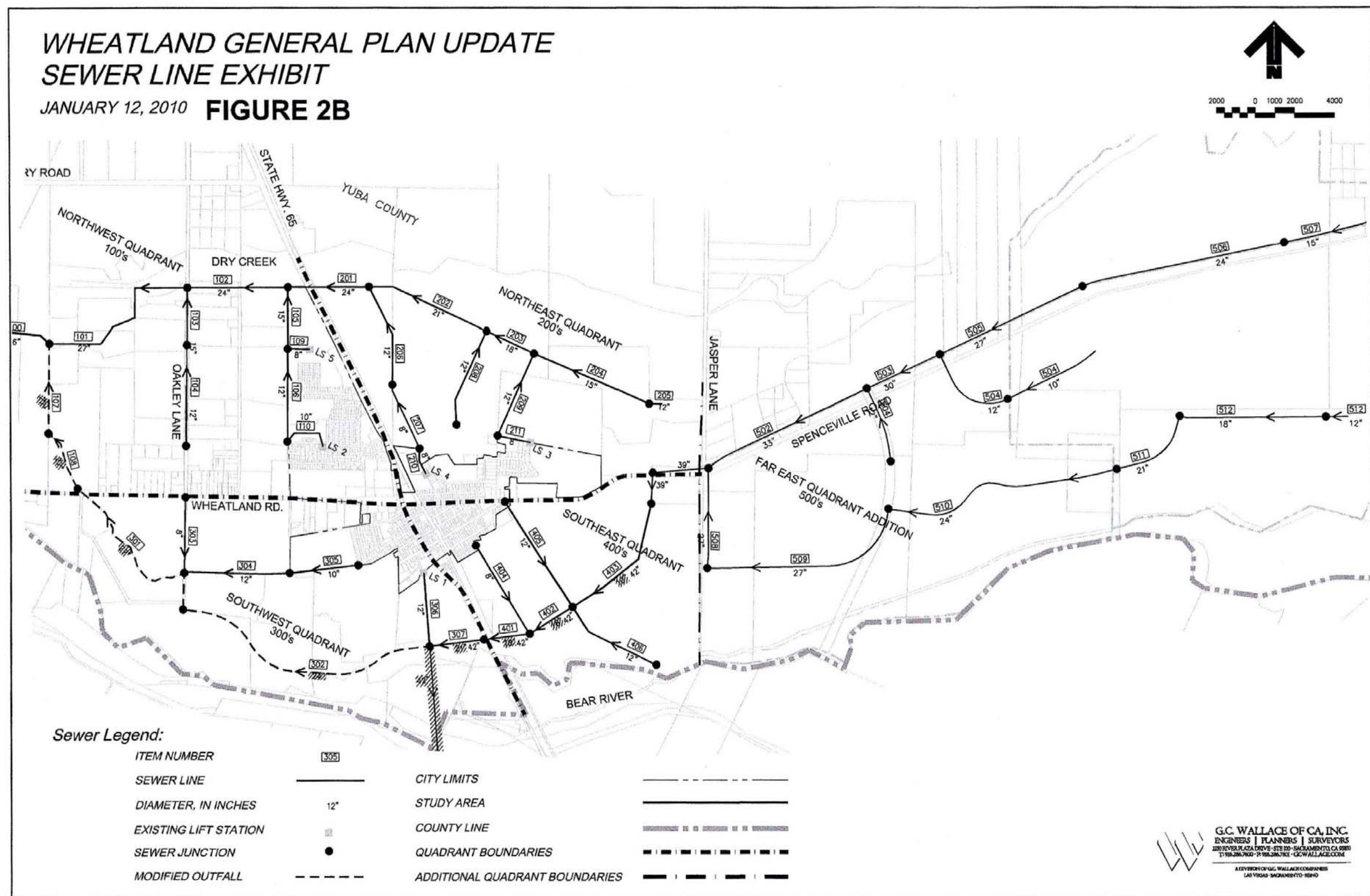


Figure 3-10
Proposed Wastewater System Option – Conveyance to New WWTP



The new WWTP would be located, as anticipated in the 2006 General Plan, in the northwestern quadrant of the General Plan Study Area. Should the first option be selected, additional improvements would be needed to the City's existing WWTP (for further discussion, please refer to Chapter 4.13, *Public Services and Utilities*, of this Draft EIR). It should be noted that Figures 3-9 and 3-10 are updates to the original figures included in the Sewer Master Plan prepared for the 2006 Wheatland General Plan Update. The figures have been updated to account for the provision of sewer service to the Johnson Rancho portion of the project, as the Sewer Master Plan already accounted for sewer demand associated with buildout of the Hop Farm portion of the proposed project.

Storm Drainage

The Johnson Rancho portion of the project includes ground which is currently directly tributary to the Bear River and Dry Creek via the existing gravity drainage patterns. Development will contribute increases to peak flows as a combined effect of the added impervious cover and the concentration and acceleration of runoff. The project would mitigate these peak flow increases through the use of on-site detention basins located upstream of the canal. The detention basins would be designed to return flows to the natural state at their points of discharge. The detention basins will be sized such that the peak flow releases from a 200-year event will not be increased at the point of discharge. Please refer to Chapter 4.10, Hydrology and Water Quality, of this Draft EIR for a detailed discussion of this issue.

Hop Farm

Bear River Hop Farm and Wheatland Hop Farm

Public services and utilities have already been planned for buildout of the Bear River Hop Farm and Wheatland Hop Farm properties under the Wheatland General Plan.

Water Supply

The water supply for the Hop Farm portion would be provided by three new groundwater wells and reservoirs connected to the City's water system (See Figure 3-8). Please refer to Chapter 4.13, *Public Services and Utilities*, for a more detailed discussion and analysis of water.

Wastewater

Major sewer trunk lines were already identified for the Hop Farm portion of the project in the 2006 General Plan Update (See Figure 3-9). The sanitary sewer system will convey flows from the Hop Farm portion via trunk lines in roadways to one of two WWTP locations, as discussed above (See Figures 3-9 and 3-10).

Storm Drainage

The proposed storm drainage system for the Hop Farm portion includes a series of detention basins and conveyance pipes intended to collect surface runoff from the Hop Farm portion's impervious surfaces and detain stormwater until peak flows have passed in the receiving water channels. More specifically, this portion of the project ultimately drains into the General Plan's planned southeast quadrant detention basin, upstream of SR 65.

Wheatland Parcels

Existing water, sewer, and stormwater facilities are currently located in close proximity to the five Wheatland Parcels. Connections to the City's systems would need to be established when the Wheatland Parcels are annexed into the City.

REQUIRED PUBLIC APPROVALS

The proposed project requires the following discretionary actions by the Wheatland City Council:

- Certification of the EIR;
- Approval of an Annexation Resolution for the entire 4,149-acre site;
- Approval of an Amendment to the General Plan Land Use Diagram for the portion of the project site designated Urban Reserve in the 2006 General Plan, including adding a Very Low Density Residential (VLDR) Land Use Designation to the Land Use Diagram and General Plan Policy Document;
- Approval of an Amendment to the General Plan Circulation Diagram;
- Rezoning of 4,136 acres to Planned Development (PD) zoning and associated approval of Stage 1 Development Plans (Johnson Rancho and Hop Farm portions of the project);
- Rezoning of Wheatland Annexation Parcels totaling 13 acres; and
- Approval of potential Development Agreement(s).

It should be noted that, upon approval of the Annexation Resolution by the City of Wheatland, the annexation of the site and detachment from the Wheatland Water District will also be required to be approved by Yuba County LAFCo.

PURPOSE AND NEED FOR THE PROPOSED PROJECT

The Johnson Rancho and Hop Farm Annexation project would result in several important benefits to the City of Wheatland. First, the approval of the Johnson Rancho and Hop Farm Annexation project would help implement the City of Wheatland's Community Vision. For example, related to the Vision's Community Development and Design principles, the proposed project would include residential villages, providing a distinct sense of place, which would be connected to each other with substantial open space and trail systems aimed at reducing the reliance on vehicular transportation. In addition, annexation of the project site to the City of Wheatland would potentially enable the City to attract to a central location within the Wheatland SOI a hospital that is capable of serving the region.

Related to the Community Vision's principles for Economic Development, approval of the proposed project would enable the City to locate a regionally attractive commercial facility along the future Wheatland Expressway (i.e., the "SR 65 Bypass" referred to in the Wheatland General Plan) within the Wheatland SOI. Such a commercial facility would substantially increase the property tax and sales tax base of the City, which in turn would enable the City to invest more money in general governmental services to the benefit of the public. Notwithstanding this, prior to seeking annexation approval of the project by Yuba LAFCo, the City of Wheatland will negotiate a tax sharing agreement with Yuba County that is satisfactory to both parties.

Among the greatest public services benefits to the City resulting from the project would be the significant monetary contribution toward needed WWTP improvements via the applicants' payment of the City's Wastewater Development Impact Fees. As discussed in Chapter 4.13, *Public Services and Utilities*, of this Draft EIR, the existing WWTP has a permitted design treatment capacity of 0.62 million gallons per day (mgd) average dry weather flow (ADWF), which is adequate to serve buildout of the existing City limits; however, any subsequent development in new annexation areas would require upsizing the existing WWTP or constructing a new WWTP. The Johnson Rancho and Hop Farm Annexation project represents the most significant potential source of revenue to the City for the expansion or construction of a new WWTP.

The annexation of the Johnson Rancho and Hop Farm project to the City of Wheatland would also provide a mechanism by which to begin constructing the Wheatland Expressway. This roadway is a major transportation corridor in the City's long-term buildout plan and much of the transportation planning and analysis in the Wheatland General Plan hinges on the completion of this key transportation corridor.

PROJECT OBJECTIVES

The following are the purposes and objectives of the proposed project:

1. Further applicable goals and policies of the City of Wheatland General Plan while meeting regional growth and development needs.
2. Facilitate delivery by the City of Wheatland of efficient municipal services characteristic of a medium-sized city by the year 2030.
3. Define guidelines for the management of natural resources that recognize environmental and cultural resources of regional concern.
4. Plan a balanced community of integrated land uses and regional services designed to promote a high quality of life.
5. Create a new regional commercial and employment destination east of the existing railroad tracks that is sufficient to meet the demand from residents and visitors.

6. Promote economic vitality with retail destinations, support services and employment opportunities for local residents.
7. Establish a comprehensive development implementation framework that provides long-term guidance and direction for future development, and includes mechanisms for properly anticipating infrastructure improvements and mitigation requirements.
8. Provide planned development funding and financing opportunities to support comprehensive planning and resolution of long term growth issues.
9. Provide a diverse range and style of single and multifamily housing units, including opportunities for entry-level housing, executive housing, senior citizen housing and housing for growing families, reflecting a variety of socioeconomic and design characteristics.
10. Provide a Land Use Plan and Circulation Concept that complements the existing traditional grid system with planned regional highway facilities and a convenient circulation network that offers a full range of transportation choices.
11. Provide a single, coordinated and comprehensive development plan with a high level of consistency and quality for a large area in order to avoid the piecemeal, parcel by parcel development that would likely develop in the absence of a unified development plan, thereby enhancing the image and character of Wheatland and supporting the adopted *Wheatland Community Vision*.

Endnotes

¹ City of Wheatland. *City of Wheatland General Plan Policy Document*. July 2006.

4.0

INTRODUCTION TO THE ANALYSIS

INTRODUCTION

The Introduction to the Analysis chapter of the EIR analyzes the potential impacts of the proposed project on a range of environmental issues. Chapters 4.1 through 4.13 describe the focus of the analysis, references and other data sources for the analysis, the environmental setting as related to the specific issue, project-specific impacts and mitigation measures, and cumulative impacts of the proposed project for each issue area. The format of each of these chapters is described below.

DETERMINATION OF SIGNIFICANCE

Under the California Environmental Quality Act (CEQA), a significant effect is defined as a substantial or potentially substantial adverse change in the environment (Public Resources Code Section 21068). The Guidelines implementing CEQA direct that this determination be based on scientific and factual data. The specific criteria for determining the significance of a particular impact are identified within the impact discussion in each chapter, and are consistent with significance criteria set forth in the CEQA Guidelines.

INITIAL STUDY

The Initial Study (See Appendix C) prepared for the proposed project, as a part of this EIR, includes a detailed environmental checklist addressing a range of technical environmental issues. For each technical environmental issue, the Initial Study identifies the level of impact for the proposed project. The Initial Study identifies the environmental effects as either “no impact,” “less-than-significant,” “less-than-significant with mitigation incorporated,” or “potentially significant.”

Impacts identified in the Initial Study as less-than-significant or having no impact, and which do not require mitigation, are presented below.

- *Aesthetics*: The project would not impact known rock outcroppings or historic buildings within a state scenic highway. Therefore, development of the project would result in a *less-than-significant* impact related to those scenic resources.
- *Agricultural Resources*: The project area is not designated as forest land or timberland production. In addition, a majority of the project area is used for agricultural crop and orchard production. Therefore, development of the project would not result in the rezoning, loss, or conversions of forest land to non-forest use and a *no impact* would occur.

- *Biological Resources:* Yuba County is currently in the process of drafting a Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP) with Sutter County. However, because a County-wide NCCP/HCP has not yet been adopted, *no impact* related to an existing NCCP/HCP would occur.
- *Geology and Soils:* The project site is not susceptible to landslides because the site is essentially flat agricultural lands; therefore, landslides would have *no impact* to the project structures. Furthermore, the proposed project includes the construction of necessary infrastructure to receive wastewater service from the City. Because the project would not use septic systems, *no impact* would occur regarding site soil capability for septic systems.
- *Hazards and Hazardous Materials:* The project site is located within the Beale Air Force Base Comprehensive Land Use Plan (CLUP). As the project does not include restricted land uses as listed by the Beale Air Force Base Overflight Guidelines, a *less-than-significant* impact related to public airport safety would result. In addition, the site is not located within an area where wildland fires occur. Therefore, a *less-than-significant* impact would occur. Furthermore, the project site is not identified on any government databases as a hazardous materials site, nor is it known to be adjacent to any such sites. Finally, the site is not located within the vicinity of a private airstrip. Therefore, the proposed project would result in *no impact* pertaining to the aforementioned aspects of hazards and hazardous materials.
- *Hydrology and Water Quality:* The project site is not located within an area subject to damage by seiche, tsunami, or mudflow. Therefore, the proposed project would have *no impact*.
- *Land Use and Planning:* The proposed project site is vacant and development of the project would not physically divide an established community, resulting in a *less-than-significant* impact. In addition, although the Yuba-Sutter Habitat Conservation Plan is currently being drafted, the Plan is not in effect at this time. Therefore, *no impact* for an existing NCCP/HCP would occur.
- *Noise:* The project site is not located within two miles of a private airstrip; however, the project is within the Beale Air Force Overflight Zone. Because the proposed single-family uses and other proposed project uses are allowed within this zone, a *less-than-significant* impact would result.
- *Population and Housing:* The approximately 4,149-acre project site is largely vacant and consists primarily of agricultural land. Development of the project would not displace existing housing or people; therefore, *no impact* would result.
- *Transportation and Circulation:* The proposed project is located within the Beale CLUP. However, the project would not result in a change in air traffic patterns; therefore, a *less-than-significant* impact would result.

All remaining issues pertaining to these impact categories have been identified in the Initial Study as potentially significant, and are discussed in the technical chapters of this Draft EIR.

ISSUES ADDRESSED IN THIS DRAFT EIR

The Initial Study identified several environmental impacts as potentially significant, which require further analysis. This Draft EIR provides the additional analysis necessary to address the technical environmental impacts not fully resolved in the Initial Study. Consistent with the conclusions of the Initial Study, the following environmental issues are addressed in this Draft EIR:

- Aesthetics;
- Land Use and Agricultural Resources;
- Transportation and Circulation;
- Air Quality and Climate Change;
- Noise;
- Biological Resources;
- Archaeological and Historical Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Mineral Resources;
- Population, Employment, and Housing; and
- Public Services and Utilities.

SECTION FORMAT

Each technical chapter addressing a specific environmental issue begins with an **introduction** describing the purpose of the chapter. The introduction is followed by a description of the project's **environmental setting** as the setting pertains to that particular issue. The setting description is followed by the **regulatory context** and the **impacts and mitigation measures** discussion. This discussion contains the **significance criteria**, followed by the **methods of analysis**. The **impact and mitigation** discussion includes impact statements prefaced by a number in bold-faced type. An explanation of each impact and an analysis of the impact's significance follow each impact statement. All mitigation measures pertinent to each individual impact follow directly after the impact statement (see below). The degree of relief provided by identified mitigation measures is also evaluated. An example of the format is shown below:

4.x-1 Statement of impact.

Discussion of impact for the proposed project in paragraph format.

Statement of *level of significance* of impact prior to mitigation is included at the end of each impact discussion.

Mitigation Measure(s)

Statement of *level of significance* after the mitigation is included immediately preceding mitigation measures.

4.x-1(a) *Required mitigation measure(s) presented in italics and lettered in consecutive order.*

4.x-1(b) *etc., etc.*

4.1

AESTHETICS

INTRODUCTION

The Aesthetics chapter of the EIR describes the existing visual resources of the proposed project site and vicinity. In addition, an evaluation is provided of the potential impacts of the project with respect to urbanization of the area. The California Environmental Quality Act (CEQA) describes the concept of aesthetic resources in terms of scenic vistas, scenic resources (such as trees, rock outcroppings, and historic buildings within a state scenic highway), the existing visual character or quality of the project site, and light and glare impacts. The following impact analysis is based on information drawn from the *City of Wheatland General Plan*¹ and the *City of Wheatland General Plan EIR*,² the *Yuba County General Plan*,³ the *Yuba County General Plan EIR*,⁴ the *Draft Yuba County 2030 General Plan Environmental Impact Report*,⁵ and the *Placer County General Plan*.⁶

EXISTING ENVIRONMENTAL SETTING

The following setting information provides an overview of existing conditions of visual resources in the project site area, located within the City of Wheatland Sphere of Influence (SOI) in Yuba County.

Regional Setting

The City of Wheatland's rural setting provides views of open agricultural areas to the north and south, and the foothills and mountains to the east and west. The urbanized area generally consists of a mix of homes, businesses, churches, and schools of various architectural styles. The City of Wheatland is located in Northern California's Central Valley along State Route (SR) 65. The City is located approximately one mile north of the Bear River. Marysville and Yuba City are both approximately twelve miles to the north of Wheatland, and are the closest cities of significant size. Sacramento is approximately forty miles to the south and Beale Air Force Base is located eight miles to the northeast. Wheatland is also the gateway city to Camp Far West, recreation area of regional significance. From the City's nineteenth century agrarian roots to the community of today, Wheatland has retained a small town atmosphere and rural setting.

Project Area Setting

The proposed project site is bordered by the Yuba County/Placer County line to the south; Wheatland city limits, SR 65 and the Union Pacific Railroad (UPRR) tracks to the west; Spenceville Road and Dry Creek to the north; and the eastern boundary of the Wheatland SOI to the east. The proposed project is located on approximately 4,149 acres of agricultural land, which contains scattered residences. The project site is currently made up of the following ownerships: Johnson's Crossing, AKT Wheatland Ranch, Dave Browne, and Browne Cattle

Company; Bear River Hop Farm and Wheatland Hop Farm; and the five “Wheatland Parcels.” The project area east of the SR 65 Bypass alignment, outside of the General Plan Study Area, is the Johnson Rancho portion of the project site and the area west of the SR 65 Bypass alignment, within the General Plan Study Area, is the Hop Farm portion of the project site.

The proposed project currently has a Yuba County General Plan designation of Valley Agricultural (VA), and a County Zoning designation of Agricultural Exclusive district with a 10-acre minimum parcel (AE-10), 40-acre minimum parcel (AE-40), and 80-acre minimum parcel (AE-80). The current Wheatland General Plan Land Use designation for the Johnson Rancho portion is Urban Reserve (UR). The current Wheatland General Plan Land Use designations for the Hop Farm portion include Low Density Residential (3-4 du/ac), Low-Medium Residential (4.1-6 du/ac), Medium Density Residential (6.1-8 du/ac), High-Density Residential (8.1-16 du/ac), Commercial, Employment, Public, and Park and Open Space. The current five Wheatland Parcels are designated Low Density Residential (3-4 du/ac), Medium Density Residential (6.1-8 du/ac), and Commercial.

The surrounding lands to the north of the proposed project currently include residential, rural residential, grassland, orchards, and Dry Creek. The area to the east is currently residential, rural residential, and grassland. The area to the south consists of Bear River, orchards, and mining operations. The land to the west includes agricultural areas and the City of Wheatland.

The City considers open space and agricultural areas as scenic resources. The receptor locations that have views of the site are the residential uses to the northwest (Park Place Subdivision), rural residential to the north, rural residential to the east, and drivers along Spenceville Road and SR 65. The proposed project site affords views of agricultural production including hop fields, orchards, and open grassland. In addition, the proposed project contains natural features that provide aesthetic value to the project site.

Hop Farm Property

The Bear River Hop Farm property has two distinct woodland riparian corridors, two riparian corridors along each branch of Grasshopper Slough in the northern portion of the Bear River Hop Farm property. The Wheatland Hop Farm property has one woodland riparian corridor. A portion of the northern Wheatland Hop Farm property boundary contains a riparian corridor along the southern bank of Grasshopper Slough. The slough supports a scattered riparian canopy of valley oak, Oregon ash, and California buckeye with patches of sparse seasonal wetland vegetation, which include Himalayan blackberry, tall flatsedge, dallies grass, barnyard grass, sedge, buttonbrush, and willow.

The existing five Wheatland Parcels consist of vacant land, rural residential, and commercial uses. The Wheatland Parcels are currently designated for urban development, consisting of the following range of uses: Low Density Residential, Medium Density Residential, and Commercial.

Johnson Rancho Property

The Johnson Rancho portion has three distinct woodland riparian corridors. A portion of the Johnson Rancho's northern boundary contains a riparian corridor along the southern bank of Dry Creek, and two riparian corridors along each branch of Grasshopper Slough in the central portion of Johnson Rancho. The creek and slough support a scattered riparian canopy of valley oak, Oregon ash, and California buckeye with patches of sparse seasonal wetland vegetation, which include Himalayan blackberry, tall flatsedge, dallies grass, barnyard grass, sedge, buttonbrush, and willow. Grasshopper Slough acts as the main drainage channel for the Johnson Rancho portion of the project, and the two branches flow from a northeasterly direction to a southwesterly direction.

In addition, the Johnson Rancho portion of the proposed project contains a portion of the California Emigrant Trail. The California Emigrant Trail was the principal overland route to California. The trail began in 1841 as a single tenuous strand along the Humboldt River and over the Sierras but subsequently branched into numerous cutoffs. The trail was described in thousands of diaries, letters, narratives, and journals before and during the gold rush. The Truckee Route led to Johnson's Ranch. According to Lieutenant George Horatio Derby, U.S. Army Topographical Engineer, an average of one hundred wagons and two hundred emigrants were arriving at the Ranch each day in the fall of 1849. Additional discussion and assessment related to the historical significance of the Emigrant Trail is included within the Archaeological and Historical Resources chapter, Chapter 4.7, of this Draft EIR.

Views from the Site

Existing views of the site and the site's surroundings are depicted in Figures 4.1-1 through 4.1-8. The figures represent the visual setting of the site, the views of the surrounding area afforded by the project site, and the unique aesthetic features (including the California Emigrant Trail) on the project site.

**Figure 4.1-1
View Looking West Across the Proposed Project Site**



**Figure 4.1-2
View Looking North Toward the Proposed VLDR Designated Uses**



**Figure 4.1-3
View Looking Northeast Toward the Proposed VLDR Designated Uses**



**Figure 4.1-4
View Looking North Directly Adjacent to the Proposed VLDR Designated Uses**



**Figure 4.1-5
View Looking Northwest Across the Proposed Project Site**



**Figure 4.1-6
View of the Emigrant Trail**



**Figure 4.1-7
View Looking East at Grasshopper Slough from the Proposed Project Site**



**Figure 4.1-8
View Looking West at Grasshopper Slough from the Proposed Project Site**



REGULATORY CONTEXT

Specific federal or State regulations do not directly pertain to the visual quality of an area. However, existing policies and regulations established in the City of Wheatland General Plan are listed below.

Local Regulations

City of Wheatland General Plan

The following are General Plan goals and policies related to aesthetics that are applicable to the proposed project.

Land Use and Community Character

Landscape and Streetscape

- Goal 1.J To maintain and enhance the quality of Wheatland's major travel corridors, city entrances, landscape, and streetscape.
- Policy 1.J.2. The City shall encourage increased building setbacks and wider landscape areas along major corridors.
- Policy 1.J.3. The City shall require that all new development incorporate the planting of trees and other vegetation that extends the vegetation pattern of older adjacent neighborhoods into new development.

Environmental Resources

Vegetation

- Goal 8.C To preserve and protect the valuable vegetation resources of the Wheatland area.
- Policy 8.C.2. The City shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands and riparian areas.
- Policy 8.C.3. The City shall require that new development preserve natural woodlands to the maximum extent possible.
- Policy 8.C.4. The City shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

Open Space for the Preservation of Natural Resources

Goal 8.D To preserve and enhance open space lands to maintain the natural resources of the Wheatland area.

Policy 8.D.1. The City shall, where appropriate, permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains.

Policy 8.D.3. The City shall require that new development be designed and constructed to preserve significant stands of vegetation and any areas of special ecological significance as open space to the maximum extent feasible.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

An impact to the aesthetic values of the project area would be considered significant if implementation of the proposed project would potentially result in any of the following conditions:

- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

As discussed in the Introduction to the Analysis chapter of this Draft EIR, impacts identified in the Initial Study as less-than-significant or having no impact, which do not require mitigation, have already been addressed in the Initial Study. As stated in the Initial Study, the proposed project would not impact known rock outcroppings or historic buildings within a designated state scenic highway. All other impacts identified as potentially significant within the Initial Study are addressed below.

Method of Analysis

The section below gives full consideration to the development of the project site and acknowledges the physical changes to the existing setting. Impacts to the existing environment of the project site are to be determined by the contrast between the site's visual setting before and after the proposed development. In this analysis, emphasis has been placed on the transformation of the existing rural and open space setting into a landscape characterized by proposed surface grading and urban development. Although few standards exist to singularly define the various individual perceptions of aesthetic value from person to person, the degree of visual change can be measured and described in a reasonably objective manner in terms of visibility and visual contrast, dominance, and magnitude. Current residents adjacent to the project site and travelers

along SR 65 and Spenceville Road would be considered sensitive to the visual and aesthetic alteration of the project area.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Johnson Rancho and Hop Farm), unless otherwise noted.

4.1-1 Impacts related to scenic vistas and altering of the existing visual character of the project site.

The project site is located in a major agricultural region, and the site contains agricultural lands and open grasslands. Additionally, the project site contains distinct riparian corridors traversing site. As noted above, views of open space and agricultural lands are considered important scenic resources in and around the City.

The Bear River Hop Farm property in the Hop Farm portion would be rezoned to PD District which would allow the development of up to approximately 1,265 residential lots, varying from Low to High Density Residential, on approximately 529 acres. The Wheatland Hop Farm property in the Hop Farm portion would be rezoned to PD District which would allow the development of up to approximately 572 residential lots, varying from Low-Medium to Medium Density Residential, on approximately 145 acres. The Johnson Rancho portion would be rezoned to PD District which would allow the development of up to approximately 12,481 residential lots, varying from Very Low to Medium Density Residential, on approximately 3,461 acres located within Yuba County. The proposed project involves a request to rezone the entire annexation area to PD District, with the exception of the Wheatland Parcels, which will be rezoned C-2, R-1, and R-2. Development of the proposed project could include other land uses such as Employment/Office, Commercial, Civic Center, Elementary and Middle Schools, Parks, Linear Parkway, and Open Space.

In addition, the project would include a mix of open space, parks, and trails. The proposed project includes a total of approximately 238 acres of open space/drainage, eight parks totaling 50 acres, and 57 acres of linear parkway. The open space includes an extensive corridor along existing Grasshopper Sough, which would have open space trail junctions at intermittent points throughout the corridor, leading to parks. In addition, the AKT Wheatland Ranch property within the Johnson Rancho portion of the site includes an open space area at its southern boundary to serve as a buffer from adjacent orchards.

The roadways surrounding the proposed project are not designated as scenic routes (e.g., SR 65) and although views of the site are afforded from some of the surrounding roadways, the principal aesthetic on-site resources have been largely incorporated into the project design (e.g., riparian tree corridors). However, although the proposed project would include extensive open space, the majority of the project site would be converted from the existing rural and agricultural characteristic to an urban setting. In addition, the Wheatland General Plan EIR concludes the change in visual character associated with

General Plan buildout would remain significant and unavoidable. The Wheatland City Council adopted Findings of Fact and a Statement of Overriding Considerations for the significant and unavoidable impacts associated with the General Plan buildout. Therefore, consistent with the General Plan EIR conclusions, the proposed project would significantly alter the existing character of the site including important scenic visual resources, and would thus result in a *significant* impact.

Mitigation Measure(s)

The proposed project already includes open space corridors in order to avoid impact of the riparian visual resources. However, the conversion of agricultural land and open space to developed urban uses cannot be mitigated with implementation of the proposed project. Therefore, feasible mitigation does not exist, and the above impact would remain *significant and unavoidable*.

4.1-2 Impacts related to light and glare.

The project site consists of agricultural land and associated farming structures; therefore, very little light or glare is currently emitted from the project site. The change from an agricultural property to a development containing residential (of varying densities), commercial, employment, school sites, and parks/open space would generate new sources of light and glare. In addition, buildout of the Hop Farm pursuant to existing General Plan land use designations would generate new sources of light and glare. The introduction of street lighting throughout proposed project development would alter the currently unlit conditions of the project area. Night lighting would be evident to neighboring properties to the east and north, which are not accustomed to development on the site; however, the type of lighting would be typical of residential and commercial uses. Although this level of light would represent a substantial change from the existing conditions, the proposed project would be required to comply with all of the building regulations found in the *California Code of Regulations, Title 24 and the Tier 1 Development Plan*,⁷ which require that conceptual lighting plans be submitted for any development project. The lighting plans are required to show the proposed shielding of all on-site lighting, so that lighting is directed within the project site and does not illuminate adjacent properties, and the lighting plans are required to address limiting light trespass and glare through the use of shielding and directional lighting methods. The *Tier 1 Development Plan* also requires that non-reflective paints be used on the exterior surfaces of buildings in order to minimize impacts related to glare. The project's compliance with these standards would result in *less-than-significant* impacts related to light and glare.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

4.1-3 Long-term impacts to the visual character of the region from the proposed project in combination with existing and future developments in the Wheatland area.

The proposed project would contribute to the cumulative change in visual character of the City of Wheatland from agricultural to urban. Due to the location and size of the project site, the larger cumulative context of the visual impact associated with the proposed project should be considered in conjunction with future development in the immediately surrounding areas of Yuba County and Placer County. The area to the north of the proposed project is designated Natural Resources in the Yuba County Draft General Plan Update, which allows for the development of residential and non-residential uses (up to one unit with one second unit per acre and up to a 0.5 Floor Area Ratio, respectively), and Valley Agriculture within the current Yuba County General Plan. In addition, the area east of the proposed project is designated Rural Community in the Yuba County Draft General Plan Update and Foothill Agriculture in the current Yuba County General Plan. The area south of the proposed project is designated Agriculture/Timberland in the Placer County General Plan.

Implementation of the current County land use plans for the area surrounding the proposed project would result in urban development to the east and west of the proposed project. However, the area to the north and south would remain primarily in agricultural production. Development of the proposed project would include residential (of varying densities), commercial, employment, school sites, and parks/open space. The proposed project is currently designated as Agriculture in the current Yuba County General Plan.

The proposed project includes higher densities and a wider range of uses as compared to the surrounding land within the City of Wheatland and Yuba County General Plan Study Areas. Therefore the conversion of the land use would contribute to a change in the visual character of the area. As noted above, the Wheatland General Plan EIR concludes that the implementation of the goals and policies would minimize cumulative impacts to the change in visual character of the Study Area but the impacts to visual character would remain significant and unavoidable. Additionally, the Yuba County General Plan EIR concludes that aesthetic/scenic resource impacts from buildout pursuant to the Yuba County General Plan would be less-than-significant with implementation of the County goals and policies. However, the proposed project would change the Yuba County General Plan anticipated use for the site from agriculture to residential, commercial, employment, school, and parks/open space uses. Therefore, consistent with the City of Wheatland General Plan EIR, the proposed project would result in a cumulatively considerable and *significant* impact.

Mitigation Measure(s)

Consistent with the Wheatland General Plan conclusions regarding aesthetics, feasible mitigation measures do not exist to reduce the above impact; therefore the impact would remain *significant and unavoidable*.

Endnotes

¹ City of Wheatland. *City of Wheatland General Plan Policy Document*. July 2006.

² Raney Planning & Management, Inc. *City of Wheatland General Plan EIR*. July 11, 2006.

³ Yuba County. *Yuba County General Plan*. May 1994.

⁴ Yuba County. *Yuba County General Plan Environmental Impact Report*. May 1994.

⁵ Yuba County. *Draft Yuba County 2030 General Plan Environmental Impact Report*. December 2010.

⁶ Placer County. *Countywide General Plan Policy Document*. August 16, 1994.

⁷ California Building Standards Commission. *2010 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11*. June 2010.

4.2

LAND USE AND AGRICULTURAL RESOURCES

INTRODUCTION

The Land Use and Agricultural Resources chapter of the EIR is divided into two analyses – Land Use and Agricultural Resources. The purpose of the Land Use section is to examine the proposed project’s compatibility with existing and planned land uses in the area. Consistency with applicable General Plan goals and policies is also evaluated. The purpose of the Agricultural Resources section is to describe the soils of the project site and determine whether or not the site is identified as Prime Farmland. Documents utilized to prepare this chapter include the *Wheatland General Plan*,¹ the *Wheatland General Plan EIR*,² the *Yuba County General Plan*,³ and the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Yuba County Soil Survey.⁴

EXISTING LAND USE ENVIRONMENTAL SETTING

Section 15125 of the CEQA Guidelines states that “[...] an EIR must include a description of the physical environmental conditions in the vicinity of the project [...] and shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans.” The following provides a discussion of the existing land uses of the project site.

Land Uses

The proposed project site is located east of the City of Wheatland, outside of the City limits, and within the Wheatland Sphere of Influence (SOI). The project would be located on approximately 4,149 acres of agricultural land, which contains scattered residences. The project site is bordered by the Yuba County/Placer County line to the south; Wheatland city limits, State Route 65 and the Union Pacific Railroad (UPRR) tracks to the west; Spenceville Road, agricultural lands, and Dry Creek to the north; and the eastern boundary of the Wheatland SOI to the east, beyond which are located rural residences and Camp Far West Reservoir.

The project site is currently made up of the following ownerships: Johnson’s Crossing, AKT Wheatland Ranch, Dave Browne, and Browne Cattle Company; Bear River Hop Farm and Wheatland Hop Farm; and the five “Wheatland Parcels” (See Chapter 3, Figure 3-3, Property Owner Exhibit, and Figure 3-4, Wheatland Parcels). For ease of discussion, the project area east of the SR 65 Bypass alignment, outside of the General Plan Study Area, and currently designated as Urban Reserve, will be referred to as the “*Johnson Rancho*” portion of the project site. The area west of the SR 65 Bypass alignment, within the General Plan Study Area, will be referred to as the “*Hop Farm*” portion of the project site.

Hop Farm Property

Generally, the Hop Farm portion of the project site primarily consists of agricultural land currently in production with an associated complex of residential structures and outbuildings. Natural habitats occur on-site in limited extent. The Bear River Hop Farm property has two distinct woodland riparian corridors – two riparian corridors along each branch of Grasshopper Slough in the northern portion of the Bear River Hop Farm property. The Wheatland Hop Farm property has one woodland riparian corridor. A portion of the northern Wheatland Hop Farm property boundary contains a riparian corridor along the southern bank of Grasshopper Slough. The slough supports a scattered riparian canopy of valley oak, Oregon ash, and California buckeye with patches of sparse seasonal wetland vegetation, which include Himalayan blackberry, tall flatsedge, dallies grass, barnyard grass, sedge, buttonbrush, and willow.

The existing five Wheatland Parcels consist of vacant land, rural residential uses, and commercial uses. The Wheatland Parcels are currently designated for urban development, including Low Density Residential, Medium Density Residential, and Commercial.

Johnson Rancho Property

Generally, the Johnson Rancho portion of the project site primarily consists of open cattle grazing land as well as a large walnut orchard on the AKT portion of the property, which has several accompanying operations-related structures. Natural habitats occur on-site in limited extent. The Johnson Rancho portion has three distinct woodland riparian corridors. A portion of the Johnson Rancho's northern boundary contains a riparian corridor along the southern bank of Dry Creek, and two riparian corridors along each branch of Grasshopper Slough in the central portion of Johnson Rancho. The creek and slough support a scattered riparian canopy of valley oak, Oregon ash, and California buckeye with patches of sparse seasonal wetland vegetation, which include Himalayan blackberry, tall flatsedge, dallies grass, barnyard grass, sedge, buttonbrush, and willow. Grasshopper Slough acts as the main drainage channel for the Johnson Rancho portion of the project, and the two branches flow from a northeasterly direction to a southwesterly direction.

Current Yuba County General Plan Land Use Designation

The Yuba County General Plan designates the approximate 4,149-acre project site as Valley Agriculture (VA). The VA classification is used to identify areas within the valley floor located outside of community boundaries, which are suitable for commercial agriculture and where areas are desirable to retain agriculture as the primary land use. The VA designation protects the agricultural community from encroachment of unrelated agricultural uses, which by their nature, would be injurious to the physical and economic well-being of the agricultural community; and to encourage the preservation of agricultural land, both productive and potentially productive, which is identified as State-designated Important Farmlands and/or Class I and II soils by the NRCS.

Examples of uses that are considered appropriate under the VA classification include but are not limited to: growing and harvesting field crops or grain and hay crops; growing and harvesting

fruit and nut trees, vines, and vegetables; pasture and grazing land; game preserves or hunting and fishing; and animal raising operations. Limited residential development is permitted for property owners, caretakers/employee housing, and farmworker housing.

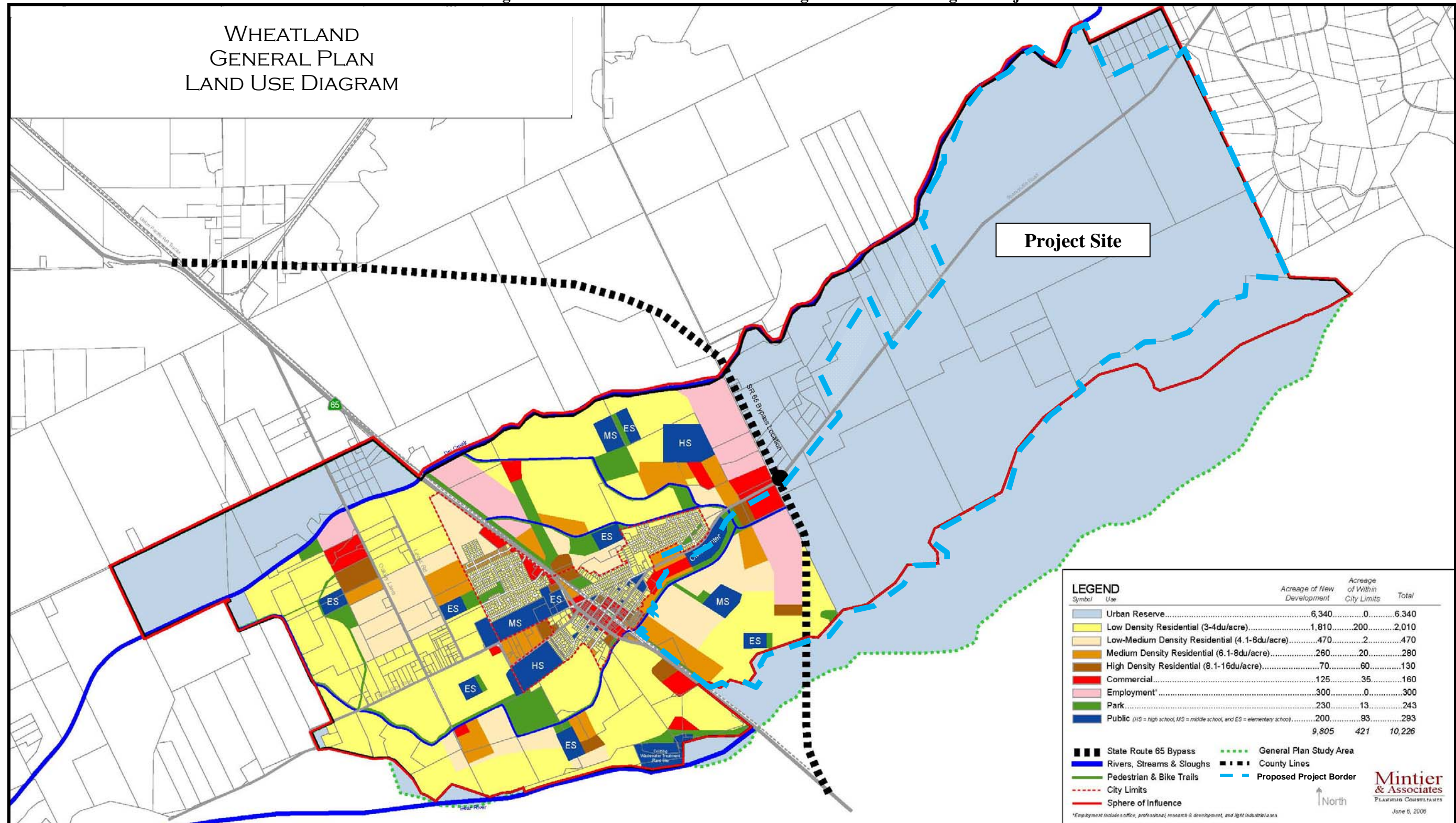
Current Yuba County Zoning Designations

The current Yuba County zoning for the 4,149-acre project site is a combination of agricultural zoning designations, including Agricultural Exclusive (AE) with a 10-acre minimum parcel (AE-10), 40-acre minimum parcel (AE-40), and 80-acre minimum parcel (AE-80). According to the Yuba County Zoning Ordinance, the minimum area of any lot or parcel of land for each AE subzone and permitted residential uses shall include: one single-family dwelling unit (du) for each ten acres in an AE-10 sub-zone, one single-family du for each forty acres in an AE-40 sub-zone, and one single-family du for each eighty acres in an AE-80 sub-zone. In addition, the following uses are allowed for AE: growing and harvesting any agricultural crop or product; aquiculture; game preserves or hunting or fishing clubs except those involving permanent dwellings; buildings with waste disposal facilities; agricultural service establishments primarily engaged in performing agricultural animal husbandry services or horticultural services to farmers; the use of implements of agriculture or aquiculture including aircraft, subject to all applicable regulations; livestock and fowl farming including raising, maintaining, and breeding of horses, cattle, hogs, rabbits, chickens and similar livestock. Furthermore, barns, coops, stables, or corrals shall not be located closer than 50 feet to any abutting dwelling, except for caretaker quarters. Accessory buildings such as garages, carports, guest dwellings, lath houses, barns, greenhouses, gardening sheds, silos, dehydrators for agricultural products that are grown or produced on the premises, and similar structures that are customarily used in conjunction with and incidental to a principal use or structure; home occupations; storage of materials used for the construction of a building, including the contractor's temporary office, provided that such use is on the building site or immediately adjacent thereto, and provided further that such use shall be permitted only during the construction period and 30 days thereafter; stands for the purpose of displaying and selling agricultural, floricultural or farming products that are grown or produced on the premises, provided that there shall not be more than one stand per lot or parcel of land which does not exceed 300 square feet, and shall be set back from the street or highway right-of-way with a distance of at least 20 feet; temporary uses; windmills and domestic storage tanks; family day care homes; and hobby kennels on parcels forty or more acres in AE-40 sub-zone or eighty acres or more in AE-80 sub-zone.

Current Wheatland General Plan Land Use Designations

In addition to the above Yuba County General Plan designations, the Hop Farm portion of the project site is included in the Wheatland General Plan Update Study Area and has been assigned various General Plan Land Use Designations, as illustrated in Figure 4.2-1. As also indicated in Figure 4.2-1, the Johnson Rancho portion of the project site was designed as Urban Reserve in the 2006 Wheatland General Plan Update.

Figure 4.2-1
Existing Wheatland General Plan Land Use Designations Surrounding the Project Site



Existing Land Use Designations

The existing Wheatland General Plan land use designations for the Hop Farm portion are as follows: Low Density Residential (LDR), Low-Medium Density Residential (LMDR), Medium Density Residential (MDR), High Density Residential (HDR), Employment (EMP), Commercial (COM), Civic Center, Park and Open Space (PARK), and School (S). The General Plan designations for the five Wheatland Parcels are LDR, MDR, and Commercial. The Johnson Rancho properties are designated Urban Reserve (UR). The Wheatland General Plan Update defines the intent of the above land uses as follows:

Low Density Residential

The LDR land use designation, which allows 3.0 to 4.0 du per acre (du/ac), provides for single-family detached homes, secondary residential units, public and quasi-public uses, and similar and compatible uses. The Floor-Area Ratio (FAR) for nonresidential uses shall not exceed 0.30.

Low-Medium Density Residential

The LMDR land use designation, which allows 4.1 to 6.0 du/ac, provides for single-family detached homes, secondary residential units, public and quasi-public uses, and similar and compatible uses. The FAR for nonresidential uses shall not exceed 0.40.

Medium Density Residential

The MDR land use designation, which allows 6.1 to 8.0 du/ac, provides for single-family detached and attached homes, secondary residential units, public and quasi-public uses, and similar and compatible uses. The FAR for nonresidential uses shall not exceed 0.50.

High Density Residential

The HDR land use designation, which allows for 8.1 to 16.0 du/ac, provides for single-family detached and attached homes, secondary residential units, multi-family residential units, and similar and compatible uses. The FAR for nonresidential uses shall not exceed 0.50.

Commercial

The COM land use designation provides for neighborhood and locally-oriented retail and service uses, restaurants, banks, entertainment uses, professional and administrative offices, public and quasi-public uses, and similar and compatible uses. The FAR shall not exceed 0.50.

Employment

The EMP land use designation provides for office parks, research and development, warehouses and light manufacturing related to research and development, general commercial uses that cater to industrial uses in this designation, professional offices, public and quasi-public uses, and similar and compatible uses. The FAR shall not exceed 0.50.

Public

The PUBLIC land use designation provides for public facilities such as schools, hospitals, sanitariums, penal institutions, libraries, museums, government offices and courts, churches, meeting halls, cemeteries and mausoleums, public facilities, and similar and compatible uses. The FAR shall not exceed 0.50.

Park and Open Space

The PARK land use designation provides for outdoor recreation uses, equestrian uses, habitat protection, irrigation canals, reservoirs, watershed management, public and quasi-public uses, and areas typically limited for human occupation due to public health and safety hazards such as floodways, unstable soils, or areas containing wildlife habitat and other environmentally-sensitive features. Such land areas are primarily publicly owned, but may include private property. The FAR for non-residential uses shall not exceed 0.10.

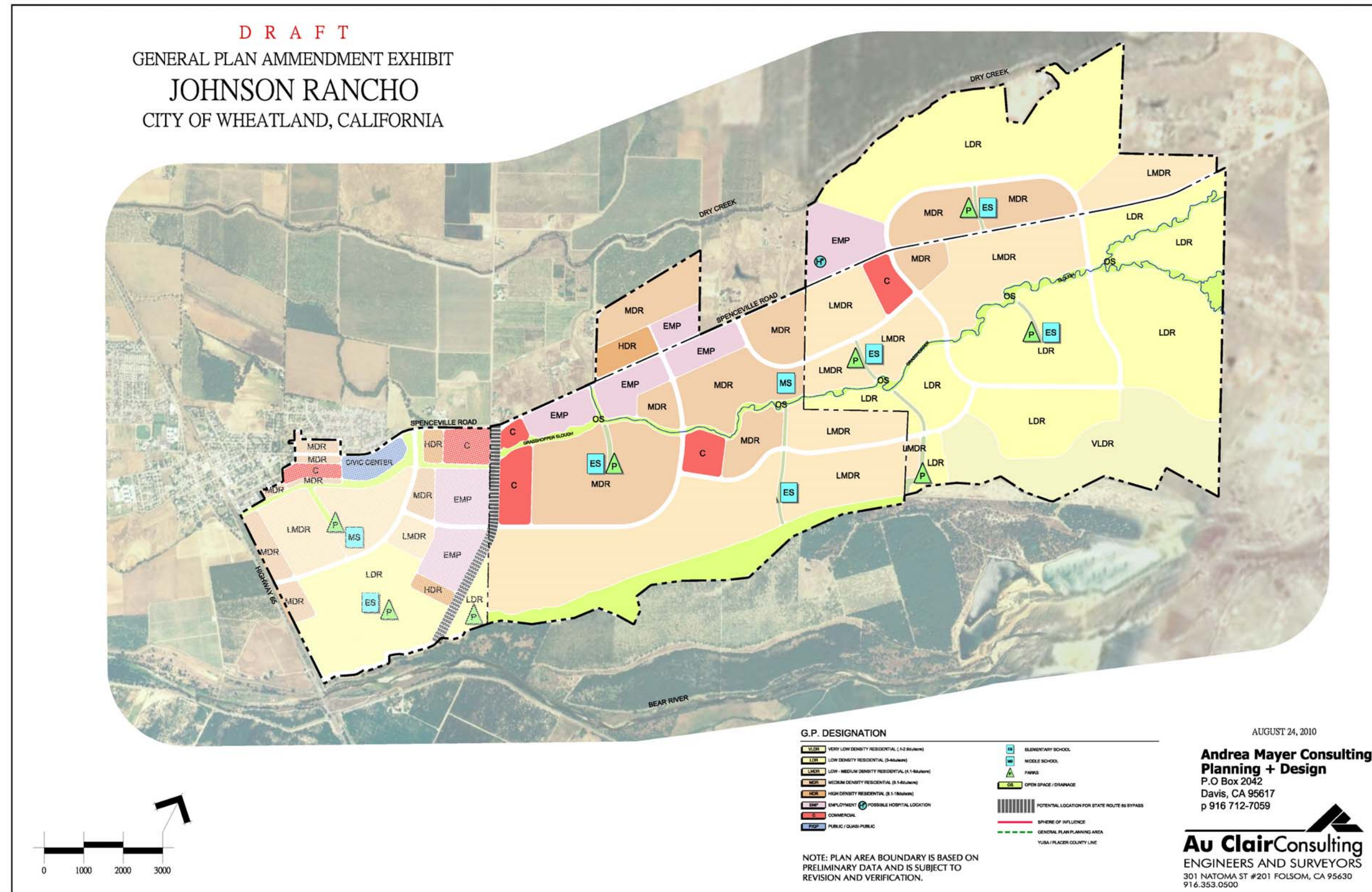
Urban Reserve (Johnson Rancho Portion)

The UR land use designation is applied to land that may be considered for development in the future with urban uses. Urban development may not occur on lands designated UR before the General Plan is amended to specify a primary land use designation for the property. Allowable uses shall include wastewater treatment facilities and other uses specified under the Agriculture and Open Space designations.

Proposed Wheatland Land Use Designations (Johnson Rancho Portion Only)

Existing General Plan Land Use Designations for the Hop Farm portion of the project site will not be changed as part of the proposed project. However, for the Johnson Rancho portion of the project site, the proposed project includes a General Plan Amendment to designate this portion with the following Wheatland General Plan land use designations: Very Low Density Residential (VLDR), LDR, LMDR, MDR, EMP, COM, PUBLIC, PARK, and School (See Figure 4.2-2, General Plan Amendment Exhibit). It should be noted that the 2006 General Plan Land Use Diagram does not include a VLDR designation. Therefore, as part of the General Plan Amendment for the proposed project, a new VLDR designation will need to be adopted and reflected on the General Plan Land Use Diagram accordingly. The proposed language for the VLDR designation is as follows:

Figure 4.2-2
General Plan Amendment Exhibit



Very Low Density Residential

This designation provides for single family detached homes, secondary residential units, public and quasi-public uses, and similar and compatible uses. Residential densities shall be in the range of 0.1 to 2.9 units per gross acre.

Proposed City of Wheatland Zoning Designations

The project site is currently part of the unincorporated lands of Yuba County, and as a result does not currently have City of Wheatland zoning. However, Government Code Section 65859 states the following:

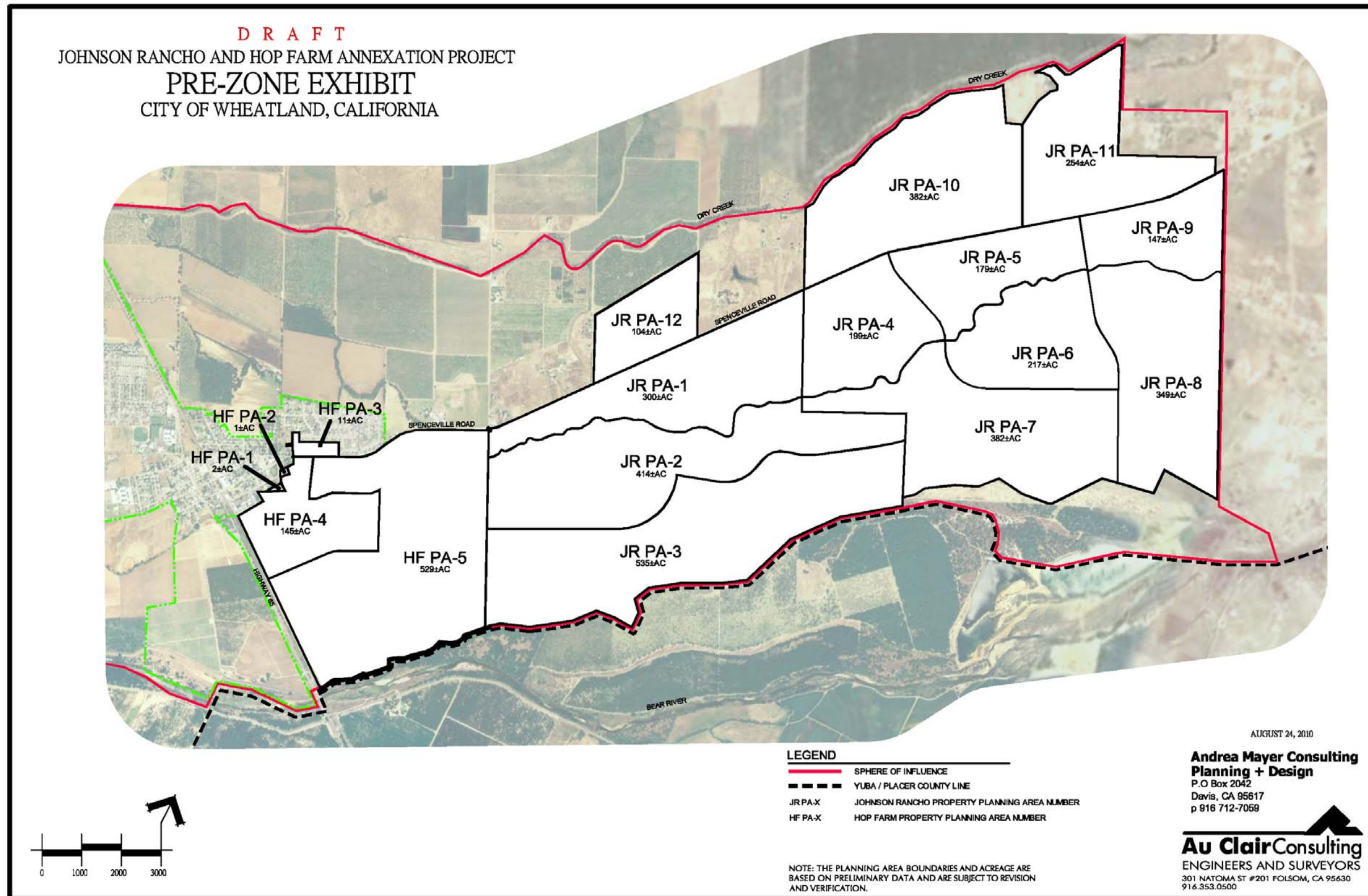
- (a) A city may, pursuant to this chapter, prezone unincorporated territory to determine the zoning that will apply to that territory upon annexation to the city. The zoning shall become effective at the same time that the annexation becomes effective.
- (b) Pursuant to Section 56375, those cities subject to that provision shall complete prezone proceedings as required by law.
- (c) If a city has not prezone territory which is annexed, it may adopt an interim ordinance pursuant to Section 65858.

The project includes a request to prezone the 4,149-acre project site to Planned Development (PD) (See Figure 4.2-3, Prezone Exhibit), except for the five Wheatland Parcels, which would be prezone as shown in Table 4.2-1.

Table 4.2-1 Wheatland Parcels – Prezone Designations		
APN	Existing Wheatland General Plan Designation	Prezone
015-360-001	Medium Density Residential	R-2
015-191-014	Low Density Residential	R-1
015-191-006	Low Density Residential	R-1
015-360-007	Commercial	C-2
015-213-009	Medium Density Residential	R-2

The purpose of the PD District is to allow diversification in the relationship of various buildings, structures and open spaces in order to be relieved from the rigid standards of conventional zoning. The PD is required to comply with the regulations and provisions of the General Plan. The proposed project has developed adequate standards to promote the public health, safety and general welfare without unduly inhibiting the advantages of modern building techniques and planning for residential, commercial or industrial purposes; these standards are in the form of a Stage 1 Development Plan. Though very similar in content, a separate Stage 1 Development Plan has been prepared for the Hop Farm and Johnson Rancho portions of the project. As is allowable under the PD Ordinance regulations, the applicant(s) will submit, at a later date, Stage 2 Development Plan(s) for portions of the entire Planned Development Zoning District as separate zoning ordinance amendment(s).

Figure 4.2-3
Prezone Exhibit



A Stage 2 Development Plan shall include and establish permitted, conditionally permitted, and accessory uses; Stage 2 site plan, site area and maximum proposed densities; maximum numbers of residential units by type and non-residential square footage for each use; development regulations and standards for all development within the area, which may include lot areas, lot square footage per dwelling unit, lot width and frontage, lot depth, setbacks, distances between buildings and structures, maximum lot coverage, common useable outdoor space, floor area ratios, height limits, parking, driveways, loading areas, signage, fencing, grading standards, and trash enclosures; architectural standards; and master landscape plan.

Surrounding Land Use Designations

The Wheatland General Plan designates the areas surrounding the vicinity (within a quarter mile radius) of the project site with the following land use designations (See Figure 4.2-1 above).

Hop Farm

North: LDR, LMDR, MDR, HDR, COM, EMP, PARK, and PUBLIC
South: UR and LDR
West: LDR, MDR, HDR, COM, and PARK
East: Johnson Rancho portion of project site

Johnson Rancho

North: UR
South: UR
West: Hop Farm portion of project site
East: County VA designation outside Wheatland's SOI

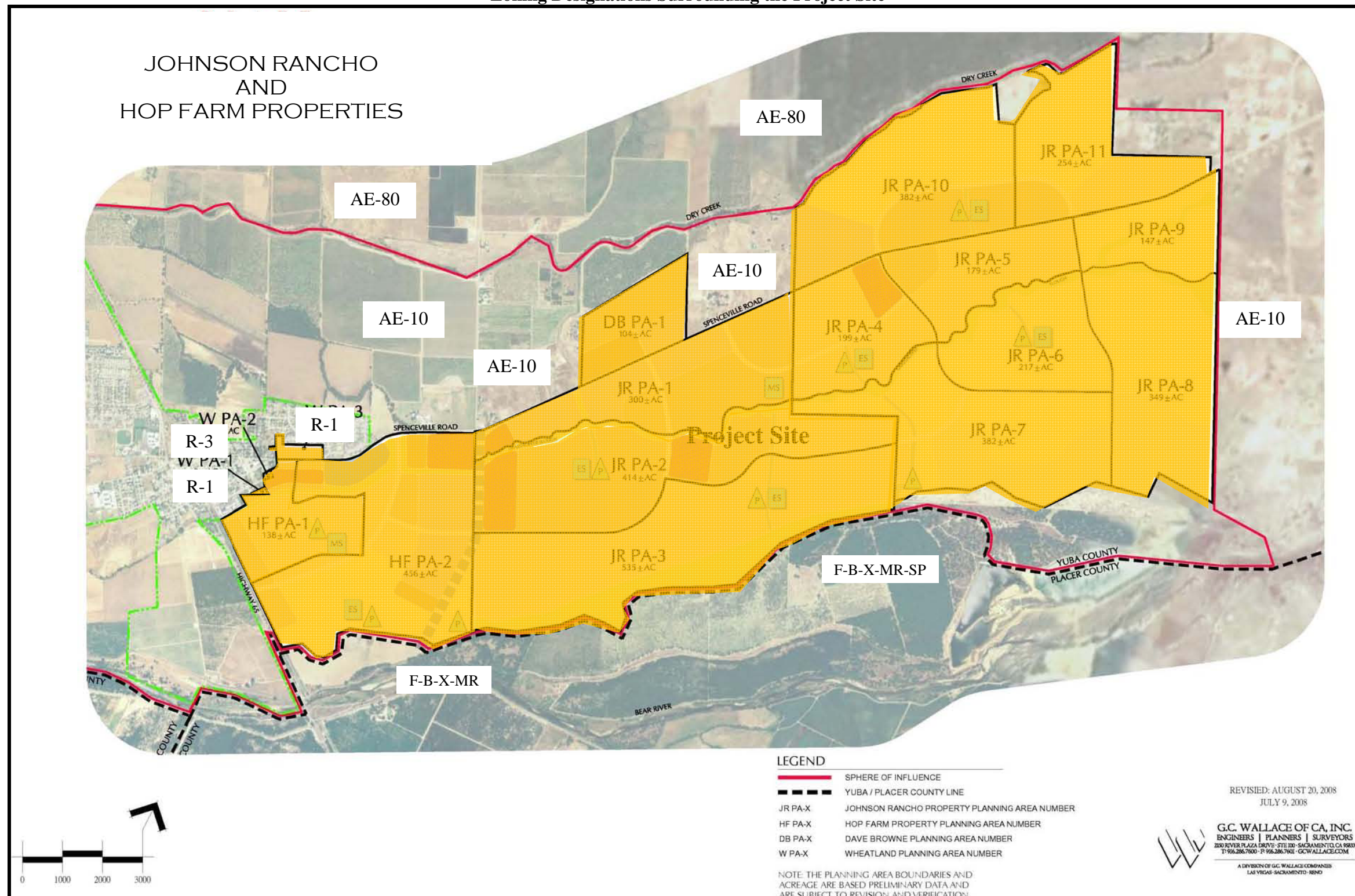
Surrounding Zoning Designations

The areas surrounding the project site have the following zoning (See Figure 4.2-4).

Hop Farm

North: Residential Single-family (R-1), Multi-family Residential (R-3), and Retail Commercial (C-2) (Wheatland)
South: F-B-X-MR 80 AC. MIN. (Placer County). This consists of the following: Farm (F) district plus Building Site (-B) combining district plus Mineral Reserve (-MR) combining district, 80-acre minimum
West: Multi-family Residential (R-3), Park (PR), PD, and Heavy Commercial (C3) (Wheatland)
East: Johnson Rancho portion of project site

Figure 4.2-4
Zoning Designations Surrounding the Project Site



Johnson Rancho

North: AE-10 and AE-80 (Yuba County)
South: F-B-X 20 AC. MIN.; and F-B-X-MR-SP 20 AC. MIN. (Placer County). The latter consists of the following: Farm (F) district plus Building Site (-B) combining district plus Mineral Reserve (-MR) combining district, plus Special Purpose (-SP) combining district, 20-acre minimum
West: Hop Farm portion of project site
East: AE-10 (Yuba County)

Surrounding Land Use Types

The following discussion has been prepared to detail the types of land uses currently surrounding the project site.

Hop Farm

North: Single-family residential development, multi-family residential, commercial uses, employment, and parks
South: Wheatland SOI limit line, Yuba County/Placer County line, and Bear River and Bear River levee system
West: UPRR tracks, SR 65, and existing agricultural land
East: Johnson Rancho portion of project site

Johnson Rancho

North: Existing agricultural land.
South: Wheatland SOI limit line, Yuba County/Placer County line, existing agricultural land, and Bear River
West: Hop Farm portion of project site
East: Existing agricultural land and rural residences

City of Wheatland SOI

The City of Wheatland has two municipal boundaries, including the City limits and the City's SOI. An SOI is the area designated as the physical boundaries and service area of a local governmental agency, as determined by the applicable Local Agency Formation Commission (LAFCo), and is periodically reviewed and updated. Wheatland's SOI was adopted by Yuba County LAFCo on June 7, 1995. The current boundary borders Dry Creek to the north, the county line to the south, Ace Hardware to the west, and almost reaches Camp Far West Road to the east. The existing SOI encompasses approximately 8,636 acres. It should be noted that the City is currently processing a Cleanup SOI Amendment and Annexation, which would result in the entire Johnson Rancho and Hop Farm Annexation project area being located within the Wheatland SOI.

EXISTING AGRICULTURAL RESOURCES ENVIRONMENTAL SETTING

The following describes the extent and quality of the agricultural resources present on the project site.

Farmland Classifications

The USDA NRCS uses two systems to determine a soil's agricultural productivity: the Soil Capability Classification and the Storie Index Rating System. The "prime" soil classification of both systems indicates the absence of soil limitation, which if present, would require the application of management techniques (e.g., drainage, leveling, special fertilizing practices) to enhance production. The Farmland Mapping and Monitoring Program (FMMP), part of the Division of Land Resource Protection, California Department of Conservation, uses the information from the USDA and the NRCS to create maps illustrating the types of farmland in the area.

Soil Capability Classification

The Soil Capability Classification System takes into consideration soil limitations, the risk of damage when soils are used, and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils, which are unsuitable for agriculture. Generally, as the rating of the capability classification system increases, the yields and profits are difficult to obtain. A general description of soil classification, as defined by the NRCS, is provided in Table 4.2-2.

Table 4.2-2 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 plants and restrict their use to recreation, wildlife habitat, or water supply or to aesthetic purposes.
<i>Source: USDA Soil Conservation Service, 1977.</i>	

Farmland Mapping and Monitoring Program

The FMMP was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the USDA Soil Conservation Service (SCS). The intent of the USDA SCS was to produce agriculture maps based on soil quality and land use across the nation. As part of the nationwide agricultural land use mapping effort, the USDA SCS developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified the 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 SCS soil survey maps using the LIM criteria.

Since 1980, the State of California has assisted the USDA SCS with completing its mapping in the state. The FMMP was created within the State 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 utilizes the SCS and Storie Index Rating systems, but also considers physical conditions such as dependable water supply for agricultural production, soil temperature range, depth of the ground water table, flooding potential, rock fragment content and rooting depth.

Important Farmland Maps for California are compiled using the modified LIM criteria (as described above) and current land use information. The minimum mapping unit is 10 acres unless otherwise specified. Units of land smaller than 10 acres are incorporated into surrounding classifications. The Important Farmland Maps identify seven agriculture-related categories: prime farmland, farmland of statewide importance (statewide farmland), unique farmland, farmland of local importance (local farmland), grazing land, urban and built-up land (urban land), and other land. Each is summarized below, based on *A Guide to Farmland Mapping and Monitoring Program (1998)*, 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. Prime farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for the production of irrigated crops at some time during the two update cycles (a cycle is equivalent to 2 years) prior to the mapping date of 1998 (or since 1994).

Statewide Farmland

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 or irrigated crops at sometime during the two update cycles prior to the mapping date (or since 1994).

Unique Farmland

Unique farmland is land of lesser quality soils used for the production of the State's leading agricultural crops. The land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. The land must have been cultivated at some time during the two update cycles prior to the mapping date (or since 1994).

Local Farmland

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. Yuba County local farmland includes lands which do not qualify as Prime, Statewide, or Unique designation, but are currently irrigated crops or pasture or non-irrigated crops; lands that would meet the Prime or Statewide designation and have been improved for irrigation, but are now idle; and lands that currently support confined livestock, poultry operations and aquaculture.

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.

Urban Land

Urban and built-up land is occupied with structures with a building density of at least one unit to one-half acre. Uses may include but are not limited to, residential, industrial, commercial, construction, institutional, public administration purposes, railroad yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other development purposes. Highways, railroads, and other transportation facilities are mapped as part of this unit, if they are part of a surrounding urban area.

Other Land

Other land is land that is not included in any other mapping categories. The following uses are generally included: rural development, brush timber, government land, strip mines, borrow pits, and a variety of other rural land uses.

Storie Index Rating

The Storie Index is a soil rating based on soil properties that govern a soil map unit component's potential for cultivated agriculture [Absence of an entry indicates that a Storie Index rating is not applicable or was not estimated]. For simplification, Storie Index ratings have been combined into six soil grades as follows: Grade 1 (Excellent): soils that rate between 80 and 100 and which are well suited to intensively grown irrigated crops that are climatically adapted to the region. Grade 2 (Good): soils that rate between 60 and 79 and are good agricultural soils, although the Grade 2 soils are not as desirable as the Grade 1 soils because of the less permeable subsoil, deep

hardpan layers, gravelly or moderately fine textured layers, and low available water capacity. Grade 3 (Fair): soils that range between 40 and 59 and are fairly well suited for agriculture because of moderate soil depth, restricted permeability in the subsoil, somewhat restrictive drainage, and/or a hazard to flooding. Grade 4 (Poor): soils that rate between 20 and 39 and which have a narrow range in their agricultural potential. Grade 5 (Very Poor): soils that rate between 10 and 19 and are of very limited agricultural use except for pasture because of adverse soil conditions. Grade 6 (Nonagricultural): soils that rate less than 10 and are better suited for limited use as rangeland, woodland, or watershed or for continued use as urban land.

Project Site Characteristics

According to the USDA SCS, Yuba County Soil Survey, the project site is made up of the following soils (See Figure 4.2-5, Project Site Soils Map):

- Columbia fine sandy loam, 0 to 1 percent slopes (137);
- Columbia fine sandy loam, 0 to 1 percent slopes, occasionally floods (138);
- Conejo loam, 0 to 2 percent slopes (141);
- Holillipah loamy sand, 0 to 1 percent slopes, occasionally floods (162);
- Horst sandy loam, 0 to 1 percent slopes (169);
- Horst silt loam, 0 to 2 percent slopes (170);
- Perkins loam, 0 to 2 percent slopes (203); and
- Redding gravelly loam, 3 to 8 percent slopes (208).

The predominant soil complexes identified throughout the project site area are described below.

170 Horst silt loam, 0 to 2 percent slopes

The Horst silt loam is a very deep well-drained soil that would be located on stream terraces. Characteristics include moderate shrink-swell potential, slight water erosion, and subject to rare flooding.

208 Redding gravelly loam, 3 to 8 percent slopes

The Redding gravelly loam is a well-drained soil that would be located on high fan terraces and is moderately deep to a hardpan. The soil is formed in alluvium derived from mixed sources. The native vegetation consists mainly of annual grass. The surface layer is typically brown gravelly loam about six inches thick. The upper 13 inches of the subsoil is yellowish red gravelly loam and the lower 14 inches is reddish brown and red clay. An indurated hardpan is at a depth of 33 inches. The soil is suited to rangeland and responds well to fertilizer, range feeding, and proper grazing use. The production of vegetation suitable for livestock grazing is limited by the low available water capacity. More specifically, the complete range of soil types found within the project site through a review of the Yuba County Soil Survey is described in Table 4.2-3.

Figure 4.2-5
Project Site Soils Map

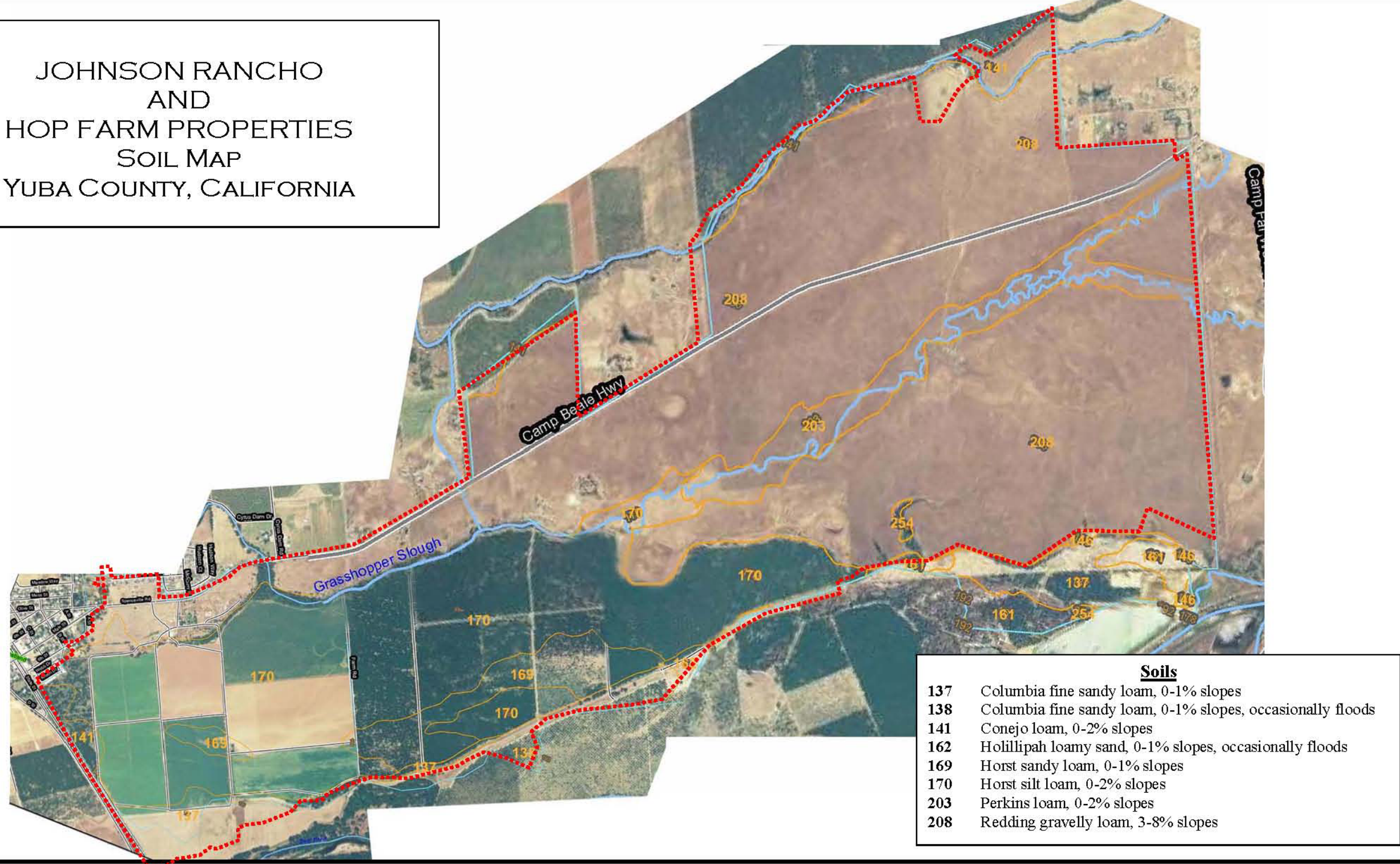


Table 4.2-3 Proposed Project Soil Index		
Soil Map Units		Storie Index Rating
137	Columbia fine sandy loam, 0 to 1 percent slopes	85
138	Columbia fine sandy loam, 0 to 1 percent slopes, occasionally flooded	43
141	Conejo loam, 0 to 2 percent slopes	90
162	Holillipah loamy sand, 0 to 1 percent slopes, occasionally flooded	49
169	Horst sandy loam, 0 to 1 percent slopes	81
170	Horst silt loam, 0 to 2 percent slopes	95
203	Perkins loam, 0 to 2 percent slopes	81
208	Redding gravelly loam, 3 to 8 percent slopes	14
<i>Source: USDA Soil Conservation Service, 1977.</i>		

The Yuba County Candidate Listing for Prime Farmland and Farmland of Statewide Importance⁵ lists Columbia fine sandy loam, 0 to 1 percent slopes; Columbia fine sandy loam, 0 to 1 percent slopes, occasionally flooded; Conejo loam, 0 to 2 percent slopes; Holillipah loamy sand, 0 to 1 percent slopes, occasionally flooded; Horst sandy loam, 0 to 1 percent slopes; Horst silt loam, 0 to 2 percent slopes; and Perkins loam, 0 to 2 percent slopes as being soils that meet the criteria for Prime Farmland. It is noteworthy that the Redding gravelly loam, 3 to 8 percent slopes (#208), which makes up the majority of the eastern portion of the Johnson Rancho portion of the project site, is not considered Prime Farmland.

REGULATORY CONTEXT

Yuba County LAFCo

Yuba County LAFCo is a State-mandated boundary commission responsible for coordinating logical and timely changes in local government boundaries. In consideration of proposals, the Commission observes four basic statutory purposes: the discouragement of urban sprawl, the preservation of open space and agricultural land resources, the efficient provision of government services, and the encouragement of orderly growth boundaries based upon local conditions and circumstances. LAFCo's powers, procedures, and functions are set forth in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, (*Government Code Section 560000 et seq.*).

Yuba County LAFCo General Policies and Standards

Yuba County LAFCo adopted their updated policies and standards on July 11, 2007. The following list of the adopted Yuba County LAFCo policies and standards is not exhaustive, and

only lists goals and policies that pertain to the proposed project. Information is provided from the Yuba County LAFCo Policies and Procedures, Section 2.

2. *LAFCo General Policies and Standards*

The following are general policies and substantive standards that apply to LAFCo's consideration of any proposal. In certain situations, the application of one policy may conflict with the application of another; in that case, LAFCo will exercise its discretion to balance policies in a manner consistent with the Cortese-Knox-Hertzberg Act, as amended, and the standards contained in this document.

2.2 Urban Development

LAFCo will encourage proposals that result in urban development to include annexation to a city whenever reasonably possible, and discourage proposals for urban development adjacent to a city without annexation to that city. LAFCo will also encourage cities to annex lands that have been developed to urban levels, particularly areas that receive city services. Urban Development includes development that utilizes either public water or sewer, and which involves industrial or commercial use, or residential use with density of at least one unit per acre.

2.3 Discouraging Urban Sprawl

LAFCo shall discourage urban sprawl. Sprawl is characterized by irregular, dispersed, and/or disorganized urban or suburban growth patterns occurring at relatively low density and in manner that precludes or hinders efficient delivery of municipal services, especially roads, public sewer and public water.

2.4 Environmental Consequences (CEQA)

LAFCo shall operate in accordance with the CEQA, Public Resources Code Sections 21000, the State Guidelines for implementation of the California Environmental Quality Act and the Commission's local CEQA Guidelines. Like other public agencies, LAFCo is required to comply with CEQA and to consider the environmental consequences of its actions. Each proposal must receive the appropriate environmental review for consideration by the Commission in making its decisions. LAFCo is most often a "responsible agency" and reviews and considers the environmental document prepared for a project by another agency (a city, the county, or a special district) and adopts a Categorical Exemption, Negative Declaration or certifies an EIR only for a project it initiates. If a city, the county, or a special district is the proponent, it is almost always the lead agency. One of the following determinations must be made by the lead agency after the appropriate environmental review:

- a. The project is statutorily or categorically exempt from CEQA review and a Notice of Exemption is prepared.
- b. A Negative Declaration is prepared, circulated for public review and certified by the governing body after an initial study finds that

no significant impact to the environment will occur either with or without mitigation. A lead agency is required to consult with LAFCo staff during the review process.

- c. An EIR is prepared, circulated, and certified by the governing body if a project may have significant impacts on the environment. A lead agency must consult with LAFCo staff during the review process.

2.5 Compact Urban Form and Infill Development Encouraged

When reviewing proposals that result in urban development, LAFCo will consider whether the proposed development is timely, compact in form and contiguous to existing urbanized areas. LAFCo will favor development of vacant or under-utilized parcels already within a city or other urbanized area prior to annexation of new territory.

2.6 Public Accessibility and Accountability

LAFCo recognizes that the public's ability to participate in the local governance process is improved when the government structure is simple, accessible, and when decision-makers are accountable to those affected. The Commission will consider this principle when it evaluates proposals for changes of organization or for reorganization.

2.7 Adequate Services

LAFCo will consider the ability of an agency to deliver adequate, reliable and sustainable services, and will not approve a proposal that has significant potential to diminish the level of service in an agency's current jurisdiction. An agency must provide satisfactory documentation of its capacity to provide service to an annexed area within a reasonable amount of time.

2.8 Efficient Services

Community needs are normally met most efficiently and effectively by proposals that:

- a. Utilize Existing Public Agencies rather than create new ones.
- b. Consolidate the Activities and Services of public agencies in order to obtain economies from the provision of consolidated services.
- c. Restructure Agency Boundaries and service areas to provide more logical, effective, and efficient local government services.

2.9. Boundaries

a. Definite Boundaries Required

LAFCo will not accept as complete any application for proposal unless it includes boundaries that are definite, certain, and fully described. Boundary descriptions shall meet the requirements of the Yuba County Tax Assessor and the State Board of Equalization.

- b. **Boundary Criteria**
LAFCo will normally favor applications with boundaries that do the following:
 - Create logical boundaries within the affected agencies; respective Spheres of Influence, and where possible, eliminate existing islands or other illogical boundaries.
 - Follow natural or man-made features and include logical service areas, where appropriate.
- c. **Boundary Adjustments**
LAFCo may amend applications with boundaries which:
 - Split neighborhoods or divide an existing identifiable community, commercial district, or another area having a social or economic identity.
 - Result in islands, corridors, or peninsulas of incorporated or unincorporated territory or otherwise cause or further the distortion of existing boundaries.
 - Are drawn for the primary purpose of encompassing revenue-producing territories.
 - Create areas where it is difficult to provide services.
- d. **Boundary Disapprovals**
If LAFCo cannot suitably adjust the boundaries of a proposal to meet the criteria established in item 2.9 (b) above, it may deny the proposal.

2.10. Agriculture

- a. LAFCo's decisions will reflect its legislated responsibility to seek to maximize the preservation of prime agricultural land while facilitating logical and orderly expansion of an urban area.
- b. Agricultural land shall be determined to be prime based on soil characteristics or on productivity (Section 56064).
- c. Development or use of land for other than open space uses shall be guided away from prime agricultural lands in open space use toward areas containing non-prime agricultural lands unless that action would not promote the planned, orderly, efficient development of an area (Section 56377).
- d. Development of vacant or prime agricultural lands for urban uses within the jurisdiction or SOI of a local agency should be encouraged before any proposal is approved which would allow for or lead to the development of prime agricultural or open space lands outside the jurisdiction or SOI of any local agency (Section 56377).

2.11 Balancing Jobs and Housing

LAFCO will normally encourage those applications which improve the regional balance between jobs and housing. LAFCO will consider the impact of a proposal on the regional supply of housing for all income levels in light of the housing and

jobs balancing policies of the applicable General Plan. The agency that is the subject of the proposal must demonstrate to the Commission that any adverse impacts of the proposal on the regional affordable housing supply have been mitigated.

2.12 Revenue Neutrality

Revenue Neutrality Applicable to All Proposals. LAFCO will approve a proposal for a change of organization or reorganization only if the Commission finds that the proposal will result in a similar exchange of both revenues and service responsibilities among all affected agencies. A proposal is deemed to have met this standard if the amount of revenue that will be transferred from an agency or agencies currently providing service in the subject territory to the proposed service-providing agency is substantially equal to the expense the current service provider bears in providing the services to be transferred or the affected agency has approved the revenue exchange.

3. *Consistency with Local Land Use Plans and Policies*

The Commission shall view unfavorably projects that are inconsistent with the General or Specific Plans for the project area unless the following conditions are met:

- a. The site is located in an existing developed area where it can be clearly found that public health, safety, and welfare interests would best be served, or clear or present health or safety hazards could be mitigated, by the requested change of organization.
- b. The site is located in an existing developed area where district facilities are present and sufficient for service and where the Commission determines that the annexation does not represent a growth-inducing factor for the area.
- c. The site is located in an existing undeveloped area and disapproval would cause the loss of service to existing service users.

3.1 Consistency with General and Specific Plans

For the purposes of this policy, a project is consistent with applicable General and Specific Plans if the type and level of services to be provided are consistent with and appropriate to the applicable General or Specific Plan land use designations and document text. Ordinarily the Commission shall accept a consistency finding by the agency responsible for the General Plan or Specific Plan. In the case of an annexation into a city, the finding of consistency shall be made with respect to the General Plan of the city. The Commission will not approve projects that are inconsistent with an applicable General or Specific Plan unless the following circumstances are shown to exist:

- a. The site is fully developed and located in an existing developed area where district or city facilities are present and found by LAFCo to be sufficient for service and where the Commission

determines that the change of organization or reorganization will not induce growth in the area.

- b. The site is fully developed and located in an existing developed area where LAFCo finds that the public interests of health, safety, and welfare would best be served, or that clear and present health or safety hazards could be mitigated, by the proposal.
- c. The site is located in an undeveloped area where disapproval would cause a loss of service to existing service users.

3.2 Planning and Pre-Zoning

All territory proposed for annexation must be specifically planned and/or pre-zoned by the appropriate planning agency prior to the effectiveness of an annexation. The planning or pre-zoning of the territory must be consistent with applicable General and Specific Plans and sufficiently specific to determine the likely intended use of the property.

- a. For city proposals, no subsequent change may be made to the General Plan or applicable specific or area plans or zoning of the annexed territory that is not consistent with the pre-zoning designations in effect at the time of the LAFCo approval for two years after the completion of the annexation, unless the city council finds after a noticed public hearing that a substantial change has occurred in circumstances that necessitates a departure from the pre-zoning (Section 56375[e]).
- b. Pending changes to applicable land use designations, zoning, or pre-zoning must be completed before the effectiveness of an annexation.

7. *Changes of Organization*

7.1 General

This section includes general policies, requirements and criteria that apply to all changes of organization. There may be cases where the Commission must use its discretion in the application of these policies so that potential or real conflicts among policies are resolved based on project specifics, consistent with the requirements of the Cortese-Knox-Hertzberg Act.

- a. An annexation shall not be approved if it represents an attempt to annex only revenue-producing property (Section 56668).
- b. An annexation shall not be approved unless the annexing agency is willing to accept the annexation.
- c. Where another agency is currently providing service or objects to the annexation, LAFCo will compare the proposed plan of service with alternative service plans and adopted determinations from any service reviews to determine whether the proposal is the best alternative for service provision.

- d. It is the policy of the Commission to approve changes of organization that encourage and promote planned, well ordered, efficient development patterns and contribute to the orderly formation and development of local agencies based upon local circumstances and conditions (Section 56300, Section 56301).
- e. LAFCo's decisions will reflect its legislated responsibility to help preserve prime agricultural land while facilitating the logical and orderly expansion of urban areas. Agricultural land shall be determined to be prime based on soil characteristics or on productivity as provided in §56064. The Commission shall consider existing zoning and rezoning, general plans, and other land use plans, interests and plans of unincorporated communities, SOIs and master service plans of neighboring governmental entities and recommendations and determinations from related service reviews (Section 56375, Section 56668).
- f. LAFCo shall encourage changes of organization that are consistent with policies and criteria contained in these Policies as interpreted by the Commission and that do not worsen conditions or undermine recommendations disclosed in a service review.
- g. Prior to annexation to a city or a special district, LAFCo shall consider whether the need for governmental services exists, the annexing agency is capable of providing service, that a plan for service exists, and that the annexation is the best alternative to provide service (Section 56700, Section 56668).
- h. LAFCo will discourage projects that shift the costs of services and infrastructure benefits received to other service providers or service areas.
- i. A proposed annexation shall be a logical and reasonable expansion to the annexing district (Section 56001, Section 56119, Section 56668).
- j. LAFCo shall discourage proposals involving agencies with SOIs that are more than five years old until a service review has been conducted, unless the LAFCo determines the proposal's impacts are insignificant.
- k. To the extent feasible, LAFCo actions shall further service review recommendations.
- l. LAFCo will consider and approve consolidations when the conclusions of special studies or service reviews indicate that reorganization would result in improved service provision at the same or lower cost.

7.3 Annexation to a City

Planned urban development contributes to the orderly growth of urban areas. Therefore, promotion of planned development is a primary goal of LAFCo.

- a. The fundamental policy of LAFCo in considering the development status of land, located in or adjacent to an established city SOI and contiguous to a city boundary shall be that such development is preferred in cities. This policy is based on the fact that cities exist to provide a broader range of services than do special districts (Section 56001, Section 56425, Section 56076).

- b. Developed lands which benefit from municipal services and contiguous to a city boundary should be annexed to that City providing such services.
- c. Urban development and utility expansion plans should be coordinated among cities, special districts, and the County, in cooperation with LAFCo.
- d. Land may not be annexed to a city unless it is contiguous to the city at the time the proposal is initiated, unless it is owned by the city, is being used for municipal purposes at the time Commission proceedings are initiated, and does not exceed 300-acres in area (Section 56741, Section 56742).
- e. Petitions shall demonstrate the need for municipal services and the city to which the territory is being annexed shall be capable of meeting the demonstrated need (Section 56700).
- f. A city shall prezone undeveloped property to be annexed before the effective date of the annexation. No subsequent change may be made to the general plan or zoning of the annexation unless the legislative body for the city makes a finding at a public hearing that a substantial change in circumstances has occurred that necessitate a departure from the pre zoning in the application to the Commission. (Section 56375)
- g. The annexing city shall be the Lead Agency and LAFCo shall be the Responsible Agency, for environmental review of any pre zoning and related change of organization. The annexing city shall consult with LAFCo during the CEQA process, provide a written response to LAFCO's input, and submit environmental documentation to LAFCo pursuant to State CEQA Guidelines Sections 15050, 15381, 15096, 15051.
- h. Detachment from districts providing services to areas being annexed to a city are to be processed simultaneously as a reorganization in compliance with Sections 56826 and 56073 of the Cortese-Knox-Hertzberg Act and consistent with applicable SOI policies and any service review recommendations adopted by LAFCo.

City of Wheatland General Plan

The following are applicable Wheatland General Plan goals and policies related to land use and planning.

Land Use and Community Character

Citywide Growth and Development

Goal 1.A To grow in an orderly pattern consistent with economic, social, and environmental needs, while preserving Wheatland's small town character and historical significance.

Policy 1.A.1. The City shall strive to preserve Wheatland's traditional small-town qualities and historic heritage, while expanding its residential and employment base.

- Policy 1.A.2. The City shall ensure that development occurs in an orderly sequence based on the logical and practical extension of the public facilities and services.
- Policy 1.A.3. The City shall designate land for development consistent with the needs of the community and consistent with its efforts to maintain a positive fiscal balance for the City.
- Policy 1.A.4. The City shall manage residential growth to keep pace with planned facilities and services improvements.
- Policy 1.A.6. The City shall work with the Sacramento Area Council of Governments (SACOG) and Yuba County to coordinate the City's General Plan with regional planning efforts.
- Policy 1.A.7. The City shall manage urban growth in areas with hazardous conditions such as flooding and unstable soils.
- Policy 1.A.8. The City shall establish a Memorandum of Understanding with Yuba County in order to maintain agricultural preservation zoning on farmland surrounding the city.
- Policy 1.A.9. The City shall require new development to pay its fair share of capital costs for necessary infrastructure improvements pursuant to the City's Fee Study.
- Policy 1.A.10. The City shall assure that the Zoning Ordinance and Zoning Map are consistent with the General Plan.
- Policy 1.A.11. The City shall require future large planning efforts, including specific plans, to provide an appropriate jobs-housing balance to ensure an adequate mix of economic and residential opportunities.
- Policy 1.A.12. Specific Plans or site plans submitted to the City as part of an application for land development must substantially conform to the General Plan Land Use Diagram. The Planning Director shall make a determination of substantial conformance with the Land Use Diagram for every development application. If such a determination cannot be made, the applicant for development shall include a request to amend the General Plan accordingly.

Residential Development

- Goal 1.B To provide adequate land in a range of residential densities to accommodate the housing needs of all income groups expected to reside in Wheatland.
- Policy 1.B.1. The City shall support residential development at a manageable pace to achieve its fair share of regional housing needs and provide for orderly extension of infrastructure and public services.
- Policy 1.B.2. The City shall require residential project design to reflect and consider natural features, noise exposure of residents, visibility of structures, circulation, access, and the relationship of the project to surrounding uses. Residential densities and lot patterns will be determined by these and other factors.
- Policy 1.B.3. The City shall discourage the development of isolated, remote, disconnected, and/or gated residential projects, which do not contribute to the sense of an integrated community.
- Policy 1.B.4. The City shall encourage multi-family housing to be located throughout the community, but especially near transportation corridors, Downtown, major commercial areas, neighborhood commercial centers, and employment centers.
- Policy 1.B.5. The City shall discourage leapfrog development and development in peninsulas extending into agricultural lands to avoid adverse effects on agricultural operations.

New Residential Neighborhoods

- Goal 1.C To provide for new residential development in planned neighborhoods that are designed to promote walking, bicycling, and transit use.
- Policy 1.C.1. The City shall promote new residential development in a range of residential densities that reflects the positive qualities of Wheatland (e.g., street trees, pedestrian orientation, mix of housing types and sizes).
- Policy 1.C.2. The City shall encourage the creation of well-defined residential neighborhoods that have a clear focal point, such as a park, school or other open space and community facility, and are connected to the existing city core as well as each other.
- Policy 1.C.3. The City shall require that development plans for new residential neighborhoods address the following:

- a. The distribution, location, and extent of land uses, including standards for land use intensity.
- b. Compatibility of new development with adjacent existing and proposed development.
- c. Provision of a range of housing types to ensure socially- and economically-integrated neighborhoods.
- d. Distribution and location of roadways, including design standards for and the precise alignment of arterial, collector, and local streets, and bikeways.
- e. Provisions for the extension of the existing city roadway system into new development areas. New development shall be linked to adjacent existing neighborhoods and planned neighborhoods by collector and local streets. .
- f. Provisions for adequate schools and child care facilities.
- g. Distribution and location of neighborhood commercial centers, parks, schools, child care centers, and other public- and quasi-public facilities.
- h. Provisions for linking residential neighborhoods, parks, schools, Downtown, shopping areas, and employment centers through a system of pedestrian pathways, bicycle routes, and linear open-space corridors along sloughs, Dry Creek, and the Bear River.
- i. Provisions for development phasing to ensure orderly and contiguous development.
- j. Provisions for minimizing conflicts between new development and agricultural uses.

Policy 1.C.4. The City shall require residential subdivisions to provide well-connected internal and external street, bicycle, and pedestrian systems.

Policy 1.C.5. The City shall encourage installation of current and emerging technological infrastructure in new and existing development for home telecommuting and electric vehicle charging.

Commercial Land Use

Goal 1.E To designate adequate commercial land for development of local and regional commercial uses compatible with surrounding land uses that would meet the present and future needs of Wheatland residents and visitors, and enhance Wheatland's economic vitality.

Policy 1.E.1. The City shall designate commercial land in appropriate locations to provide for various kinds of commercial development to meet the needs of Wheatland residents and visitors, with necessary access, exposure, and utilities.

- Policy 1.E.2. The City shall strive to avoid creating an oversupply of commercially-designated land to prevent the dilution or deterioration of currently viable commercial areas, as well as efforts to improve and extend Downtown.
- Policy 1.E.3. The types and locations of future outlying commercial uses should be examined to minimize any adverse effects on the efforts to improve and extend Downtown.
- Policy 1.E.4. Commercial facilities should be designed to encourage and promote transit, pedestrian, and bicycle access. The City shall require that new commercial development be designed to encourage and facilitate pedestrian circulation within and between commercial sites and nearby residential areas.
- Policy 1.E.5. The City shall require pedestrian and bicycle access in the design of sound walls, buffers, detention basins, fencing, or other physical features between commercial and residential uses.
- Policy 1.E.6. The City shall require new commercial development to be designed to minimize the visual impact of parking areas on public roadways.
- Policy 1.E.7. New commercial development adjacent to residential development shall provide buffers from noise, trespassing, lighting, or other annoyances, through methods such as landscaping or fencing.
- Policy 1.E.8. The City shall reserve sites for neighborhood commercial development in specific plans for new neighborhoods.

Employment

- Goal 1.G To support development of employment uses to meet the present and future needs of Wheatland residents for jobs and to maintain Wheatland's economic vitality.
- Policy 1.G.1. The City shall designate specific areas suitable for employment development and reserve such lands in a range of parcel sizes to accommodate a variety of employment uses.
- Policy 1.G.2. The City shall only approve new employment development that has adequate infrastructure and services. Employment development shall be required to provide sufficient buffering from residential areas to avoid impacts associated with noise, odors, and the potential release of hazardous materials.

- Policy 1.G.3. The City shall promote the development of new high technology uses in the employment locations near the SR 65 bypass.
- Policy 1.G.4. The City shall promote the development of business park and research and development uses in Wheatland.
- Policy 1.G.7. The City shall ensure that intensive industrial or manufacturing uses are located in areas compatible with adjacent use.

Urban Reserve

Goal 1.H To maintain land as Urban Reserve for consideration for future development.

- Policy 1.H.1. No urban development of Urban Reserve areas will be permitted without a General Plan amendment. No General Plan amendment will be considered without an analysis that includes the factors listed in Policy 1.H.2.
- Policy 1.H.2. The City shall, when deemed necessary, consider the appropriateness of development of Urban Reserve lands based upon the following factors:
- a. Possible location and mix of land uses.
 - b. Implications for overall community form and relationship to the existing community and Downtown Wheatland.
 - c. Flooding and drainage implications.
 - d. Market feasibility of development in this area, including the expected rate of absorption.
 - e. Availability of water supply.
 - f. Consideration of circulation patterns and improvements
 - g. Effect on and compatibility with existing City infrastructure (e.g., wastewater treatment plant).
 - h. Implications of providing law enforcement and fire protection services.
 - i. Potential impacts on sensitive biological resources.
 - j. Noise contour implications of Beale Air Force Base.

Agriculture

Goal 1.I To maintain the productivity and minimize developments affects on agricultural lands surrounding Wheatland.

- Policy 1.I.1. The City shall discourage leapfrog development and development in peninsulas extending into agricultural lands to avoid adverse effects on agricultural operations.

- Policy 1.I.2. The City shall support the local agricultural economy by encouraging the location of agricultural support industries in the City, establishing and promoting marketing of local farm products, exploring economic incentives, and support for continuing agricultural uses adjacent to the City, and providing its fair share of adequate housing to meet the needs of agricultural labor.
- Policy 1.I.3. The City shall promote good neighbor policy between residential property owners and adjacent farming operations by supporting the rights of farmers and ranchers to conduct agricultural operations in compliance with State laws.

Landscape and Streetscape

Goal 1.J To maintain and enhance the quality of Wheatland's major travel corridors, city entrances, landscape, and streetscape.

- Policy 1.J.1. New development within major transportation corridors must comply with the following minimum building requirements:
- a. All outdoor storage of goods, materials, and equipment, and loading docks areas shall be screened from major roadways.
 - b. Developments with multiple buildings should have a uniform design theme and sign program.
 - c. Earth tones shall be used as the dominant color; colors such as white, black, blue, and red should be used as accents. Building surfaces should have color schemes that reduce their apparent size.
 - d. Metal buildings will be allowed only with enhanced architectural and landscaping treatment (such as use of trim bands, wing walls, parapets, and reveals).
 - e. All exterior elevations visible from major roadways should have architectural treatment to alleviate long void surfaces. This can be accomplished through varying setbacks, breaking buildings into segments, pitched roof elements, columns, indentations, patios, and incorporating landscaping into architectural design.
- Policy 1.J.2. The City shall encourage increased building setbacks and wider landscape areas along major corridors.
- Policy 1.J.3. The City shall require that all new development incorporate the planting of trees and other vegetation that extends the vegetation pattern of older adjacent neighborhoods into new development.

- Policy 1.J.4. As a condition of the approval of larger development projects, the City shall require establishment of funding mechanisms for the ongoing maintenance of street trees and landscape strips. The City shall explore the potential for putting all new development in a master landscape and lighting district for maintenance of street trees and landscape strips.
- Policy 1.J.5. The City shall promote efforts to improve the visual quality of entrances to Wheatland and to Downtown.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

For the purposes of this Draft EIR, impacts are considered significant if implementation of the Johnson Rancho and Hop Farm Annexation project would result in the following.

Land Use

A land use impact is considered to be significant if any effects of the following conditions, or potential thereof, would result with the implementation of the proposed project:

- Result in substantial potential for conflict as a result of incompatible land uses;
- Result in a significant change in the character of Wheatland; or
- Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

Agricultural Resources

An agricultural impact is considered to be significant if any effects of the following conditions, or potential thereof, would result with the implementation of the proposed project:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency;
- Conflict with existing zoning for agricultural use; or
- Involve other changes in the existing environment, which, due to their location or nature, could result in the conversion of Farmland to non-agricultural use.

Method of Analysis

Land Use

The Land Use impact evaluation qualitatively compares the uses proposed for the project to the existing and other proposed uses in the vicinity of the project site in order to determine if proposed land uses are compatible with existing or proposed uses. The determination of compatibility is based on the anticipated environmental effects of proposed uses and the sensitivity of adjacent uses to those effects. The evaluation also assesses the consistency of the proposed project with the goals and policies of the Wheatland General Plan and LAFCo policies and standards regarding annexation.

Agricultural Resources

The Agricultural Resources section assesses the impacts of the project on agricultural resources by applying the standards of significance listed above to the proposed project. If the analysis determines that the proposed project would have significant impacts on agricultural resources, mitigation measures are recommended to reduce impacts.

Project-Specific Impacts and Mitigation Measures – Land Use

The following discussion of impacts is based on the implementation of the proposed project (Johnson Rancho and Hop Farm), unless otherwise noted.

4.2-1 Compatibility with surrounding agricultural operations.

The determination of compatibility of land uses typically relies on a general discussion of the types of adjacent uses to a proposed project and whether any sensitive receptors exist either on the adjacent properties or associated with the proposed project. Incompatibilities typically exist when uses such as residences, parks, churches, and schools are located adjacent to more disruptive uses such as heavy industrial, major transportation corridors, and regional commercial centers where noise and traffic levels may be high. The identification of incompatible uses occurs if one land use is anticipated to be disruptive of the existing or planned use of an adjacent property.

Approval of the proposed project would result in the development of residential neighborhoods, employment, commercial, public/quasi-public, park/open space, and schools adjacent to agricultural operations.

In considering the potential incompatibilities between the project and surrounding uses, it is necessary to consider both the potential effects that the new project uses could have on existing surrounding uses, as well as the potential effects that existing off-site uses could have on the new project uses. For a discussion regarding the potential effects of the new project uses on existing surrounding uses, see Impact 4.2-2, below.

Hop Farm

Potential Incompatibilities between the Proposed Project and Surrounding Uses

This discussion will appropriately consider the potential effects that existing surrounding agricultural uses could have on the new project uses. Of concern here are the existing agricultural lands located west and east and partially north of the project site. Certain characteristics need to be noted regarding these off-site agricultural lands. First, those agricultural lands located west of the project site do not necessitate further consideration because they are sufficiently separated from the project site by the Union Pacific Railroad tracks, SR 65, and the Heritage Oaks Estates Tentative Map site, which was mass graded in anticipation for residential development, but subsequently left undeveloped due to the current economic milieu. (It should be noted that potential incompatibilities due to noise from UPRR are addressed in Chapter 4.5, Noise, of this Draft EIR.) Therefore, the focus will be on the agricultural lands to the east and northeast of the Hop Farm portion of the project site.

Regarding the agricultural lands east of the Hop Farm project site, given that these lands are part of the Johnson Rancho portion of the project, any potential land use incompatibilities resulting from these agricultural lands would be considered temporary, as the entirety of the Johnson Rancho portion of the project site is anticipated to be developed in the long-term. However, in the short-term, active agricultural operations on the lands east of the Hop Farm property (i.e., AKT Ranch), could result in the generation of dust, noise, and drift of agricultural chemicals, which could create incompatibilities with the sensitive land uses proposed for the Hop Farm Property. However, the Yuba County Agricultural Commissioner has indicated that in order for farmers to get clearance on spraying pesticides, they first need to request and obtain a permit from the Agricultural Commissioner.⁶ As part of this process, the Agricultural Commissioner reviews the proposed types of agricultural chemicals and application methods as well as the uses surrounding the agricultural lands that would be sprayed. The Agricultural Commissioner uses a variety of conditions that he can apply to any pesticide permit, such as only permitting pesticide applications during favorable wind conditions, or restricting aerial application within a certain distance of nearby residential receptors and only allowing ground spraying. In summary, if the Hop Farm property precedes the development of the AKT Ranch portion of the Johnson Rancho property, the AKT orchard operator would need to obtain a pesticide permit from the Yuba County Agricultural Commissioner, who would ensure that appropriate restrictions are placed on AKT's permit to ensure that the limited residential uses on the Hop Farm property are not adversely affected.

It is important to note that almost the entirety of the eastern portion of the Hop Farm property would consist of Employment and Commercial uses, which would not typically be considered sensitive uses. Furthermore, these Employment and Commercial land uses are separated from the Johnson Rancho portion of the project site by the proposed Wheatland Expressway. Only a very small area of the eastern portion of the Hop Farm property consists of residential uses (LDR) that would be located immediately adjacent to

the agricultural lands on the Johnson Rancho portion of the project site. In addition, a small HDR parcel is located in the Hop Farm property's northeastern corner, near agricultural lands, albeit, this HDR parcel would be separated from the agricultural lands by Spenceville Road. Yet, the land use plan for the Hop Farm property does not include setbacks in the northeastern and far southeastern corners so as to avoid the establishment of unnecessary permanent separations at such time that the adjacent properties develop. In order to avoid this type of piece-meal development, the project has been designed so as to not incorporate large, unnecessary setbacks from adjacent agricultural parcels. As a result, until such time that the agricultural lands located northeast and southeast of the Hop Farm property are developed, potential interim incompatibilities could result and therefore would be made known to prospective homebuyers through the use of disclosure statements. Included in the disclosure statement will be language regarding the fact that Yuba County has a right-to-farm ordinance, which seeks to retain and promote the agricultural industry within the County.

It should also be noted that Bear River and the Bear River levee bound the Hop Farm's southern boundary. These physical land features would act as an adequate buffer between the project's sensitive receptors and the agricultural operations to the south of Bear River in Placer County. More specifically, the proposed residential uses on the Hop Farm property would be located a minimum of 0.13 miles, or approximately 690 feet, from the nearest agricultural lands in Placer County to the south. This distance is nearly 190 feet more than the most strict buffer (i.e., 500 feet) often employed by regulatory agencies between sensitive receptors and those agricultural lands receiving the most intense type of pesticide applications (i.e., aerial).

Johnson Rancho

Potential Incompatibilities between the Project and Surrounding Uses

The Johnson Rancho property, which consists of several different ownerships as illustrated in Figure 3-3 of Chapter 3, Project Description, is surrounded by agricultural lands, many of which are simply used for grazing. Grazing lands are primarily located north and east of the Johnson Rancho portion of the project, and as such, the residential uses proposed in the northern and eastern portions of the Johnson Rancho property would not be subject to incompatibilities from surrounding uses, with the single exception of the Dave Browne property, located north of Spenceville Road. An orchard is currently located immediately north of this property and south of Dry Creek. In addition, many stretches of the southern boundary of the Johnson Rancho property are located in close proximity to agricultural lands containing uses such as orchards, beyond which are the Bear River levee and the river itself.

The active agricultural operations on the lands south of the Johnson Rancho property could result in the generation of dust, noise, and drift of agricultural chemicals, which could create incompatibilities with the sensitive land uses proposed for the Johnson Rancho Property. As a result, the Land Use Plan for the project, as illustrated in Figure 4.2-2 above, includes a large open space/drainage corridor along much of the southern

boundary of the Johnson Rancho property. This open space/drainage corridor would provide a substantial buffer between the agricultural lands and the proposed LMDR uses for the project. In addition, potential interim incompatibilities would be made known to prospective homebuyers through the use of disclosure statements. Included in the disclosure statement will be language regarding the fact that Placer County has a right-to-farm ordinance, which seeks to retain and promote the agricultural industry within the County.

The active agricultural operations on the parcel north of the Dave Browne property (north of Spenceville Road), which is within the Johnson Rancho portion of the project could also result in the generation of dust, noise, and drift of agricultural chemicals. As a result, until such time that the agricultural land located north of the Dave Browne property is developed, potential interim incompatibilities could result and therefore would be made known to prospective homebuyers through the use of disclosure statements. Included in the disclosure statement will be language regarding the fact that Yuba County has a right-to-farm ordinance, which seeks to retain and promote the agricultural industry within the County.

Conclusion

Development of the proposed project would potentially expose future on-site residents to temporary nuisances from adjacent agricultural operations; therefore, a **significant** impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would inform prospective residents of the potential for a nuisance from adjacent agricultural operations; however, the mitigation would not reduce or remove the potential for conflict. Therefore, as agricultural operations are anticipated to remain in the near-term, the project would result in a short-term *significant and unavoidable* impact. Eventual buildout of the Johnson Rancho portion of the property, as well as the overall General Plan area, would replace the existing agricultural operations with urban uses, which would not conflict with the proposed residences; therefore, under the long-term scenario, impacts would be *less-than-significant*.

- 4.2-1 *The project applicant shall inform and notify prospective buyers in writing, prior to purchase, about existing and on-going agriculture activities in the immediate area in the form of a disclosure statement. The notifications shall disclose that the Wheatland area is an agriculture area subject to ground and aerial applications of chemical and early morning or nighttime farm operations, which may create noise, dust, et cetera, and provide that such agricultural operations shall not be considered a nuisance. The language and format of such notification shall be reviewed and approved by the City Attorney prior to recording the **first** final map. Each disclosure statement shall be acknowledged with the signature of each prospective property owner.*

4.2-2 Compatibility with surrounding residential uses.

As discussed above, the determination of compatibility of land uses typically relies on a general discussion of the types of adjacent uses to a proposed project and whether any sensitive receptors exist either on the adjacent properties or associated with the proposed project. In some limited cases, approval of the proposed project would result in the development of residential neighborhoods, employment, commercial, public/quasi-public, park/open space, and schools adjacent to residential uses.

Hop Farm

Potential Incompatibilities between the Proposed Project and Surrounding Uses

In this discussion, consideration will be given to the potential effects that the new project uses could have on surrounding residential uses. The most intense land uses proposed for development on the Hop Farm portion of the project site include the Employment uses and the Commercial uses. However, only the Commercial land use type is of importance in this incompatibility discussion given the fact that the Employment land uses are located adjacent to the proposed Wheatland Expressway, and sufficiently away from any existing sensitive receptors. A relatively small “block” of Commercial land use is proposed in the northwestern corner of the Hop Farm property. The western boundary of this commercially-designated area is adjacent to the existing City limits, where residences are located. Generally, the juxtaposition of commercial and residential land uses can result in incompatibilities via the introduction of new sources of lighting, noise (i.e., parking lot and truck delivery), and traffic. However, the above statement does not take into consideration the variety of ways by which commercial developments can be thoughtfully designed so as to minimize any potential land use incompatibilities that could otherwise arise. In fact, the Wheatland General Plan Update has specific policies aimed at ensuring the attainment of this very objective – that is, careful design of commercial developments to minimize incompatibilities. For example, Policy 1.E.7 states “New commercial development adjacent to residential development shall provide buffers from noise, trespassing, lighting, or other annoyances, through methods such as landscaping or fencing.” Accordingly, the Stage 1 Development Plans prepared for both the Hop Farm and Johnson Rancho portions of the project, which provide general development standards for the Planned Development zoning that will be applied to the overall project site, include similar language requiring the careful design of future on-site commercial development to ensure that adequate buffers and/or setbacks are included in the development’s design to minimize incompatibilities with adjacent residential uses. In summary, implementation of the Stage 1 Development Plan would ensure that land use incompatibilities would not result between new project uses and surrounding residential uses.

Potential Incompatibilities On-Site between Proposed Uses

Potential incompatibilities could occur between the residential uses proposed for the project site and the Employment and Commercial uses proposed for the project site;

however, as discussed above the Stage 1 Development Plans prepared for both the Hop Farm and Johnson Rancho portions of the project, which provide general development standards for the Planned Development zoning that will be applied to the overall project site, include language requiring the careful design of future on-site Commercial development to ensure that adequate buffers and/or setbacks are included in the development's design to minimize incompatibilities with adjacent residential uses. In addition, the Stage 1 Development Plans, consistent with relevant General Plan policies, include language requiring the careful design of future on-site Employment uses to ensure adequate buffers and/or setbacks are included to minimize incompatibilities with adjacent residential uses. For example, Policy 1.G.2 of the General Plan states: "[...] employment development shall be required to provide sufficient buffering from residential areas to avoid impacts associated with noise, odors, and the potential release of hazardous materials." In summary, implementation of the Stage 1 Development Plan would ensure that nuisance land use incompatibilities would not result between new residential and Employment and Commercial uses.

Johnson Rancho

Unlike the Hop Farm property, the Johnson Rancho portion of the project site is not surrounded by existing residential uses, with the exception of a very small number of rural residential dwellings, none of which are located immediately adjacent to the project site. Therefore, this discussion is limited to the project's future potential incompatibilities on-site between proposed land uses.

Potential Incompatibilities On-Site Between Proposed Uses

Two areas within the Johnson Rancho property would include the collocation of Employment and Commercial uses adjacent to residential uses of varying densities. As described in detail above for the Hop Farm property, the Stage 1 Development Plans prepared for both the Hop Farm and Johnson Rancho portions of the project, which provide general development standards for the Planned Development zoning that will be applied to the overall project site, include language requiring the careful design of future on-site Commercial and Employment developments to ensure that adequate buffers and/or setbacks are included in the development's design to minimize incompatibilities with adjacent residential uses. In summary, implementation of the Stage 1 Development Plan would ensure that land use incompatibilities would not result between new residential and Employment and Commercial uses.

Patterson Sand and Gravel is also located south of the southeastern corner of the Johnson Rancho property (i.e., the Johnson's Crossing property) at 8705 Camp Far West Road. However, at its closest point, Patterson Sand and Gravel is located just over 0.6 miles from the southern boundary of the Johnson Rancho property, which would be more than sufficient to eliminate any potential incompatibilities resulting from operational dust and noise associated with this facility.

It should also be noted that bee boxes are sometimes utilized on the agricultural properties that make up the Johnson Rancho property. These bee boxes are part of a very

small operation by which the farmers harvest the honey and wax from the bees' activities. These bee boxes would not generate any incompatibilities with future residents within the Johnson Rancho property because they would be removed prior to any construction work occurring on-site.

Conclusion

Through careful design guided by the framework set forth in the Stage 1 Development Plans for both the Johnson Rancho and Hop Farm portions of the project site, future Commercial and Employment uses on the project site would be compatible with the existing residential areas located adjacent to the northwestern boundaries of Hop Farm, as well as new residential areas proposed for the overall project. In addition, potential impacts from light and glare, air quality, and noise are more fully addressed in Chapter 4.1, Aesthetics, Chapter 4.4, Air Quality and Climate Change, and Chapter 4.5, Noise, respectively. Therefore, impacts related to compatibility with surrounding residential uses would be *less-than-significant*.

Mitigation Measure(s)

None required.

4.2-3 Consistency with the Wheatland General Plan.

The Hop Farm portion of the project site is included in the Wheatland General Plan Update Study Area and has been assigned various General Plan Land Use Designations, as illustrated in Figure 4.2-1, above. The existing General Plan Land Use Designations for the Hop Farm portion of the project will not be changed as part of the proposed project because the development proposed for the Hop Farm is consistent with the type and intensity of development anticipated for the site in the General Plan Update.

However, as also indicated in Figure 4.2-1, the Johnson Rancho portion of the project site was designated as Urban Reserve in the 2006 Wheatland General Plan Update. As a result, the proposed project includes a General Plan Amendment to redesignate this portion with the following Wheatland General Plan Land Use Designations: Very Low Density Residential (VLDR), LDR, LMDR, MDR, EMP, COM, PUBLIC, and PARK. As noted above, the 2006 General Plan Update Land Use Diagram does not include a VLDR designation. Therefore, as part of the General Plan Amendment for the proposed project, a new VLDR designation will need to be adopted and reflected on the General Plan Update Land Use Diagram accordingly. The proposed language for the VLDR designation is as follows:

Very Low Density Residential

This designation provides for single family detached homes, secondary residential units, public and quasi-public uses, and similar and compatible uses. Residential densities shall be in the range of 0.1 to 2.9 units per gross acre.

In addition to the General Plan Amendment to the Land Use Diagram, the proposed project also requires a General Plan Amendment to the Circulation Element Diagram. This amendment would add the major roadway network of the proposed project to the Circulation Element Diagram to reflect the necessary extensions of existing City streets as well as new roadways identified in the 2006 General Plan Update Circulation Element Diagram.

Regarding the existing Urban Reserve designation of the Johnson Rancho portion of the project, page 1-17 of the Wheatland General Plan Update Policy Document states:

The Land Use Diagram designates the area east of Jasper Lane, portions of the Study Area between the county line and the Bear River, and a small area north of Dry Creek, as Urban Reserve. This indicates that the City will study this area and may consider it for future development. Policies of this section call for the City to study the implications of future development of the Urban Reserve area to determine if this area is feasible and appropriate for future development.⁷

This entire Draft EIR, in fact, studies the implications of future development of the Urban Reserve area (i.e., Johnson Rancho portion of the project) to determine if this area is feasible and appropriate for future development. More specifically, Table 4.2-4 evaluates the specific Urban Reserve policies in the General Plan as well as all other relevant land use policies included in the General Plan Update.

Summary

As noted above, the existing General Plan Land Use Designations for the Hop Farm portion of the project will not be changed as part of the proposed project because the development proposed for the Hop Farm is consistent with the type and intensity of development anticipated for the site in the General Plan Update. And while the proposed Johnson Rancho portion of the project is generally consistent with the relevant General Plan policies discussed in the below table, development of this portion of the project would require the City Council to approve the requested Annexation and General Plan Amendment. Should City Council approve these program-level entitlement requests, the entirety of the project would be deemed consistent with the General Plan, resulting in a *less-than-significant* impact.

Mitigation Measure(s)

None required.

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
LAND USE AND COMMUNITY CHARACTER	
Citywide Growth and Development	
<p>Policy 1.A.1. The City shall strive to preserve Wheatland's traditional small-town qualities and historic heritage, while expanding its residential and employment base.</p>	<p>The Hop Farm portion of the project site was already anticipated in the Wheatland General Plan Update for the type and intensity of development proposed for this project, which among other uses includes approximately 77 acres of Employment land use and 441 acres of residential land uses of varying densities. The Johnson Rancho portion of the project site, which requires a General Plan Amendment to change the current Urban Reserve land use designation, would further expand the City's residential and employment base. Specifically, approval of the requested land use designation amendment for the Johnson Rancho portion of the project site would result in an additional 197 acres of Employment land use within the City limits and 2,794 acres of residential land uses of varying densities.</p> <p>The Johnson Rancho and Hop Farm Annexation project is also consistent with Policy 1.A.1 in that the historic heritage and small-town qualities of the City are emphasized and incorporated into the project, as evidenced by the following language in Section 3.1 of the Johnson Rancho Stage 1 Development Plan: "The general theme of the Plan Area is intended to respond to the site's historic aspects and emphasize Wheatland's scenic beauty. Historic structures will be preserved, where feasible, and incorporated into public parks and open spaces, providing a community identity and serving as reminders of Wheatland's distinguished history. The open spaces associated with the three drainages will be preserved as community focal points, passive open space and vital wildlife habitat that will celebrate the community's connection to the local ecology. The use of agrarian components, high quality rustic materials and iconic elements will be used to reinforce the visual character and provide a unified, distinct theme throughout the Plan Area that reinforces a strong sense of place."</p> <p>It should be noted that the Johnson Rancho Stage 1 Development Plan was prepared in part to assist in implementing the <i>City of Wheatland Community</i></p>

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
	<p><i>Vision</i>, which was developed in collaboration with residents and decision makers in 2008, to function as a companion document to the 2006 General Plan Update. The Wheatland Community Vision Plan includes principles related not only to expanding the residential and employment base within the City, consistent with General Plan Policy 1.A.1., but also principles related to expanding the commercial base. For example, one of the Community Development and Design principles included in the Vision Plan states the following: “Wheatland shall seek to locate a regionally attractive commercial facility along the State Route 65 Bypass within the Wheatland Sphere of Influence.” Consistent with this principle of the City’s Community Vision Plan, the Johnson Rancho and Hop Farm Annexation Project includes a regional commercial facility along the Wheatland Expressway (State Route 65 Bypass) within the Wheatland Sphere of Influence. Furthermore, the general design standards included in the Stage 1 Development Plan prepared for the proposed project would ensure that this regional commercial facility is attractive.</p>
<p>Policy 1.A.2 of the Land Use and Community Character section of the General Plan states that the City shall ensure that development occurs in an orderly sequence based on the logical and practical extension of the public facilities and services.</p>	<p>The Hop Farm portion of the project site is adjacent to both the existing City limits and existing residential development. In addition, the Hop Farm portion of the project site, while requiring annexation, has already been anticipated in the Wheatland General Plan Update for the type and intensity of development proposed for this project. In addition, as discussed in Chapter 4.13, Public Services and Utilities, of this Draft EIR, water, sewer, and storm drainage infrastructure can be practically extended to the entire Johnson Rancho and Hop Farm Annexation project site from the major delivery/trunk lines existing within City right-of-ways, and mitigation included within this Draft EIR requires the project applicant(s) to fund and construct any improvements needed to connect the project site to utilities.</p>
<p>Policy 1.A.3. The City shall designate land for development consistent with the needs of the community and consistent with its efforts to maintain a positive fiscal balance for the City.</p>	<p>As demonstrated in Chapter 4.12, Population, Employment, and Housing, the land uses in the Johnson Rancho and Hop Farm Plan Area have been designed to provide a balance of jobs and housing comparable to that which was anticipated for the City in the General Plan Update. Please refer to the consistency discussion under Policy 1.A.11 for more details. In addition, it is important to note that the proposed project is not envisioned to be built out all</p>

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
	at once; rather, once the program-level entitlements, which are the subject of this EIR, are approved by the City, it is anticipated that buildout of the project would occur in phases, as the market will support. Each phase will require subsequent discretionary project-level approvals, including Stage 2 Development Plans and tentative maps.
Policy 1.A.4 states that the City shall manage residential growth to keep pace with planned facilities and services improvements.	Chapter 4.13, Public Services and Utilities, of this Draft EIR, identifies, at a program level, the facilities and infrastructure improvements that would be necessary to accommodate the residential development included in the project. Chapter 4.13 includes several mitigation measures requiring the applicant(s) to pay their fair share fees toward needed facilities and infrastructure improvements via payment of Wheatland's Development Impact Fees, which will be updated per the mitigation requirements.
Policy 1.A.6. The City shall work with the Sacramento Area Council of Governments (SACOG) and Yuba County to coordinate the City's General Plan with regional planning efforts.	The City will coordinate with SACOG and Yuba County regarding the regional cost sharing for the Wheatland Expressway and other planned regional roadways on which the proposed project would contribute traffic.
Policy 1.A.7. The City shall manage urban growth in areas with hazardous conditions such as flooding and unstable soils.	As demonstrated in Chapter 4.10, Hydrology and Water Quality, any areas of the project site that are within the 100-year flood plain cannot proceed with any land disturbance activities until the necessary approvals are obtained from the City and/or FEMA. Compliance with the City's floodplain management ordinance and applicable FEMA regulations would ensure that all flood hazard impacts would be reduced to a less-than-significant level. Similarly, while Chapter 4.8, Geology and Soils, determined that some areas of the project site are underlain by expansive soils and soils subject to liquefaction, the mitigation measures incorporated into the Draft EIR would ensure that all potential unstable soil impacts would be reduced to a less-than-significant level.
Policy 1.A.8. The City shall establish a Memorandum of Understanding with Yuba County in order to maintain agricultural preservation zoning on farmland surrounding the city.	This policy is a directive for the City of Wheatland and not the project applicant. It should be noted, however, that the City continues to work with Yuba County toward establishing a Memorandum of Understanding in order to maintain agricultural preservation zoning on farmland surrounding the city.
Policy 1.A.9. The City shall require new development to pay its fair share of capital costs for necessary infrastructure improvements pursuant to the City's Fee	As evidenced in the mitigation measures included in Chapter 4.13, Public Services and Utilities, the applicant(s) for the project will be required to pay

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
Study.	all applicable City fees in accordance with the City's Public Facilities Financing Plan prior to the issuance of building permits.
Policy 1.A.10. The City shall assure that the Zoning Ordinance and Zoning Map are consistent with the General Plan.	The City is committed to ensuring that the Zoning Ordinance and the Zoning Map are consistent with the General Plan. As a result, those areas of the project site that were assigned General Plan land use designations when the General Plan was updated in 2006 are being rezoned, as part of the project, to compatible zoning designation(s). These areas include the Hop Farm portion of the project as well as the five "Wheatland Parcels." In terms of the Johnson Rancho portion of the project site, the proposed General Plan land use designations and zoning designations are consistent.
Policy 1.A.11 states that the City shall require future large planning efforts, including specific plans, to provide an appropriate jobs-housing balance to ensure an adequate mix of economic and residential opportunities.	Buildout of the Johnson Rancho and Hop Farm annexation includes the development of approximately 14,396 dwelling units. The project includes 274.3 acres of employment/offices uses with an approximate density of 25 employees per acres and 131 acres of commercial uses at a Floor Area Ratio of 0.5 and density of 1 employee per 450 square feet. As discussed in Chapter 4.12, Population, Employment, and Housing, of this Draft EIR, buildout of the project area would result in approximately 13,197 jobs and a jobs/housing ratio of 0.92. The jobs/housing ratio of the Johnson Rancho and Hop Farm Annexation area would be consistent with the ratio anticipated in the General Plan Update. Therefore, as determined in Impact Statement 4.12-2, because the project jobs/housing ratio would be consistent with the anticipated jobs-to-housing ratio and would increase the ratio closer to a 1:1 ratio, the impact to the jobs-to-housing balance within the City of Wheatland would be less-than-significant.
Policy 1.A.12 states that the Specific Plans or site plans submitted to the City as part of an application for land development must substantially conform to the General Plan Land Use Diagram. The Planning Director shall make a determination of substantial conformance with the Land Use Diagram for every development application. If such a determination cannot be made, the applicant for development shall include a request to amend the General Plan accordingly.	The Hop Farm portion of the project site was already anticipated in the Wheatland General Plan Update for the type and intensity of development proposed for this project; therefore, the Hop Farm portion conforms to the General Plan Land Use Diagram. Because the Johnson Rancho portion of the project site necessitates a Land Use Designation change from Urban Reserve to various urban designations so as to permit the proposed types and intensities of development on this portion of the project site, the applicant has submitted a request to the City for the approval of a General Plan Amendment, which would result in conformance with the General Plan Land

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
	Use Diagram for the Johnson Rancho portion of the project site.
Residential Development	
Policy 1.B.1 states that the City shall support residential development at a manageable pace to achieve its fair share of regional housing needs and provide for orderly extension of infrastructure and public services.	See discussion on Policy 1.A.2 above.
Policy 1.B.2. The City shall require residential project design to reflect and consider natural features, noise exposure of residents, visibility of structures, circulation, access, and the relationship of the project to surrounding uses. Residential densities and lot patterns will be determined by these and other factors.	<p>The proposed project, at this time, only includes the approval of program-level entitlements, such as annexation, General Plan Amendment, and rezoning. Therefore, residential project designs have not been submitted at this time. The Stage 1 Development Plans acknowledge these factors, and, accordingly, set forth general guidance related to residential design for applicants to consider and incorporate into future residential projects. As stated in the Stage 1 Development Plan, specific development standards will be included into required Stage 2 Development Plans for review and approval by the City. As an example of the general guidance provided in the Stage 1 Development Plan related to residential design, Section 2.2.1 states: “Johnson Rancho is structured to create distinctive and attractive neighborhoods[...]Each neighborhood/district is bordered by a natural or designed open space with a school, park or public place as a central focal point. These neighborhoods are linked together with an interconnected street, open space and trail system. These systems provide easy access to the public amenities such as the schools, parks, shopping and employment areas[...]All of these components will be enhanced by the application of high quality architectural building and site design elements.”</p> <p>Regarding design considerations for noise and visibility of structures, the Stage 1 Development Plans prepared for both the Hop Farm and Johnson Rancho portions of the project, include language requiring the careful design of future on-site commercial and other non-residential development to ensure that adequate buffers and/or setbacks are included in the development’s design to minimize incompatibilities with adjacent residential uses.</p>
Policy 1.B.3. The City shall discourage the development of isolated, remote, disconnected, and/or gated residential projects, which do not contribute to the sense of an integrated community.	The proposed project’s northwestern boundary is directly adjacent to Wheatland City limits and the Hop Farm portion of the project site has already been designated for the type and intensity of development proposed

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
	for this project. The Stage One Development Plan for the project does not indicate that any gated residential projects are planned as part of the project. Therefore, the project does not include isolated, remote, disconnected, or gated residential projects.
Policy 1.B.4 of the Residential Development section states that the City shall encourage multi-family housing to be located throughout the community, but especially near transportation corridors, Downtown, major commercial areas, neighborhood commercial centers, and employment centers.	The proposed project includes several High Density Residential parcels near locations specified in Policy 1.B.4. For example, two HDR parcels are located near the proposed Wheatland Expressway and the Commercial and Employment areas associated with said Expressway. In addition, a single HDR parcel is located just north of Spenceville Road, adjacent to planned Employment uses.
Policy 1.B.5 of the Residential Development section states that the City shall discourage leapfrog development and development in peninsulas extending into agricultural lands to avoid adverse effects on agricultural operations.	The proposed project's northwestern boundary is directly adjacent to Wheatland City limits and the Hop Farm portion of the project site has already been designated for the type and intensity of development proposed for this project. Although the Johnson Rancho portion of the project would involve the conversion of agricultural lands, the development of the Johnson Rancho portion of the project site would not involve "leapfrog development and development in peninsulas extending into agricultural lands." The entire Johnson Rancho portion of the project site would be converted; thereby avoiding the creation of oddly shaped peninsulas extending into agricultural lands. In addition, the Wheatland General Plan has designated this portion of the project site as UR, a designation which is applied to land that may be considered for development in the future with urban uses.
New Residential Neighborhoods	
Policy 1.C.1 of the New Residential Neighborhoods section states that the City shall promote new residential development in a range of residential densities that reflect the positive qualities of Wheatland.	The proposed project includes a mix of residential land uses, including single family residential at varying densities, as well as multi-family residential and mixed use residential. The proposed project includes approximately 13,330 single-family dus. The proposed project would offer a variety of residential lot sizes, allowing for a blend of housing styles, sizes, and price ranges within a single community. Single-family residential is the largest land use component of the proposed project. Single-family homes are dispersed throughout the planning area, defined by landforms, street systems, and other land uses to create cohesive neighborhoods. The proposed project contains single-family residential designated as VLDR (0.1-2.9 du/ac), LDR (3-4

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
	du/ac), LMDR (4.1-6 du/ac), or MDR (6.1-8 du/ac) and multi-family residential designated as HDR (8.1-16 du/ac).
Policy 1.C.2 of the New Residential Neighborhoods section states that the City shall encourage the creation of well-defined residential neighborhoods that have a clear focal point, such as a park, school or other open space and community facility, and are connected to the existing City core, as well as each other.	As described in Section 2.2.1 of the Stage 1 Development Plan prepared as part of the project's Planned Development rezoning requirements, "Each neighborhood/district is bordered by a natural or designated open space with a school, park or public place as a central focal point. These neighborhoods are linked together with an interconnected street, open space and trail system. These systems provide easy access to the public amenities such as the schools, parks, shopping and employment areas."
<p>Policy 1.C.3. The City shall require that development plans for new residential neighborhoods address the following:</p> <ul style="list-style-type: none"> a. The distribution, location, and extent of land uses, including standards for land use intensity. b. Compatibility of new development with adjacent existing and proposed development. c. Provision of a range of housing types to ensure socially- and economically-integrated neighborhoods. d. Distribution and location of roadways, including design standards for and the precise alignment of arterial, collector, and local streets, and bikeways. e. Provisions for the extension of the existing city roadway system into new development areas. New development shall be linked to adjacent existing neighborhoods and planned neighborhoods by collector and local streets. f. Provisions for adequate schools and child care facilities. 	<ul style="list-style-type: none"> a. The general distribution and location of land uses for this project is illustrated on Figure 3-5, "General Plan Amendment Exhibit," of the Project Description chapter of this Draft EIR. As stated in Section 5.1.1 of the Stage 1 Development Plan, standards for land use density are required as part of the Stage 2 Development Plan, which is a required submittal at the next stage of discretionary entitlements for this project. b. See the discussion under Policy 1.B.2. c. See the discussion under Policy 1.C.1. d. The general distribution and location of roadways for this project is illustrated on Figure 3-7, "Johnson Rancho and Hop Farm Annexation Circulation Exhibit," of the Project Description chapter of this Draft EIR. As stated in Section 5.1.1 of the Stage 1 Development Plan, standards for roadways are required as part of the Stage 2 Development Plan, which is a required submittal at the next stage of discretionary entitlements for this project. e. As illustrated in Figure 3-7, "Johnson Rancho and Hop Farm Annexation Circulation Exhibit," of the Project Description chapter of the Draft EIR, as part of the proposed project the existing roadway system would be extended into the project area. f. Schools are addressed in Impact Statement 4.13-6 of the Public Services

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
<p>g. Distribution and location of neighborhood commercial centers, parks, schools, child care centers, and other public- and quasi-public facilities.</p> <p>h. Provisions for linking residential neighborhoods, parks, schools, Downtown, shopping areas, and employment centers through a system of pedestrian pathways, bicycle routes, and linear open-space corridors along sloughs, Dry Creek, and the Bear River.</p> <p>i. Provisions for development phasing to ensure orderly and contiguous development.</p> <p>j. Provisions for minimizing conflicts between new development and agricultural uses.</p>	<p>and Utilities chapter of the Draft EIR. Section 4 of the Stage 1 Development Plan includes a list of the proposed land use districts within the proposed Planned Development District rezoning and a corresponding description of the conceptual allowable uses for each land use district. Child care facilities are specified as being allowable in all residential land use districts and the “school” land use district.</p> <p>g. Figure 3-5, “General Plan Amendment Exhibit,” of the Project Description chapter of the Draft EIR, illustrates the conceptual location of commercial centers, parks, schools, and other public uses. Given the program-level nature of the proposed project, specific locations of child-care facilities have not been identified at this time. However, Section 4 of the Stage 1 Development Plan specifies that child care facilities are allowable in all residential land use districts and the “school” land use district. In addition, Section 4 of the Stage 1 Development Plan states that the Commercial Mixed Use district would include neighborhood-serving retail.</p> <p>h. As stated above, Section 2.2.1 of the Stage 1 Development Plan states - regarding the Johnson Rancho project - “Each neighborhood/district is bordered by a natural or designed open space with a school, park or public place as a central focal point. These neighborhoods are linked together with an interconnected street, open space and trail system. These systems provide easy access to the public amenities such as the schools, parks, shopping and employment areas.”</p> <p>i. Given the program-level nature of the requested entitlements, phasing of the project has not been provided at this time. Phasing details are required as part of the Stage 2 Development Plan submittal, which, per the City’s Planned Development Ordinance, will be required of the applicant during subsequent discretionary approvals.</p> <p>j. Potential conflicts between new development and agricultural uses are addressed above in Impact Statement 4.2-1.</p>
Policy 1.C.4. The City shall require residential subdivisions to provide well-connected internal and external street, bicycle, and pedestrian systems.	See the discussion under Policy 1.C.2.
Policy 1.C.5. The City shall encourage installation of current and emerging	Given the program-level nature of the requested project entitlements, design-

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
technological infrastructure in new and existing development for home telecommuting and electric vehicle charging.	level building details regarding technological infrastructure are not available at this time. The City will work with future applicant(s) during the building design process to ensure that this policy is met.
Commercial Land Use	
Policy 1.E.1 of the Commercial Land Use section states that the City shall designate commercial land in appropriate locations to provide for various kinds of commercial development to meet the needs of Wheatland residents and visitors, with necessary access, exposure, and utilities.	The proposed project designates several commercial areas along Spenceville Road and focused around the proposed Wheatland Expressway. The proposed locations would provide Wheatland residents and visitors convenient access to a variety of commercial uses.
Policy 1.E.2. The City shall strive to avoid creating an oversupply of commercially-designated land to prevent the dilution or deterioration of currently viable commercial areas, as well as efforts to improve and extend Downtown.	Out of the 4,149-acre project site, approximately 130 acres have been designated for commercial uses, 25 of which were already designated as such in the 2006 Wheatland General Plan Update on the Hop Farm property. In addition, these commercially-designated areas have been concentrated around the Wheatland Expressway (referred to as the “SR 65 Bypass” in the General Plan), consistent with General Plan Policy as well as the Community Development and Design principles included in the City’s Vision Plan, so as not to detract from Wheatland’s existing downtown businesses, but rather to serve the greater commercial/retail needs of the region. The City has previously determined through the preparation of its Vision Plan that attracting regional commercial uses to the area is a priority (see additional discussion under Policy 1.A.1. above). The regional commercial uses identified as important in the City’s General Plan and Vision Plan are categorically different than the types of existing commercial uses in Wheatland’s downtown. The types of goods and services that would be provided by the regional commercial areas along the proposed Wheatland Expressway would not result in direct competition with the existing commercial businesses in Wheatland’s existing downtown core.
Policy 1.E.3. The types and locations of future outlying commercial uses should be examined to minimize any adverse effects on the efforts to improve and extend Downtown.	See the above discussion under Policy 1.E.2.
Policy 1.E.4 states that commercial facilities should be designed to encourage and promote transit, pedestrian, and bicycle access. The City shall require that new commercial development be designed to encourage and facilitate pedestrian circulation within and between commercial sites and nearby residential areas.	As described in Section 2.2.1 of the Stage 1 Development Plan prepared as part of the project’s Planned Development rezoning requirements, “Strategically located commercial centers will provide the community with easy access to obtain goods and services within a convenient walking or

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
	biking distance from the neighborhoods and employment areas. All building complexes, whether commercial, employment or public, will be designed to incorporate pedestrian friendly layouts and connections to all adjacent uses and neighborhoods.”
Policy 1.E.5 states that the City shall require pedestrian and bicycle access in the design of sound walls, buffers, detention basins, fencing, or other physical features between commercial and residential uses.	As the project involves only program-level entitlements at this time, specific commercial building designs have not been submitted. At a future date when subsequent development applications are submitted for the commercial portions of the project, adequate pedestrian and bicycle connections will be incorporated into commercial developments in keeping with the standards set forth in the project’s Stage 1 Development Plan, as partially referenced above.
Policy 1.E.6 states that the City shall require new commercial development to be designed to minimize the visual impact of parking areas on public roadways.	The Stage 1 Development Plans prepared for both the Hop Farm and Johnson Rancho portions of the project, which provide general development standards for the Planned Development zoning that will be applied to the overall project site, include language consistent with this General Plan policy requiring the careful design of future on-site commercial development to ensure that adequate buffers and/or setbacks are included in the development’s design to minimize visual impacts.
Policy 1.E.7 of the Commercial Land Use section states that new commercial development adjacent to residential development shall provide buffers from noise, trespassing, lighting, or other annoyances, through methods such as landscaping or fencing.	The Stage 1 Development Plans prepared for both the Hop Farm and Johnson Rancho portions of the project, which provide general development standards for the Planned Development zoning that will be applied to the overall project site, include language consistent with this General Plan policy requiring the careful design of future on-site commercial development to ensure that adequate buffers and/or setbacks are included in the development’s design to minimize incompatibilities with adjacent residential uses. Implementation of the Stage 1 Development Plan would ensure that land use incompatibilities would not result between new residential and Commercial uses.
Policy 1.E.8 states that the City shall reserve sites for neighborhood commercial development in specific plans for new neighborhoods.	The City of Wheatland General Plan Update does not have a specific neighborhood commercial land use designation. However, the Stage 1 Development Plan prepared for the project includes two distinct Commercial Districts or subzones associated with the Planned Development rezoning, one of which is Commercial/Mixed Use (smaller than 25 acres). The definition of this PD District is as follows: “This district is intended to allow

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
	<p>for a wide range of low to medium intensity uses providing a wide range of neighborhood scale retail goods and services, offices, and professional uses. The district is intended to promote a mix of retail goods and services as well as small-scale office and mixed use development that includes high density housing [...]"</p> <p>As discussed in Section 5.1.1 of the Stage 1 Development Plan prepared for the proposed project, a detailed Stage 2 Site Plan will be required as part of the Stage 2 Development Plan submittal, which, per the City's Planned Development Ordinance, will be required of the applicant during subsequent discretionary approvals. This detailed Stage 2 Site Plan will show the location and arrangement of proposed land uses on the site and proposed general building areas, including neighborhood commercial uses.</p>
Employment	
<p>Policy 1.G.1. The City shall designate specific areas suitable for employment development and reserve such lands in a range of parcel sizes to accommodate a variety of employment uses.</p>	<p>The project, in total, includes 274.3 acres of employment/offices uses on a range of parcel sizes as illustrated in Figure 3-5 of the Project Description chapter. These Employment-designated parcels would have regional access via the proposed Wheatland Expressway and Spenceville Road. The large Employment-designated parcels have been strategically positioned, both in terms of vehicular access and proximity to commercial-retail services, so as to appeal to prospective companies seeking to locate in the Wheatland area, including a potential community-serving hospital, consistent with the Economic Development principles included in the City's Vision Plan.</p>
<p>Policy 1.G.2 states that the City shall only approve new employment development that has adequate infrastructure and services. Employment development shall be required to provide sufficient buffering from residential areas to avoid impacts associated with noise, odors, and the potential release of hazardous materials.</p>	<p>As discussed above, the Stage 1 Development Plans, consistent with relevant General Plan policies, include language requiring the careful design of future on-site Employment uses to ensure adequate buffers and/or setbacks are included to minimize incompatibilities with adjacent residential uses. Implementation of the Stage 1 Development Plan would ensure that land use incompatibilities would not result between new residential and Employment uses.</p>
<p>Policy 1.G.3 states that the City shall promote the development of new high technology uses in the employment locations near the SR 65 Bypass.</p>	<p>The City of Wheatland General Plan does not have a specific high technology land use designation. However, similar to the Commercial land use category described above, the Stage 1 Development Plan prepared for the project</p>

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
	<p>includes two distinct Employment Districts or subzones associated with the Planned Development rezoning, one of which is “Business Professional.” The definition of this PD District is as follows: “The business professional district is intended to allow for a variety of employers to serve the Wheatland community and the surrounding region. Located along the primary access corridors, these districts will provide good opportunity for both major employers and local businesses. Development in this district may range from traditional professional office buildings, hi-tech office, research and development business parks with supporting retail and service uses...” In addition, the hi-tech uses anticipated in the Employment PD District could include light industrial, which is consistent with the General Plan’s definition of the Employment Land Use designation.</p> <p>As discussed in Section 5.1.1 of the Stage 1 Development Plan prepared for the proposed project, a detailed Stage 2 Site Plan will be required as part of the Stage 2 Development Plan submittal, which, per the City’s Planned Development Ordinance, will be required of the applicant during subsequent discretionary approvals. This detailed Stage 2 Site Plan will show the location and arrangement of proposed land uses on the site and proposed general building areas, including hi-tech uses.</p>
Policy 1.G.4 states that the City shall promote the development of business park and research and development uses in Wheatland.	See above discussion regarding Policy 1.G.3.
Policy 1.G.7 states that the City shall ensure that intensive industrial or manufacturing uses are located in areas compatible with adjacent use.	The proposed project does not include areas suitable for “intensive” industrial uses. As noted in the Stage 1 Development Plan, the second type of Employment PD District is “Light Industrial,” which is “intended to designate appropriately located land for light industrial uses that minimize impacts on residential neighborhoods and mixed use areas. Development in this district may range from light industrial, and/or manufacturing uses and may be integrated into a business park or campus setting with supporting retail services.”
Urban Reserve	
Policy 1.H.1 states that no urban development of Urban Reserve areas will be permitted without a General Plan amendment. No General Plan amendment will be	Because the Johnson Rancho portion of the project site necessitates a Land Use Designation change from Urban Reserve to various urban designations so

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
considered without an analysis that includes the factors listed in Policy 1.H.2.	as to permit the proposed types and intensities of development on this portion of the project site, the applicant has submitted a request to the City for the approval of a General Plan Amendment.
<p>Policy 1.H.2 states that the City shall, when deemed necessary, consider the appropriateness of development of Urban Reserve lands based upon the following factors:</p> <ul style="list-style-type: none"> a. Possible location and mix of land uses. b. Implications for overall community form and relationship to the existing community and Downtown Wheatland. c. Flooding and drainage implications. d. Market feasibility of development in this area, including the expected rate of absorption. e. Availability of water supply. f. Consideration of circulation patterns and improvements. g. Effect on and compatibility with existing City infrastructure (e.g., wastewater treatment plant). h. Implications of providing law enforcement and fire protection services. i. Potential impacts on sensitive biological resources. j. Noise contour implications of Beale Air Force Base. 	<p>In an effort to minimize the lengthiness and repetitiveness of this chapter, the various subcomponents of Policy 1.H.2 will not be discussed in detail here given that they are individually addressed in great detail in their respective technical chapters. Therefore, the approach taken here will be to simply refer the reader to the appropriate sections of the Draft EIR where the issue is specifically addressed at length.</p> <ul style="list-style-type: none"> a. The location and mix of land uses for the project is most fully addressed in this technical chapter, particularly, Impact 4.2-1. b. The relationship of the project to the existing community is most fully addressed in this technical chapter, particularly, Impact 4.2-1. c. Flooding and drainage implications are addressed at great length in Chapter 4.10, Hydrology and Water Quality, of this Draft EIR. d. Market feasibility of development in the project area is not a CEQA issue and is more appropriately addressed by the Planning staff and the City's decision-makers. e. Availability of water supply is addressed at great length in Chapter 4.13, Public Services and Utilities, of this Draft EIR. f. Consideration of circulation patterns and improvements is addressed at great length in Chapter 4.3, Transportation and Circulation, of this Draft EIR. g. Effect of the project on existing City infrastructure is addressed in Chapter 4.13, Public Services and Utilities, of this Draft EIR. h. Implications of the project on law enforcement and fire protection services are addressed in Chapter 4.13, Public Services and Utilities, of this Draft EIR. i. Potential impacts of the project on sensitive biological resources are addressed at great length in Chapter 4.6, Biological Resources, of this Draft EIR. j. Noise contour implications of Beale Air Force Base are addressed in Chapter 4.5, Noise, of this Draft EIR.

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
Agriculture	
Policy 1.I.1. The City shall discourage leapfrog development and development in peninsulas extending into agricultural lands to avoid adverse effects on agricultural operations.	See the discussion under Policy 1.B.5.
Policy 1.I.2 of the Agriculture section states that the City shall support the local agricultural economy by encouraging the location of agricultural support industries in the City, establishing and promoting marketing of local farm products, exploring economic incentives, and support for continuing agricultural uses adjacent to the City, and providing its fair share of adequate housing to meet the needs of agricultural labor.	<p>While the proposed project is not necessarily in direct conflict with this agricultural policy, it would indirectly create conflicts via the conversion of prime agricultural farmland in the eastern portion of the City's SOI, though much of this land is not considered prime farmland, as discussed below in Impact Statement 4.2-6. As concluded in Impact 4.2-6, the project's conversion of prime farmland would be considered a significant and unavoidable impact that would require City Council to make certain legal findings and adopt a statement of overriding considerations setting forth the benefits of the project that would outweigh its adverse effects.</p> <p>In addition, the project includes opportunities for agricultural support industry within the Employment Land Use designation as well as ample areas suitable for farmer's markets, which would promote marketing of local farm products, consistent with this policy.</p>
Policy 1.I.3 of the Agriculture section states that the City shall promote good neighbor policy between residential property owners and adjacent farming operations by supporting the rights of farmers and ranchers to conduct agricultural operations in compliance with State law.	In a good faith effort to promote good neighbor policy between residential property owners and adjacent farming operations the City has included Mitigation Measure 4.2-1, which requires the applicant to inform and notify prospective buyers in writing, prior to purchase, about existing and on-going agriculture activities in the immediate area in the form of a disclosure statement. The notifications shall disclose that the Wheatland area is an agriculture area subject to ground and aerial applications of chemical and early morning or nighttime farm operations, which may create noise, dust, et cetera, and provide that such agricultural operations shall not be considered a nuisance. Each disclosure statement shall be acknowledged with the signature of each prospective property owner.
Landscape and Streetscape	
Policy 1.J.1 states that new development within major transportation corridors must comply with the following minimum building requirements:	As the project involves only program-level entitlements at this time, site-specific designs for buildings along major transportation corridors have not been submitted. At a future date when subsequent development applications

**Table 4.2-4
Wheatland General Plan Update Policy Discussion**

Policy	Project Consistency
<ul style="list-style-type: none"> a. All outdoor storage of goods, materials, and equipment, and loading docks areas shall be screened from major roadways. b. Developments with multiple buildings should have a uniform design theme and sign program. c. Earth tones shall be used as the dominant color; colors such as white, black, blue, and red should be used as accents. Building surfaces should have color schemes that reduce their apparent size. d. Metal buildings will be allowed only with enhanced architectural and landscaping treatment (such as use of trim bands, wing walls, parapets, and reveals). e. All exterior elevations visible from major roadways should have architectural treatment to alleviate long void surfaces. This can be accomplished through varying setbacks, breaking buildings into segments, pitched roof elements, columns, indentations, patios, and incorporating landscaping into architectural design. 	<p>are submitted for areas along the major transportation corridors in the project, the Community Development Director will review such applications to ensure consistency with these broad landscape and streetscape standards, which are also included to a degree in the project's Stage 1 Development Plan. For example, section 3.2.1 of the Stage 1 Development Plan prepared for the project states: "A coordinated signage system will be developed to provide quality and consistency of material, colors and form for all community gateways, neighborhood entries, street signage, directional signage and business identification signs."</p>
<p>Policy 1.J.2. The City shall encourage increased building setbacks and wider landscape areas along major corridors.</p>	<p>While site-specific designs have not yet been submitted for the project, these landscape design standards are generally addressed in the Stage 1 Development Plan prepared for the proposed project. For example, as stated in Section 2.2.3, the land use plan for the project encourages the use of alternative transportation by making walking and biking more convenient, by providing <i>tree-lined streets</i>, convenient trails and safe street crossings.</p>
<p>Policy 1.J.3. The City shall require that all new development incorporate the planting of trees and other vegetation that extends the vegetation pattern of older adjacent neighborhoods into new development.</p>	<p>While site-specific designs have not yet been submitted for the project, Section 3.2.3 of the Stage 1 Development Plan prepared for the project addresses general landscape standards applicable to future development submittals.</p>
<p>Policy 1.J.4. As a condition of the approval of larger development projects, the City shall require establishment of funding mechanisms for the ongoing maintenance of street trees and landscape strips. The City shall explore the potential for putting all new development in a master landscape and lighting district for maintenance of street trees and landscape strips.</p>	<p>This policy will be considered by the City during the preparation of conditions of approval for the future site-specific projects within the overall project area.</p>
<p>Policy 1.J.5. The City shall promote efforts to improve the visual quality of entrances to Wheatland and to Downtown.</p>	<p>Regarding community gateways, the Stage 1 Development Plan for the project states in Section 3.2.1: "Gateways are envisioned to be comprised of low entry walls, low profile monument signs and iconic elements at specific</p>

Table 4.2-4 Wheatland General Plan Update Policy Discussion	
Policy	Project Consistency
	points of entry into the overall Plan Area, into neighborhoods and districts.” As also stated in Section 3.2.3, landscape features will be used to define and frame important entries and streets. It is noteworthy that some of these project entries will now form new entry points to the City of Wheatland on the whole.

4.2-4 Consistency with existing zoning.

The proposed project site is located in Yuba County and is zoned Agricultural Exclusive (AE)-10, AE-40, and AE-80 by the County. It should be noted that portions of the project site are not currently located within the Wheatland SOI; however, as discussed above, the City is currently processing a Cleanup SOI Amendment and Annexation, which would result in the entire project site being located within the SOI. As the project includes annexation to the City of Wheatland, the project site must also be rezoned by the City. The applicant has requested that the entire project site be rezoned to the City's Planned Development zone district.

The purpose of the PD District is to allow diversification in the relationship of various buildings, structures and open spaces in order to be relieved from the rigid standards of conventional zoning. The PD is required to comply with the regulations and provisions of the General Plan. The proposed project has developed adequate standards to promote the public health, safety and general welfare without unduly inhibiting the advantages of modern building techniques and planning for residential, commercial or industrial purposes; these standards are in the form of a Stage 1 Development Plan. Though very similar in content, a separate Stage 1 Development Plan has been prepared for the Hop Farm and Johnson Rancho portions of the project.

As is allowable under the PD Ordinance regulations, the applicant(s) will submit, at a later date, Stage 2 Development Plan(s) for portions of the entire Planned Development Zoning District as separate zoning ordinance amendment(s). A Stage 2 Development Plan shall include and establish permitted, conditionally permitted, and accessory uses; Stage 2 site plan, site area and maximum proposed densities; maximum numbers of residential units by type and non-residential square footage for each use; development regulations and standards for all development within the area, which may include lot areas, lot square footage per dwelling unit, lot width and frontage, lot depth, setbacks, distances between buildings and structures, maximum lot coverage, common useable outdoor space, floor area ratios, height limits, parking, driveways, loading areas, signage, fencing, grading standards, and trash enclosures; architectural standards; and master landscape plan.

Approval of the project is a discretionary action of the City Council. Should the City Council deny the project, an inconsistency would not occur. Should the City Council approve the project, the requested rezoning would be approved concurrently and an inconsistency would not occur. Therefore, a *less-than-significant* impact would result.

Mitigation Measure(s)
None required.

4.2-5 Consistency with Yuba County LAFCo Standards.

The proposed project is located in Yuba County within the Wheatland SOI. As a result, the project involves a request to annex the approximate 4,149-acre project site to the City of Wheatland. Annexation of the project site would ultimately require approval by Yuba

County LAFCo. The discussion in Table 4.2-5 evaluates the proposed annexation of the Johnson Rancho and Hop Farm properties in light of relevant Yuba County LAFCo policies and standards regarding annexation.

As demonstrated below, the proposed project is consistent with the standards set forth by Yuba County LAFCo. Ultimately, annexation to the City of Wheatland is a discretionary action by Yuba County LAFCo. Therefore, the project would have a *less-than-significant* impact.

Mitigation Measure(s)
None required.

Cumulative Impacts – Land Use

4.2-6 Increases in the intensity of land uses in the region due to the proposed project and all other projects in the Wheatland area.

The proposed project, along with reasonably foreseeable projects within the City of Wheatland, would change the intensity of land uses within the geographic area that would be affected by the proposed project. The cumulative land use impacts of the project, together with the related impacts of other foreseeable projects, would be considered significant. The increased development associated with these projects would result in environmental impacts, such as traffic, air, and noise, which are analyzed in other technical chapters of this Draft EIR.

However, the Hop Farm portion of the project site is already designated for urban development in the Wheatland General Plan and the applicant is not requesting a General Plan Amendment for this portion of the project, given the fact that the type and intensity of development would be consistent with what was anticipated for the Hop Farm property in the General Plan Update. In addition, the Wheatland General Plan Update designates the Johnson Rancho portion of the project site as UR; the UR designation is applied to land that may be considered for development with urban uses in the future. As demonstrated above, the Johnson Rancho portion of the project would be generally consistent with the relevant General Plan policies. In addition, eventual buildout of the Johnson Rancho portion of the property, as well as the overall General Plan Update area, would replace the existing agricultural operations on- and off-site with urban uses, which would not conflict with the project's proposed residents. Therefore, under cumulative conditions, the near-term land use incompatibilities noted above would be eliminated.

**Table 4.2-5
Yuba LAFCo Policy Discussion**

Policy	Project Consistency
LAFCo GENERAL POLICIES AND STANDARDS	
<p>2.2 Urban Development</p> <p>LAFCo will encourage proposals that result in urban development to include annexation to a city whenever reasonably possible, and discourage proposals for urban development adjacent to a city without annexation to that city. LAFCo will also encourage cities to annex lands that have been developed to urban levels, particularly areas that receive city services. Urban Development includes development that utilizes either public water or sewer, and which involves industrial or commercial use, or residential use with density of at least one unit per acre.</p>	<p>The proposed project would include the annexation of the entire 4,149-acre project site to the City of Wheatland, with boundaries coterminous with Wheatland's existing city limits and with all public services and utilities being provided by the City of Wheatland, consistent with Policy 2.2 of LAFCo's General Standards.</p>
<p>2.3 Discouraging Urban Sprawl</p> <p>LAFCo shall discourage urban sprawl. Sprawl is characterized by irregular, dispersed, and/or disorganized urban or suburban growth patterns occurring at relatively low density and in manner that precludes or hinders efficient delivery of municipal services, especially roads, public sewer and public water.</p>	<p>The proposed project would be subject to the project's Stage 1 Development Plan, which provide general development standards for the PD zoning that will be applied to the overall project site, as well as the design guidelines for the project. The Stage 1 Development Plan ensures that the proposed project would offer a variety of residential lot sizes and types, and that consistent with principles of smart-growth, denser residential areas would be located in near proximity to commercial and employment nodes, centered around the SR 65 Bypass and Spenceville Road. As indicated in Section 1.2.1 of the Stage 1 Development Plan prepared for the project, the overall approach to residential development would be to create cohesive neighborhoods, around which municipal services could be efficiently delivered, including roads, public sewer and water, as well as public amenities such as parks and bicycle/pedestrian trails.</p> <p>In addition, the Stage 2 Development Plan(s), which will be required at the next stage of discretionary entitlements, would include a detailed Phasing Plan as a component. Upon submittal of the Stage 2 Development Plan(s) and associated Phasing Plan, the City would ensure through review of the required documents that the proposed project phasing is such that buildout would occur in an organized growth pattern. The City would ensure a controlled, logical growth pattern, moving outward from the existing City, generally west to east, which would enable efficient extension and delivery of municipal services. Therefore, the Stage 2 Development Plan(s) and</p>

**Table 4.2-5
Yuba LAFCo Policy Discussion**

Policy	Project Consistency
	associated Phasing Plan would ensure that the project would not include irregular, dispersed, and/or disorganized urban or suburban growth patterns occurring at relatively low densities that hinders efficient delivery of municipal services.
<p>2.4 Environmental Consequences (CEQA) LAFCo shall operate in accordance with the CEQA, Public Resources Code Sections 21000, the State Guidelines for implementation of the California Environmental Quality Act and the Commission's local CEQA Guidelines. Like other public agencies, LAFCo is required to comply with CEQA and to consider the environmental consequences of its actions. Each proposal must receive the appropriate environmental review for consideration by the Commission in making its decisions. LAFCo is most often a "responsible agency" and reviews and considers the environmental document prepared for a project by another agency (a city, the county, or a special district) and adopts a Categorical Exemption, Negative Declaration or certifies an EIR only for a project it initiates. If a city, the county, or a special district is the proponent, it is almost always the lead agency. One of the following determinations must be made by the lead agency after the appropriate environmental review:</p> <ul style="list-style-type: none"> a. The project is statutorily or categorically exempt from CEQA review and a Notice of Exemption is prepared. d. A Negative Declaration is prepared, circulated for public review and certified by the governing body after an initial study finds that no significant impact to the environment will occur either with or without mitigation. A lead agency is required to consult with LAFCo staff during the review process. e. An EIR is prepared, circulated, and certified by the governing body if a project may have significant impacts on the environment. A lead agency must consult with LAFCo staff during the review process. 	The Johnson Rancho and Hop Farm Annexation EIR is a program-level EIR that evaluates the full range of potential environmental impacts of the proposed project, pursuant to CEQA Guidelines Section 15161. LAFCo, as a responsible agency, will review and consider this EIR for its actions.
<p>2.5 Compact Urban Form and Infill Development Encouraged When reviewing proposals that result in urban development, LAFCo will consider whether the proposed development is timely, compact in form</p>	The proposed project is contiguous to existing urbanized areas and would expand the existing City of Wheatland. Consistent with Policy 2.5, the proposed residential and commercial areas would be clustered around large

**Table 4.2-5
Yuba LAFCo Policy Discussion**

Policy	Project Consistency
<p>and contiguous to existing urbanized areas. LAFCo will favor development of vacant or under-utilized parcels already within a city or other urbanized area prior to annexation of new territory.</p>	<p>open space corridors, resulting in compact urban form. In addition, the project would include residential development at typical urban residential densities and would not include any large-lot development, with the exception of only 245 acres of the project site which would be designated Very Low Density Residential. Furthermore, it is important to note that only a small amount of vacant land exists within the current Wheatland city limits and these vacant parcels have existing constraints to development, such as being located in the floodplain. In addition, none of the vacant parcels are of sufficient size to accommodate the proposed project. Therefore, feasible alternative locations for similar development do not exist within the City.</p>
<p>2.7 Adequate Services LAFCo will consider the ability of an agency to deliver adequate, reliable and sustainable services, and will not approve a proposal that has significant potential to diminish the level of service in an agency's current jurisdiction. An agency must provide satisfactory documentation of its capacity to provide service to an annexed area within a reasonable amount of time.</p>	<p>Mitigation measures have been included in Chapter 4.13, Public Services and Utilities, of this Draft EIR to ensure that City of Wheatland public services and utilities would be sufficient to accommodate buildout of the proposed project, while at the same time not being adversely affected so as to compromise the City's ability to adequately serve existing residents and businesses. These public services and utilities include water supply and delivery, waste disposal and recycling, electricity, school and park facilities, and law enforcement and fire protection services. The chapter concludes that the existing wastewater treatment plant (WWTP) would not have the ability to provide service for the proposed project. However, the Public Services and Utilities chapter includes Mitigation Measure 4.13-2(b), which states that prior to occupancy of the development, adequate wastewater capacity must exist to accommodate the project. Therefore, with implementation of the mitigation measures included in this Draft EIR, the proposed annexation would be consistent with Policy 2.7 of LAFCo's General Standards.</p>
<p>2.10. Agriculture a. LAFCo's decisions will reflect its legislated responsibility to seek to maximize the preservation of prime agricultural land while facilitating logical and orderly expansion of an urban area.</p>	<p>a. The proposed project is immediately adjacent to the existing southern/southeastern boundary of the City of Wheatland, and is within the Wheatland SOI. As described below in Impact Statement 4.2-6, the majority of the project site is composed of prime farmland soils. The City of Wheatland is located within an area largely composed of prime farmland soils; thus, urban expansion of the City would, to some extent, necessarily result in the conversion of prime agricultural land. As</p>

**Table 4.2-5
Yuba LAFCo Policy Discussion**

Policy	Project Consistency
<p>b. Agricultural land shall be determined to be prime based on soil characteristics or on productivity (Section 56064).</p> <p>c. Development or use of land for other than open space uses shall be guided away from prime agricultural lands in open space use toward areas containing non-prime agricultural lands unless that action would not promote the planned, orderly, efficient development of an area (Section 56377).</p> <p>d. Development of vacant or nonprime agricultural lands for urban uses within the jurisdiction or SOI of a local agency should be encouraged before any proposal is approved which would allow for or lead to the development of prime agricultural or open space lands outside the</p>	<p>discussed in Chapter 4.10, Hydrology and Water Quality, and shown in Figures 4.10-1 through 4.10-3, portions of the City and the majority of the surrounding areas are within flood hazard zones due to nearby levees. Although urban expansion to the east of the existing City of Wheatland would have developmental constraints related to flooding, the constraints would be significantly less than those of the areas to the north and west of the City, as shown in Figures 4.10-1 through 4.10-3. Therefore, even though development of the project would result in the conversion of prime agricultural land, the proposed project location is the most logical and orderly option for expansion of the urban area.</p> <p>b. Consistent with this policy, this agricultural resources analysis contained in this chapter determines prime farmland based on soil characteristics – see Figure 4.2-5 and the corresponding discussion on page 4.2-18.</p> <p>c. In the case of the City of Wheatland, guiding development or use of land for other than open space uses away from prime agricultural lands toward areas containing non-prime agricultural lands would not promote the planned, orderly, efficient development of the Wheatland area. Large areas of non-prime soils are not available within the Wheatland study area with limited exceptions. For example, as shown in Figure 4.2-5, the majority of the eastern portion of the Johnson Rancho portion of the project site consists of Redding gravelly loam soil (#208), which is not considered Prime Farmland. However, guiding project development to this eastern area containing non-prime agricultural lands would result in leap frog development, which would not promote orderly or efficient development of the area and would, therefore, be inconsistent with policies of LAFCo’s General Standards. Although the majority of the project site is composed of prime farmland soils, the project would be consistent with Policy 2.10 in promoting planned, orderly, efficient development of the area.</p> <p>d. The Johnson Rancho and Hop Farm Annexation project site is entirely within the City of Wheatland’s existing Sphere of Influence. As discussed above, under Policy 2.5, only a small amount of vacant land exists within the current Wheatland city limits and these vacant parcels have existing</p>

**Table 4.2-5
Yuba LAFCo Policy Discussion**

Policy	Project Consistency
jurisdiction or SOI of any local agency (Section 56377).	constraints to development, such as being located in the floodplain. In addition, none of the vacant parcels are of sufficient size to accommodate the proposed project. Therefore, feasible alternative locations for similar development do not exist within the City. Nonprime agricultural lands was discussed under “c” above, which, in summary, states that large areas of non-prime soils are not available within the Wheatland study area with limited exceptions. For example, as shown in Figure 4.2-5, the majority of the eastern portion of the Johnson Rancho portion of the project site consists of Redding gravelly loam soil (#208), which is not considered Prime Farmland. However, guiding project development to this eastern area containing non-prime agricultural lands would result in leap frog development, which would not promote orderly or efficient development of the area and would, therefore, be inconsistent with policies of LAFCo’s General Standards.
<p>2.11 Balancing Jobs and Housing LAFCO will normally encourage those applications which improve the regional balance between jobs and housing. LAFCO will consider the impact of a proposal on the regional supply of housing for all income levels in light of the housing and jobs balancing policies of the applicable General Plan. The agency that is the subject of the proposal must demonstrate to the Commission that any adverse impacts of the proposal on the regional affordable housing supply have been mitigated.</p>	Buildout of the Johnson Rancho and Hop Farm annexation includes the development of approximately 14,396 dwelling units. The project includes 274.3 acres of employment/offices uses with an approximate density of 25 employees per acres and 131 acres of commercial uses at a Floor Area Ratio of 0.5 and density of 1 employee per 450 square feet. As discussed in Chapter 4.12, Population, Employment, and Housing, of this Draft EIR, buildout of the project area would result in approximately 13,197 jobs and a jobs/housing ratio of 0.92. The jobs/housing ratio of the Johnson Rancho and Hop Farm Annexation area would be consistent with the ratio anticipated in the General Plan Update. Therefore, as determined in Impact Statement 4.12-2, because the project jobs/housing ratio would be consistent with the anticipated jobs-to-housing ratio and would increase the ratio closer to a 1:1 ratio, the impact to the jobs-to-housing balance within the City of Wheatland would be less-than-significant.
<p>2.12 Revenue Neutrality <u>Revenue Neutrality Applicable to All Proposals.</u> LAFCo will approve a proposal for a change of organization or reorganization only if the Commission finds that the proposal will result in a similar exchange of both revenues and service responsibilities among all affected agencies. A</p>	The City of Wheatland will continue to work with Yuba County to negotiate a tax-sharing agreement satisfactory to both parties prior to seeking approval of the annexation application by LAFCo.

**Table 4.2-5
Yuba LAFCo Policy Discussion**

Policy	Project Consistency
<p>proposal is deemed to have met this standard if the amount of revenue that will be transferred from an agency or agencies currently providing service in the subject territory to the proposed service-providing agency is substantially equal to the expense the current service provider bears in providing the services to be transferred or the affected agency has approved the revenue exchange.</p>	
CONSISTENCY WITH LOCAL LAND USE PLANS AND POLICIES	
<p>3.2 Planning and Pre-Zoning All territory proposed for annexation must be specifically planned and/or pre-zoned by the appropriate planning agency prior to the effectiveness of an annexation. The planning or pre-zoning of the territory must be consistent with applicable General and Specific Plans and sufficiently specific to determine the likely intended use of the property.</p> <p>a. For city proposals, no subsequent change may be made to the General Plan or applicable specific or area plans or zoning of the annexed territory that is not consistent with the pre-zoning designations in effect at the time of the LAFCo approval for two years after the completion of the annexation, unless the city council finds after a noticed public hearing that a substantial change has occurred in circumstances that necessitates a departure from the pre-zoning (Section 56375[e]).</p> <p>b. Pending changes to applicable land use designations, zoning, or pre-zoning must be completed before the effectiveness of an annexation.</p>	<p>The entire project site for the Johnson Rancho and Hop Farm Annexation project would be pre-zoned to the City's Planned Development District as illustrated in Figure 3-6 of the Project Description chapter of the Draft EIR. Furthermore, the proposed pre-zoning is consistent with the existing and proposed General Plan Land Use Designations for the project site.</p>
CHANGES OF ORGANIZATION	
<p>7.1 General This section includes general policies, requirements and criteria that apply to all changes of organization. There may be cases where the Commission must use its discretion in the application of these policies so that potential or real conflicts among policies are resolved based on project specifics, consistent with the requirements of the Cortese-Knox-Hertzberg Act.</p> <p>a. An annexation shall not be approved if it represents an attempt to annex only revenue-producing property (Section 56668).</p>	<p>a. The proposed annexation for the project does not only include revenue-producing property.</p>

**Table 4.2-5
Yuba LAFCo Policy Discussion**

Policy	Project Consistency
<ul style="list-style-type: none"> b. An annexation shall not be approved unless the annexing agency is willing to accept the annexation. c. Where another agency is currently providing service or objects to the annexation, LAFCo will compare the proposed plan of service with alternative service plans and adopted determinations from any service reviews to determine whether the proposal is the best alternative for service provision. d. It is the policy of the Commission to approve changes of organization that encourage and promote planned, well ordered, efficient development patterns and contribute to the orderly formation and development of local agencies based upon local circumstances and conditions (Section 56300, Section 56301). e. LAFCo's decisions will reflect its legislated responsibility to help preserve prime agricultural land while facilitating the logical and orderly expansion of urban areas. Agricultural land shall be determined to be prime based on soil characteristics or on productivity as provided in §56064. The Commission shall consider existing zoning and rezoning, general plans, and other land use plans, interests and plans of unincorporated communities, SOIs and master service plans of neighboring governmental entities and recommendations and determinations from related service reviews (Section 56375, Section 56668). f. LAFCo shall encourage changes of organization that are consistent with policies and criteria contained in these Policies as interpreted by the Commission and that do not worsen conditions or undermine recommendations disclosed in a service review. g. Prior to annexation to a city or a special district, LAFCo shall consider whether the need for governmental services exists, the annexing agency is capable of providing service, that a plan for service exists, and that the annexation is the best alternative to provide service (Section 56700, Section 56668). h. LAFCo will discourage projects that shift the costs of services and infrastructure benefits received to other service providers or service 	<ul style="list-style-type: none"> b. The City of Wheatland, as the annexing agency, is willing to accept the annexation. c. The proposed plan of service for the project is described in detail in Chapter 4.13, Public Services and Utilities, of the Draft EIR. d. The proposed project is directly adjacent to Wheatland's southern City limits. e. See the discussion for Policy 2.10 above. f. See the corresponding discussions for other relevant LAFCo policies in this table. g. The proposed project would include the annexation of the entire 4,149-acre project site to the City of Wheatland, with boundaries coterminous with Wheatland's existing city limits and with all public services and utilities being provided by the City of Wheatland. The plan for services is described in the Public Services and Utilities chapter of the Draft EIR. h. The proposed project would not shift the costs of services and infrastructure benefits received to other service providers or service

**Table 4.2-5
Yuba LAFCo Policy Discussion**

Policy	Project Consistency
<p>areas.</p> <ul style="list-style-type: none"> i. A proposed annexation shall be a logical and reasonable expansion to the annexing district (Section 56001, Section 56119, Section 56668). j. LAFCo shall discourage proposals involving agencies with SOIs that are more than five years old until a service review has been conducted, unless the LAFCo determines the proposal's impacts are insignificant. k. To the extent feasible, LAFCo actions shall further service review recommendations. l. LAFCo will consider and approve consolidations when the conclusions of special studies or service reviews indicate that reorganization would result in improved service provision at the same or lower cost. 	<p>areas.</p> <ul style="list-style-type: none"> i. The proposed project would include the annexation of the entire 4,149-acre project site to the City of Wheatland, with boundaries coterminous with Wheatland's existing city limits. j. Yuba LAFCo adopted the final MSR for the County on July 24, 2008. In addition, this Draft EIR includes full descriptions of the plan for providing all services and utilities to the proposed project, which will be incorporated as necessary into the annexation application to Yuba LAFCo. k. The project's plan for services is consistent with the service review recommendations. l. This Draft EIR provides the needed information for LAFCo to make the determination that reorganization would result in improved service provision at the same or lower cost.
<p>7.3 Annexation to a City Planned urban development contributes to the orderly growth of urban areas. Therefore, promotion of planned development is a primary goal of LAFCo.</p> <ul style="list-style-type: none"> a. The fundamental policy of LAFCo in considering the development status of land, located in or adjacent to an established city SOI and contiguous to a city boundary shall be that such development is preferred in cities. This policy is based on the fact that cities exist to provide a broader range of services than do special districts (Section 56001, Section 56425, Section 56076). b. Developed lands which benefit from municipal services and contiguous to a city boundary should be annexed to that City providing such services. c. Urban development and utility expansion plans should be coordinated among cities, special districts, and the County, in cooperation with LAFCo. d. Land may not be annexed to a city unless it is contiguous to the city at the time the proposal is initiated, unless it is owned by the city, is 	<ul style="list-style-type: none"> a. The project, as proposed, would be annexed in its entirety to the City of Wheatland and all services would be provided by Wheatland. b. See above discussion under "a." c. The project has been and will continue to be coordinated among cities, special districts, and the County, in cooperation with LAFCo. d. The annexation boundaries of the project site are contiguous to the City of Wheatland city limits.

**Table 4.2-5
Yuba LAFCo Policy Discussion**

Policy	Project Consistency
<p>being used for municipal purposes at the time Commission proceedings are initiated, and does not exceed 300-acres in area (Section 56741, Section 56742).</p> <p>e. Petitions shall demonstrate the need for municipal services and the city to which the territory is being annexed shall be capable of meeting the demonstrated need (Section 56700).</p> <p>f. A city shall prezone undeveloped property to be annexed before the effective date of the annexation. No subsequent change may be made to the general plan or zoning of the annexation unless the legislative body for the city makes a finding at a public hearing that a substantial change in circumstances has occurred that necessitate a departure from the rezoning in the application to the Commission. (Section 56375)</p> <p>g. The annexing city shall be the Lead Agency and LAFCo shall be the Responsible Agency, for environmental review of any rezoning and related change of organization. The annexing city shall consult with LAFCo during the CEQA process, provide a written response to LAFCO's input, and submit environmental documentation to LAFCo pursuant to State CEQA Guidelines Sections 15050, 15381, 15096, 15051.</p> <p>h. Detachment from districts providing services to areas being annexed to a city are to be processed simultaneously as a reorganization in compliance with Sections 56826 and 56073 of the Cortese-Knox-Hertzberg Act and consistent with applicable SOI policies and any service review recommendations adopted by LAFCo.</p>	<p>e. See the discussion for Policy 2.7.</p> <p>f. See the discussion for Policy 3.2.</p> <p>g. See the discussion for Policy 2.4.</p> <p>h. Upon annexation, the project would require detachment from the Wheatland Water District. The detachment would be processed at the same time as the annexation, pursuant to LAFCo's policies.</p>

In addition, while the proposed project, along with reasonably foreseeable projects within the City of Wheatland, would change the intensity of land uses within the region, the type and intensity of development for the Hop Farm portion of the project site would be consistent with the intensity of land uses anticipated by the General Plan Update. In addition, long-term plans for the City of Wheatland have designated the Johnson Rancho portion of the project site for urban development. Furthermore, the environmental impacts, such as traffic, air, and noise impacts, that could be created due to implementation of the proposed project have been analyzed in this Draft EIR, and mitigation has been provided for those cumulative impacts, where necessary.

Given the land use controls, General Plan goals and policies, and development standards presently in use within Wheatland, the project's incremental contribution to cumulative land use impacts would be minimized to a level that is considered *less-than-significant*.

Mitigation Measure(s)

None required.

Project-Specific Impacts and Mitigation Measures – Agricultural Resources

4.2-7 Conversion of Prime Farmland to urban uses.

The proposed project is approximately 4,149 acres and includes the development of 14,396 residential units on approximately 3,167 acres of land. In addition, the proposed project would include approximately 286 acres of employment, 138 acres of commercial, 95 acres of schools, 24 acres of civic center, 50 acres of parks, 54 acres of linear parkways, 225 acres of open space/drainage, and 30 acres of land designated for the Wheatland Expressway.

According to the USDA NRCS, Yuba County Soil Survey, the soil complexes found on the project site include Columbia fine sandy loam, 0 to 1 percent slopes; Columbia fine sandy loam, 0 to 1 percent slopes, occasionally floods; Conejo loam, 0 to 2 percent slopes; Holillipah loamy sand, 0 to 1 percent slopes, occasionally floods; Horst sandy loam, 0 to 1 percent slopes; Horst silt loam, 0 to 2 percent slopes; Perkins loam, 0 to 2 percent slopes; and Redding gravelly loam, 3 to 8 percent slopes.

The majority of the site is composed of Horst silt loam, 0 to 2 percent slopes, which is designated as Prime Farmland soil that is well suited for irrigated crops and Redding gravelly loam, 3 to 8 percent slopes, which is not well suited for agriculture but is primarily used for range, pasture, and woodland. The Yuba County Candidate Listing for Prime Farmland and Farmland of Statewide Importance also identifies the following soils as being soils that meet the criteria for Prime Farmland: Columbia fine sandy loam, 0 to 1 percent slopes; Columbia fine sandy loam, 0 to 1 percent slopes, occasionally flooded; Conejo loam 0 to 2 percent slopes; Holillipah loamy sand, 0 to 1 percent slopes, occasionally flooded; Horst sandy loam, 0 to 1 percent slopes; and Perkins loam 0 to 2 percent slopes. Overall, approximately one-third of the site is composed of Prime Farmland.

The proposed project would be consistent with the goals and policies related to the preservation of local and regional agricultural land in both the Wheatland General Plan and the Yuba County General Plan. The Wheatland General Plan EIR concludes that the implementation of the goals and policies in the General Plan would minimize impacts to agriculture. However, impacts to agricultural land would remain significant and unavoidable because buildout of the General Plan would permanently convert Prime Farmland to non-agricultural uses. Because implementation of the proposed project would convert Prime Farmland to non-agricultural uses, a **significant** impact would result.

Mitigation Measure(s)

Potential mitigation for impacts related to the conversion of Prime Farmland to urban uses could include purchasing agricultural conservation easements outside the project area. However, it should be noted that this mitigation would not create new agricultural land; rather, the mitigation would simply preserve existing agricultural land elsewhere. Consistent with the Wheatland General Plan EIR, feasible mitigation measures do not exist to reduce the above impact to a less-than-significant level. Therefore, the impact would remain *significant and unavoidable*.

Cumulative Impacts – Agricultural Resources

4.2-8 Cumulative loss of agricultural land.

Portions of the proposed project site, such as the Hop Farm property, have historically been used for agricultural operations and are currently being farmed. Other areas of the project site, such as a large portion of the Johnson Rancho property (i.e., Johnson's Crossing property), have been and are being used for cattle grazing, as these areas are not considered Prime Farmland. The proposed project site is approximately 4,149 acres and would include the development of 14,396 residential units on approximately 3,167 acres of land. In addition, the proposed project would include approximately 286 acres of employment, 138 acres of commercial, 95 acres of schools, 24 acres of civic centers, 50 acres of parks, 54 acres of linear parkways, 225 acres of open space/drainage, and 30 acres of land designated for the Wheatland Expressway, all of which would result in the conversion of agricultural land to urban uses. It should be noted, however, that the Yuba County General Plan is currently being updated and when the General Plan Update is complete, the Johnson Rancho and Hop Farm Annexation project area is expected to be designated as City of Wheatland urban development, not as agricultural land. Nevertheless, the proposed project, in conjunction with other development in the Wheatland SOI, would have a **significant** cumulative impact related to the permanent loss of agricultural land.

Mitigation Measure(s)

Feasible mitigation measures do not exist to reduce the above impact to less-than-significant. Therefore, the impact would remain *significant and unavoidable*.

Endnotes

¹ City of Wheatland. *City of Wheatland General Plan Policy Document*. July 2006.

² Raney Planning & Management, Inc. *City of Wheatland General Plan EIR*. July 11, 2006.

³ Yuba County. *Yuba County General Plan*. May 1994.

⁴ United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). *Yuba County Soil Survey*. August 2008.

⁵ California Department of Conservation, Farmland Mapping and Monitoring Program. *Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Yuba County*. May 3, 2005.

⁶ Personal Communication with Louie B. Mendoza, Jr., Yuba County Agricultural Commissioner. October 15, 2010.

⁷ City of Wheatland. *City of Wheatland General Plan Policy Document*. July 2006. Page 1-17.

4.3

TRANSPORTATION AND CIRCULATION

INTRODUCTION

The Transportation and Circulation chapter of the EIR analyzes transportation impacts that would result from the implementation of the proposed Johnson Rancho and Hop Farm Annexation project. The information in this chapter is based on the *Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project*¹ prepared for this EIR by KD Anderson & Associates, Inc. (See Appendix D). Potential impacts to off-site roadways and bicycle, pedestrian, and transit systems are evaluated, as well as site access, on-site circulation, and parking. Mitigation measures are suggested to reduce or eliminate potential significant impacts of the project.

EXISTING ENVIRONMENTAL SETTING

The existing roadway, transit, bicycle, and pedestrian components of the transportation system within the traffic study area are described below.

Regional Roadways

The Wheatland area in general and the project area in particular are served by regional County roads maintained by South Yuba County and Placer County.

South Yuba County

State Route (SR) 65. SR 65 is a north-south highway that traverses Placer and Yuba Counties. To the south, SR 65 links the City of Wheatland with the Roseville- and Rocklin-Sacramento areas. North of the City of Wheatland, SR 65 joins SR 70 in Olivehurst, which then continues on through the Yuba City/Marysville area. The most recent information published by Caltrans indicates that SR 65 carries an Annual Average Daily Traffic (AADT) volume of 16,800 vehicles at the Placer County–Yuba County line (2009). The volume remains at that level through Wheatland to Evergreen Drive.

Forty Mile Road. Forty Mile Road is an important north-south route through Yuba and Sutter counties as it is the only Bear River crossing in the area between SR 65 and SR 70/99. In 2009, this two lane road carried 1,600 Average Daily Traffic (ADT) north of Wheatland Road.

McGowan Parkway. McGowan Parkway is a two lane arterial road that extends west from an interchange on SR 65 westerly across SR 70 into the southern Olivehurst area. McGowan Parkway carries 8,830 ADT between the SR 70 and SR 65 interchanges and 9,420 ADT west of SR 70.

Ostrom Road. Ostrom Road links SR 65 with the northern terminus of Jasper Lane near Beale Air Force Base (AFB). Ostrom Road carries approximately 1,400 ADT west of South Beale Road and 600 ADT east of South Beale Road.

Plumas Arboga Road. Plumas Arboga Road links Forty Mile Road with SR 70. This rural highway carried 1,740 ADT in 2009.

Wheatland Road. Wheatland Road extends west from the City to Forty Mile Road and its Bear River Crossing. Wheatland Road is a two lane rural road, and new counts made in 2009 indicated that this route carried 1,300 ADT in 2009.

Placer County

State Route (SR) 65. SR 65 is a four-lane controlled access freeway from I-80 to Lincoln. SR 65 narrows to a two-lane freeway section through Lincoln and remains a two-lane roadway through Sheridan and Wheatland. It should be noted that this segment is configured to have two additional lanes, which would make this segment a four-lane freeway in the future. The Lincoln Bypass is currently under construction, and the first phase of that project will result in a two lane expressway that returns to the current alignment at Sheridan. Long term plans for SR 65 involve creation of alternative routes around existing urban areas. The Lincoln Bypass is under construction and will create a new route linking SR 65 at the Industrial Avenue interchange south of Lincoln with the existing SR 65 alignment north of Lincoln near Sheridan. This bypass is a State highway and the old alignment through Lincoln will be relinquished to the City of Lincoln.

While not located in the immediate area of the proposed project, Placer County has asked that the following additional regional roads be addressed in this analysis.

Baseline Road – Riego Road. This two lane rural arterial road links SR 99 with Roseville across the southern boundary of Placer County and into Sutter County.

Camp Far West Road / McCourtney Road. Camp Far West Road is a rural road that links Placer County with Yuba County via Spenceville Road in the area east of the project near the Beale AFB's south gate. Camp Far West Road originates at an intersection on Spenceville Road and continues southerly to the Camp Far West Reservoir dam, south of which the route becomes McCourtney Road. McCourtney Road extends for another 15 miles to the Lincoln city limits. New traffic counts conducted for this study in 2009 revealed that Camp Far West Road carried 630 ADT between Spenceville Road and the Placer County line. McCourtney Road carried 770 ADT between the Yuba County line and Riosa Road, with the volume rising to 1,600 ADT between Riosa Road and the Lincoln city limits.

Fiddymont Road. Fiddymont Road is a north-south rural arterial that links Moore Road and Baseline Road through Lincoln, Placer County and Roseville in the area west of SR 65.

Watt Avenue. Watt Avenue is an arterial road than links Baseline Road with Interstate 80.

Walerga Road. This north-south arterial links the Baseline Road / Fiddymment Road intersection with the Antelope area of Sacramento County.

Wheatland Roadways

The Wheatland street system is in the general form of a grid with streets running parallel and perpendicular to SR 65 and the Union Pacific Railroad (UPRR) tracks. The text that follows describes streets serving the City of Wheatland.

Main Street. Main Street is designated as an Arterial in the Wheatland General Plan. Main Street is the most southerly east-west street linking SR 65 with downtown Wheatland and is one of four downtown at-grade UPRR crossings. Main Street also continues easterly out of Wheatland via Spenceville Road to the southern gate of Beale AFB. Main Street is relatively wide and on street parking is permitted. The City's General Plan indicates that Main Street will be improved and extended westerly to intersect Wheatland Park Drive in the area west of Wheatland High School. This improvement is a condition of approval for the Jones Ranch project in western Wheatland, and will provide alternative access to Wheatland Road and to Wheatland High School. New traffic counts conducted for the traffic impact analysis indicated that Main Street carried 2,330 ADT between State Street and C Street (i.e., across the UPRR).

2nd Street, 3rd Street and 4th Street. The downtown Wheatland grid street system includes three other streets that extend east from SR 65 across the UPRR. Each of these streets features two lanes, and on-street parking is permitted. 4th Street is designated an arterial street in the General Plan. Current daily traffic volume on 4th Street across the UPRR is 2,600 ADT. The Wheatland General Plan notes that the 2nd Street and 3rd Street UPRR crossings will eventually be closed when alternative crossing locations are developed.

Spenceville Road. Main Street becomes Spenceville Road beyond Wheatland, and this road continues easterly to the south Beale AFB gate and to Camp Far West Road. Spenceville Road is a two lane rural road. New traffic counts made for the traffic impact analysis indicated that Spenceville Road carried 3,600 ADT between Main Street and Jasper Lane and 2,300 ADT between Jasper Lane and Camp Far West Road.

Jasper Lane. Jasper Lane is a two lane rural road that links Spenceville Road east of Wheatland with Ostrom Road and the west Beale AFB gate. New traffic counts indicated that Jasper Lane carried 555 ADT in 2009.

SR 65 (D Street). In Wheatland, SR 65 is named D Street and has been widened to provide left turn lanes and traffic signals have been installed at the First Street and Main Street intersections.

The California Department of Transportation (Caltrans) compiles information regarding the volume of traffic on state highways. The most recent information published by Caltrans indicates that SR 65 carries an ADT volume of 16,800 vehicles per day at the Placer County-Yuba County line (2009). The volume remains at that level through Wheatland to Evergreen Drive. This 2009 data reveals an appreciable reduction from the data developed in 2005 when 20,100 AADT was reported through Wheatland. Caltrans data is also available regarding truck traffic on SR 65. The most recent data

available from the State indicates that trucks comprise nearly 29 percent of the total volume on SR 65 through Wheatland, with roughly one-third of that volume being four- and five-axle trucks.

Long range plans for a bypass of Wheatland have existed for many years, and the City of Wheatland General Plan envisions creation of a route on the east side of the City. A two-lane facility would be constructed initially, with eventual expansion as traffic volumes increase.

Wheatland Intersections

Because the quality of traffic flow on urban streets is typically governed by the operation of major intersections, the traffic impact analysis assessed current conditions (and addresses project impacts) at the following five existing intersections that are located within the Wheatland study area, as well as three additional future intersections that will be located within the Wheatland study area:

1. SR 65 (D Street) / First Street (signalized);
2. SR 65 (D Street) / Fourth Street (side street stop signs);
3. SR 65 (D Street) / Main Street (signalized);
4. Spenceville Road / Jasper Lane (side street stop sign);
5. Spenceville Road / Camp Far West Road (side street stop signs);
6. Spenceville Road / Ring Road (future);
7. Spenceville Road / Wheatland Expressway (future interchange); and
8. A Street / Wheatland Expressway (future at-grade intersection).

Existing Traffic Conditions

To quantify existing traffic conditions, AM and PM peak hour traffic counts were made by the consultant at study intersections in February 2009. Observed intersection traffic volumes are presented in Figure 4.3-1, Existing Traffic Volumes and Lane Configurations. To quantitatively evaluate traffic conditions and to provide a basis for comparison of operating conditions with and without project generated traffic, Levels of Service (LOS) were determined at study area intersections and on individual roadway segments. LOS is a quantitative measure of traffic operating conditions whereby a letter grade "A" through "F" is assigned to an intersection. LOS A through F represents progressively worsening traffic conditions. The characteristics associated with the various LOS for intersections are presented in Table 4.3-1.

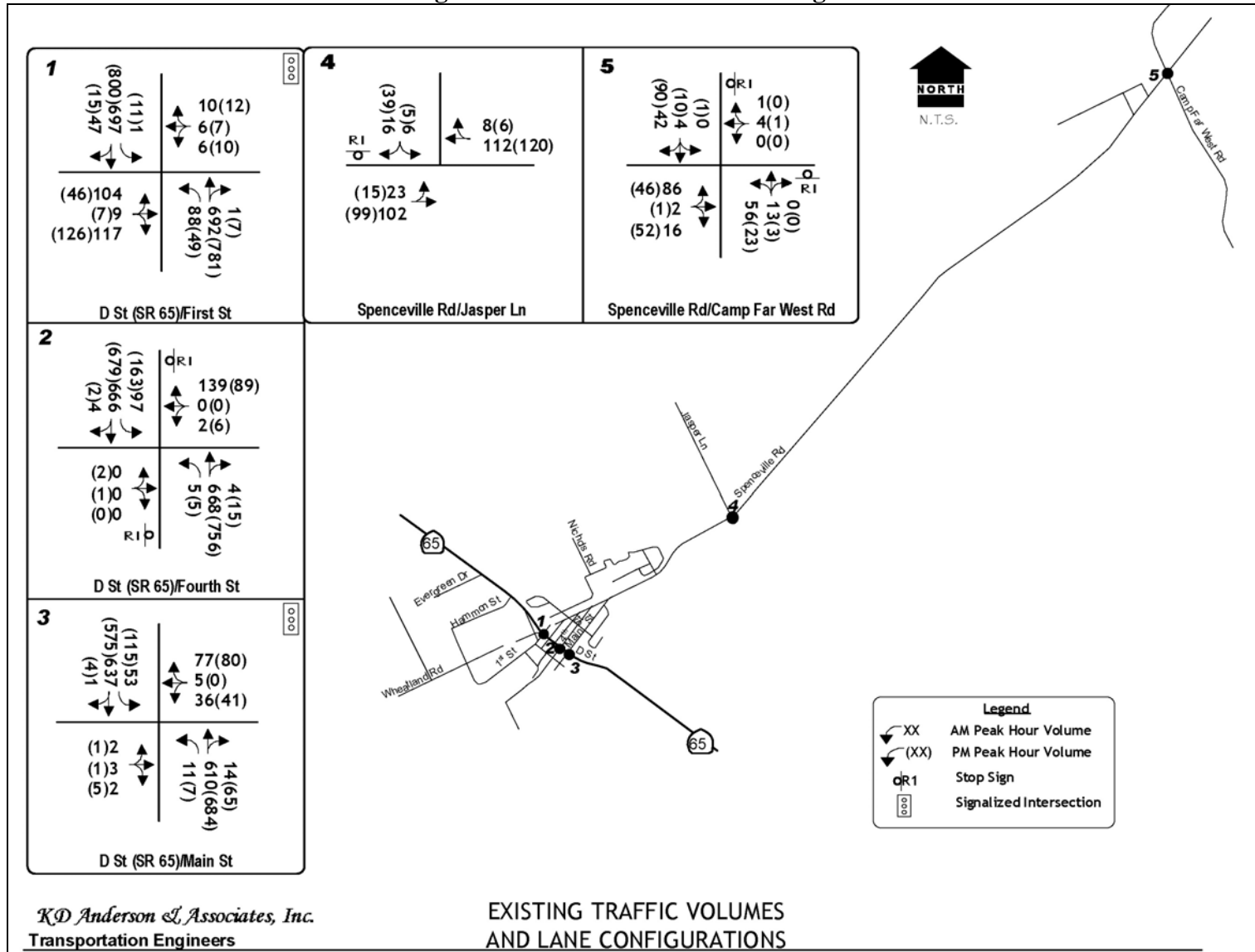
The Wheatland General Plan Circulation Element establishes the allowable LOS standard for roadways and intersections. The City of Wheatland General Plan establishes LOS C as the applicable standard on City streets, while LOS D is the minimum for State highways and for locations within one-quarter mile of a State highway.

Current LOS within the City of Wheatland

Roadway LOS

The current roadway segment volumes and LOS on study area roads are presented in Figure 4.3-2, Existing Daily Traffic Volumes.

Figure 4.3-1
Existing Traffic Volumes and Lane Configurations



**Figure 4.3-2
Existing Daily Traffic Volumes**

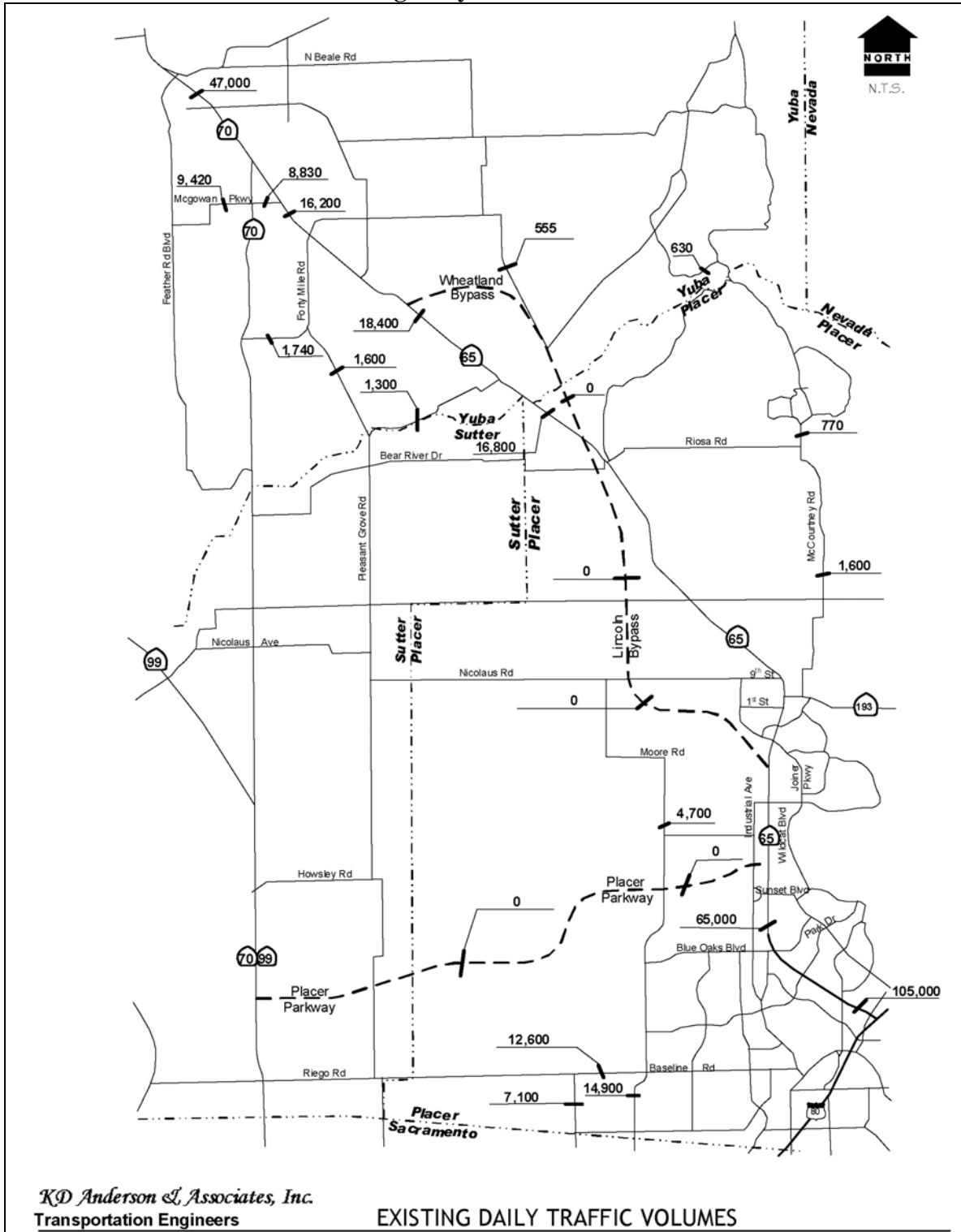


Table 4.3-1 LOS Definitions			
LOS	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
A	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
B	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
C	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
D	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds, and ability to maneuver restricted.
E	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
F	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.
<i>Source: Caltrans, Highway Capacity Manual, 2000.</i>			

As shown, the Annual Average Daily Traffic (AADT) reported by Caltrans on SR 65 through Wheatland (16,800 AADT) is indicative of LOS F conditions, which is considered an unacceptable LOS. The volumes of traffic on all other streets in Wheatland are at LOS C or better conditions.

Peak Hour Intersection LOS

Current AM and PM peak hour LOS were calculated at the study intersections and are summarized in Table 4.3-2. Current levels of service were compared to adopted standards to determine whether existing conditions are satisfactory. The two traffic signals on SR 65 through Wheatland deliver LOS that satisfy the community's LOS D minimum. At the SR 65 / 4th Street intersection the delays to motorists on the eastbound 4th Street approach are indicative of LOS E and F; however, the number of vehicles experiencing poor conditions is very low, and the intersection does not carry traffic volumes that satisfy peak hour warrants for signalization.

**Table 4.3-2
Existing Intersection LOS**

<div>Table 4.3-2</div> <div>Existing Intersection LOS</div>							
Location	Control	Peak Hour LOS				Traffic Signal Warranted?	
		AM Peak Hour		PM Peak Hour			
		Average Delay	LOS	Average Delay	LOS		
Within City of Wheatland							
SR 65 (D Street) / 1 st Street	Signal	25.1 sec	C	22.7 sec	C	N/A	
SR 65 (D Street) / 4 th Street	EB/WB Stop	NB left turn	9.4 sec	A	9.7 sec	A	No
SB left turn		10.1 sec	B	11.9 sec	B		
EB left+thru+right turn		42.9 sec	E	125.4 sec	F		
WB left+thru+right turn		18.7 sec	C	23.4 sec	C		
SR 65 (D Street) / Main Street	Signal	11.3 sec	B	16.9 sec	B	N/A	
Outside City of Wheatland							
Spenceville Road / Jasper Lane	SB Stop	EB left turn	7.5 sec	A	7.6 sec	A	No
SB left+right turn		9.5 sec	A	9.4 sec	A		
Spenceville Road / Camp Far West Road	NB/WB Stop	WB left+thru+right turn					No
WB left+thru+right turn		9.9 sec	A	10.8 sec	B		
NB left+thru+right turn		10.1 sec	B	10.4 sec	B		
Note: Bold = LOS in excess of adopted standard.							
Source: KD Anderson & Associates, Inc. Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.							

Current LOS outside the City of Wheatland

Conditions on State Highways

As shown in Table 4.3-3, the volume of traffic reported on SR 65 south of Lincoln is indicative of LOS E-F conditions. North of Lincoln, the two lane highway operates at LOS D. In Yuba County the two lane portion of SR 65 north of Wheatland operates at LOS E. The LOS on the four lane freeway north of South Beale Road is LOS A, and the portion of SR 70 beyond the SR 65 junction operates at LOS C.

Conditions on Yuba County Roads

Because current traffic volumes are relatively low, the Yuba County roads that provide regional access to Wheatland operate at LOS B (See Table 4.3-3).

**Table 4.3-3
Existing Roadway Segment ADT Volumes and Resulting LOS**

Location	Class	Lanes	Jurisdiction	Daily Volume Thresholds		Existing Conditions	
				LOS C	LOS D	Daily Volume	LOS
SR 65 from Interstate 80 to Washington Blvd	Freeway	4	Placer	54,720	66,960	105,000	F
SR 65 from Washington Blvd to Industrial Avenue	Freeway	4	Placer	54,720	55,960	65,000	E
Lincoln Bypass from Industrial Avenue to Nicolaus Road ¹	Freeway	(4)	Placer	54,720	66,960	future	-
Lincoln Bypass from Nicolaus Road to Sheridan ¹	Freeway	(2) (4)	Placer	27,360	33,480	future	-
SR 65 from Sheridan to Bear River	Highway	2	Placer	16,000	18,000	16,800	D
SR 65 from Bear River to Main Street	Urban	2	Wheatland	13,000	15,000	16,800	F
SR 65 from Main Street to 1 st Street	Urban	3	Wheatland	15,950	17,950	16,800	E
SR 65 from 1 st Street to north Wheatland City limits	Urban	3	Wheatland	15,950	17,950	16,800	E
SR 65 from Wheatland City limits to South Beale Road	Rural Highway	2	Yuba	-	-	18,400 (1,800)	E
SR 65 from South Beale Road to Forty Mile Road	Freeway	4	Yuba	-	-	16,100 (1,450)	A
SR 65 from Forty Mile Road to McGowan Parkway	Freeway	4	Yuba	-	-	16,200 (1,500)	A
SR 65 from McGowan Parkway to SR 70	Freeway	4	Yuba	-	-	16,900 (1,600)	A
SR 70 from SR 65 to North Beale Road	Freeway	4	Yuba	-	-	47,000 (4,200)	C
Main Street from SR 65 to Spenceville Road	Urban	2	Wheatland	12,000	13,500	2,330	A
Fourth Street from SR 65 to Olive Street	Urban	2	Wheatland	12,000	13,500	2,600	A
Spenceville Road from Main Street to Jasper Lane	Rural	2	Wheatland	6,000	10,500	3,600	B
Jasper Lane from Spenceville Road to Ostrom Road	Rural	2	Yuba	6,000	10,500	555	B
Spenceville Road from Jasper Lane to Camp Far West Road	Rural	2	Yuba	6,000	10,500	2,300	B
Camp Far West Road from Spenceville Road to Blackford Road – McCourtney Road	Rural	2	Yuba	6,000	10,500	630	B

(Continued on next page)

Table 4.3-3 (continued)
Existing Roadway Segment ADT Volumes and Resulting LOS

Location	Class	Lanes	Jurisdiction	Daily Volume Thresholds		Existing Conditions	
				LOS C	LOS D	Daily Volume	LOS
McCourtney Road from Yuba County line to Riosa Road	Rolling	2	Placer	7,600	11,400	770	A
Wheatland Road from Forty Mile Road to Wheatland City Limits	Rural	2	Yuba	6,000	10,500	1,300	B
Forty Mile Road from Wheatland Road to Plumas Arboga Road	Rural	2	Yuba	6,000	10,500	1,600	B
Plumas Arboga Road from SR 70 to Forty Mile Road	Rural	2	Yuba	6,000	10,500	1,740	B
McGowan Parkway from SR 65 to SR 70	Urban	2	Yuba	12,000	13,500	8,830	B
McGowan Parkway from SR 70 to Arboga Road	Urban	2	Yuba	12,000	13,500	9,420	B
Marysville Bypass – Yuba River Parkway from SR 70 to North Beale Road	Urban	(4)	Yuba	28,800	32,400	future	-
Placer Parkway from SR 65 to Watt Avenue	Expressway	(4)	Placer	32,000	36,000	future	-
Placer Parkway from Watt Avenue to Pleasant Grove Road	Expressway	(4)	Placer	32,000	36,000	future	-
Baseline Road from Fiddymment Road to Watt Avenue	Arterial - High	2	Placer	16,000	18,000	12,600	C
Watt Avenue from Baseline Road to Sacramento County line	Arterial - High	2	Placer	16,000	18,000	7,100	A
Walerga Road from Baseline Road to Sacramento County line	Arterial – Mod	2	Placer	14,400	16,200	14,900	D
Fiddymment Road from Moore Road to Athens Avenue	Rural - Level	2	Placer	9,600	15,500	4,700	B
Fiddymment Road from Athens Avenue to Roseville city limits	Rural - Level	2	Placer	9,600	15,500	5,000	B

¹ Currently under construction and expected to be complete before development of the proposed project.

Notes: **Bold** = LOS in excess of adopted minimum standard.
(X) is the number of lanes planned in the future.

Source: KD Anderson & Associates, Inc. Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.

Conditions on Placer County Roads

McCourtney Road, which provides access to Wheatland via the Camp Far West area carries low traffic volumes and operates at LOS A. While current volumes are higher, most of the Placer County arterials that serve the western Placer County area operate at an acceptable LOS. An exception is the portion of Walerga Road south of Baseline Road, which operates at LOS D (See Table 4.3-3).

Pedestrian and Bicycle Facilities

Sidewalks are generally available in downtown Wheatland, and the City has consistently required new development to provide sidewalks as part of tentative map conditions. Sidewalks do not exist on the rural roads in the immediate area of the proposed project. Designated facilities for bicycles are limited in Wheatland but are being developed as new roadways are constructed with new development. The Wheatland General Plan designates Spenceville Road as an arterial street and Class II bicycle lanes would normally accompany development along arterial streets. However, it should be noted that because Spenceville Road is the only major east-west arterial in the City, the City may contemplate Class I bicycle lanes for the road in the future. Future Class I bicycle lanes on Spenceville Road would be included in the Pedestrian and Bicycle Master Plan that is currently being prepared for the City.

Public Transit Service

Transit services are provided to the Wheatland area by Yuba-Sutter Transit. Yuba-Sutter Transit offers regular fixed route service to the communities of Yuba City, Marysville, Olivehurst and Linda. Limited route deviation service is provided to the Yuba County foothills and to the cities of Live Oak and Wheatland. The Wheatland Route offers two roundtrips into Marysville and Linda on Tuesdays and Thursdays under a reimbursable contract to the City. Transfers to routes serving Sacramento and Yuba City are available.

Five designated stops exist on the Wheatland Route. The stops at Main Street / C Street and at Anderson Way / McCurry Street off of Spenceville Road are the locations closest to the proposed project. The Main Street / C Street stop is a few blocks from the Hop Farm. The Anderson Way / McCurry Street stop is more than a half-mile from the proposed project site.

The 2008 Yuba-Sutter Transit Short-Range Transit Plan (SRTP)² indicated that a total of 156 annual loadings occurred on the Wheatland Route in 2006. At that time only a single-day service was provided. The SRTP noted the additional day now provided and suggested that as rural areas developed, increased roundtrips, rather than additional days, would be the preferred strategy.

UPRR Crossings

The UPRR runs through downtown Wheatland along an alignment that is roughly parallel to SR 65. Currently, the following four public at-grade crossings are located on the UPRR:

- 2nd Street;

- 3rd Street;
- 4th Street; and
- Main Street.

All of the public road crossings are controlled by crossing gates that preclude automobile traffic when a train approaches. Private crossings on the UPRR also exist within the Wheatland Sphere of Influence (SOI) at the following three locations:

- Just north of the Bear River;
- South of McDevitt Drive; and
- Levee Road north of Wheatland.

Because the UPRR passes through the center of Wheatland, pedestrians cross the tracks at various times during the day. The most appreciable pedestrian activity occurs before and after the school day. Because Wheatland's schools are located west of SR 65, children living on the east side of town cross the UPRR as part of their walk to and from school. This pedestrian activity is concentrated at a guarded pedestrian crossing at the SR 65 / 2nd Street intersection. The traffic study prepared to support the City's application to signalize the SR 65 / 1st Street intersection noted that 50 to 80 school age children cross the highway in the morning and afternoon.³ Nearly all of this activity also occurs over the UPRR as well.

The Wheatland General Plan includes the City's goals for future UPRR crossings. The General Plan indicates that two grade-separated crossings will be constructed. One crossing will be located midway between the Bear River and downtown Wheatland in the area of the approved Heritage Oaks project. The other grade-separation will be on the north side of town, north of Evergreen Drive in the vicinity of the proposed Almond Estates subdivision. The General Plan also indicates that a new at-grade crossing will be constructed opposite the SR 65 / McDevitt Drive intersection. The General Plan indicates that the existing 2nd Street and 3rd Street crossings will eventually be closed. Funding for grade-separated crossings will be accumulated as part of the City's Traffic Impact Fee Program.

REGULATORY CONTEXT

Existing transportation policies, laws, and regulations that would apply to the proposed project are summarized below.

State Regulations

The California Department of Transportation (Caltrans) has jurisdiction over California State highways. SR 65 runs through the center of the City of Wheatland and near the western boundary of the project site.

Local Regulations

City of Wheatland General Plan

The following are applicable goals and policies from the City of Wheatland General Plan related to transportation and circulation.

Transportation and Circulation

Goal 2.A To provide for the long-range planning and development of the City's roadway system to ensure the safe and efficient movement of people and goods.

Policy 2.A.1. The City shall plan, design, and regulate the development of the City's street system in accordance with the functional classification system described [in the General Plan] and reflected in the Circulation Diagram and the City's Street Standards and Specifications.

Policy 2.A.2. The City shall develop and manage its roadway system to maintain LOS C or better on all roadways, except within one-quarter mile of state highways. In these areas, the City shall strive to maintain LOS D or better.

Policy 2.A.3. The City shall identify economic, design and planning solutions to improve existing levels-of-service currently below the LOS specified above. Where physical mitigation is infeasible, the City shall consider developing programs that enhance alternative access or otherwise minimize travel demand.

Policy 2.A.4. The City shall assure that new development effectively links both sides of State Route 65 and the railroad tracks at the north and south ends of town.

Policy 2.A.5. The City shall strive to meet the level of service standards through a balanced transportation system that provides alternatives to the automobile and by promoting pedestrian, bicycle, and transit connections between employment areas and major residential and commercial areas.

Policy 2.A.6. The City shall require an analysis of the effects of traffic from proposed major development projects. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. Such improvements may include a fair share of improvements that provide benefits to others.

Policy 2.A.7. The City shall proactively pursue financing in a timely manner for all components of the transportation system, particularly an eastern alignment of the State Route 65 bypass, to achieve and maintain adopted level of service standards.

Policy 2.A.8. The City shall assess fees on new development sufficient to cover the fair share portion of that development's impacts on the local and regional transportation system.

Policy 2.A.9. The City shall limit private access along arterial streets wherever possible.

Policy 2.A.10. The City shall give priority to street and highway improvements that increase safety, minimize maintenance costs, and increase the efficiency of the street system.

Policy 2.A.11. The City shall ensure that highways and arterial streets within its jurisdiction provide for the efficient flow of traffic. Therefore, the following shall be undertaken:

- Minimize the number of intersections along arterials.
- Reduce curb cuts along arterials through the use of common access easements, backup lots and other design measures.
- Provide grade separations at all major railroad crossings with arterials, except for an at-grade crossing of the major arterial in the north.
- Extend arterials over waterways, railroads and through developed and undeveloped areas to provide for the continuous flow of through traffic and appropriate area access.

Goal 2.C To protect residential areas from high-volume and high-speed traffic and its effects and promote bicycling and walking on residential streets.

Policy 2.C.1. The City shall consider the effects of new development on local streets in residential areas and require new development to mitigate significant impacts on residential neighborhoods.

Policy 2.C.2. The City shall promote street, alley, and sidewalk maintenance to encourage their safe use.

Policy 2.C.3. The City shall consider future needs for street and sidewalk maintenance in approving new development.

Policy 2.C.4. The City shall require ADA compliance for existing and proposed street sidewalks.

Policy 2.C.5. The City shall promote elderly friendly roadways, including the use of bikeways for golf carts and motorized wheelchairs.

Goal 2.D To provide a sufficient amount of convenient, available, accessible, safe, and attractive parking to serve existing and new development throughout the City as needed.

Policy 2.D.1. The City shall require provision of adequate off-street parking in conjunction with new development. The adequacy and appropriateness of parking requirements in the Zoning Ordinance shall be periodically reevaluated.

Policy 2.D.2. The City shall require that parking lots be designed for maximum pedestrian safety and convenience, motorist convenience and safety, and handicapped access.

Policy 2.D.3. The City shall continue to implement Zoning Ordinance parking standards that establish minimum and maximum number of spaces for parking lots.

Policy 2.D.4. The City shall require new parking lots to be designed to minimize visual impacts on public roadways and neighboring areas.

Policy 2.D.5. The City shall allow shared parking where different adjacent uses generate peak parking demand at different times.

Goal 2.E To promote a safe and efficient transit system to reduce congestion, improve the environment, and provide viable non-automotive means of transportation in and through Wheatland.

Policy 2.E.1. The City shall work with Yuba-Sutter Transit to implement bus transit services that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.

Policy 2.E.2. The City shall consider the transit needs of senior, disabled, minority, low-income, and transit-dependent persons in making decisions regarding transit services and in compliance with the Americans with Disabilities Act.

Policy 2.E.3. The City shall consider families' needs in transportation planning efforts and shall promote safe and convenient methods of transportation between school, home, retail shopping, and childcare.

Policy 2.E.4. The City shall encourage the creation of rail transit to link Wheatland with Marysville/Yuba City and the Sacramento Area.

Goal 2.F To provide a safe, comprehensive, and integrated system of facilities for non-motorized transportation for both transportation and recreation.

Policy 2.F.1. The City shall promote the development of a comprehensive and safe system of recreational and commuter bicycle routes that provide connections between the city's major employment and housing areas, between its existing and planned bikeways, and between schools, parks, retail shopping, and residential neighborhoods.

Policy 2.F.2. The City shall require developers to finance and install pedestrian pathways, bikeways, and multi-purpose paths in new development, as appropriate.

Policy 2.F.3. The City shall encourage the development of adequate, convenient, and secure bicycle parking at employment centers, schools, recreational facilities, transit terminals, commercial businesses, the Downtown, and in other locations where people congregate.

Policy 2.F.4. The City shall consider the needs of bicyclists when new roadways are constructed and existing roadways are upgraded.

Policy 2.F.5. The City shall consider the needs of bicyclists when determining street widths.

Policy 2.F.6. The City shall develop safe and pleasant pedestrian ways. To this end, the City shall ensure sidewalks are wide enough for pedestrian convenience.

Policy 2.F.7. The City shall cooperate with the schools in maintaining and updating the Safe Routes to School program.

Policy 2.F.8. The City shall require crosswalks and other pedestrian safety measures be designed and installed according to City of Wheatland Ordinances.

Policy 2.F.9. The City shall encourage major employment centers (50 or more total employees) to install showers, lockers, and secure parking areas for bicyclists as part of any entitlement.

Policy 2.F.10. The City shall ensure that bikeways are maintained in a manner that promotes their local and regional use.

City of Wheatland Traffic Impact Fee Update

Various improvements needed to mitigate traffic impacts within the City of Wheatland may be of city-wide benefit and may best be addressed through an update to the City's existing Traffic Impact Fee program. A Traffic Fee Update may continue to allocate costs on a uniform city-wide basis or may establish distinct areas of benefit for improvements that are used to a greater degree by specific portions of the community. The allocation of projects on a community wide basis or to specific areas of the City can be determined when the fee update occurs.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

The Wheatland General Plan Circulation Element establishes the allowable LOS standard for roadways and intersections within the City's jurisdiction. The Wheatland General Plan establishes LOS C as the applicable standard on City streets, while LOS D is the minimum for State highways and for locations within one-quarter mile of State highways. Caltrans' minimum LOS standard is generally based on State guidelines but is often adjusted to account for particular limitations within each District. Because this EIR has been prepared for the City of Wheatland, the City has chosen to apply the City standards to impacted roadways associated with the proposed project.

A significant traffic impact would occur if development of a project does any of the following:

- Results in an intersection or roadway segment that operates at an acceptable LOS under "baseline" conditions (i.e., LOS A, B, or C) deteriorating to an unacceptable LOS (i.e., LOS D, E, or F).
- Results in a State highway or an intersection or roadway segment within one-quarter mile of a State highway that operates at an acceptable LOS under "baseline" conditions (i.e., LOS A, B, C, or D) deteriorating to an unacceptable LOS (i.e., LOS E or F).
- Adds an appreciable amount of traffic to a facility already operating at unacceptable LOS:
 - For roadway segments, an "appreciable" traffic volume increase is two percent of the roadway capacity;
 - For signalized intersections, an "appreciable" volume increase results in a five-second or greater increase in average delay in the peak hour;
 - At unsignalized intersections, an "appreciable" volume increase results in the satisfaction of peak hour signal warrants as a result of the increase; and
 - At unsignalized intersections already meeting warrants, an "appreciable" volume increase results in a five-second or greater increase in side street delay.

As discussed in the Introduction to the Analysis chapter of this Draft EIR, impacts identified in the Initial Study as less-than-significant or having no impact, which do not require mitigation, have already been addressed in the Initial Study. As stated in the Initial Study, the proposed project does not include any of the restricted land uses within the Beale AFB Overflight Guidelines; therefore, the project would result in a less-than-significant impact regarding air

traffic patterns. All impacts identified as potentially significant within the Initial Study are addressed below.

Method of Analysis

The traffic impact report for the Johnson Rancho and Hop Farm Annexation project, dated January 28, 2011, was prepared by KD Anderson & Associates, Inc. The report analyzes the traffic impacts associated with development of the proposed project. Impacts of the project were considered within the context of existing traffic conditions, future traffic conditions occurring from General Plan buildout, and cumulative impacts.

Existing Conditions

The traffic impact analysis did not include an examination of how existing traffic conditions within the City of Wheatland (conditions in 2011) would be impacted by implementation of the proposed project; however, it is necessary to include in the EIR a comparison of Existing Conditions versus Existing Plus Project Conditions. As discussed in more detail in the Project-Specific Impacts and Mitigation Measures section below, existing traffic volumes within the Wheatland roadway network were compared to existing roadway capacities to determine the proposed project's estimated impact on the existing roadway network.

Year 2025 No Project and Year 2025 Plus Project Conditions

At the direction of City and Caltrans staff, the analysis considered the following two scenarios:

1. **Year 2025 No Project Conditions.** This scenario assumes that Wheatland is built out per the current General Plan and that the Johnson Rancho remains undeveloped Urban Reserve. Because the Hop Farm's land uses are already included in the current General Plan, the No Project condition already assumes development of the Hop Farm.
2. **Year 2025 Plus Project Conditions.** The Plus Project conditions assume buildout of the current General Plan land uses as well as the additional development identified for the Johnson Rancho area.

The impact analysis addressed conditions on roadway segments in Wheatland and at locations throughout Yuba and Placer Counties (See Table 4.3-4). Study locations were identified in consultation with Yuba County and Placer County staff.

Year 2025 No Project Conditions

To quantify existing traffic conditions, AM and PM peak hour traffic counts were made by the consultant at study intersections in February 2009. The AM and PM peak hours were selected as being representative of typical "worst case" background traffic conditions, based on review of daily traffic counts in Wheatland and based on the highest hours of project trip generation. This approach is consistent with the analyses contained in other recent EIRs in the City of Wheatland and Caltrans guidelines. Observed traffic volumes are presented in Figure 4.3-1.

Table 4.3-4 Roadway Segments Studied	
Road Location	Jurisdiction
SR 65 from Interstate 80 to Washington Blvd	Placer-Caltrans
SR 65 from Washington Blvd to Industrial Avenue	Placer-Caltrans
Lincoln Bypass from Industrial Avenue to Nicolaus Road	Placer-Caltrans
Lincoln Bypass from Nicolaus Road to Sheridan	Placer-Caltrans
Old SR 65 from Sheridan to Lincoln	Placer
SR 65 from Bear River to South Ring Road connection	Wheatland-Caltrans
SR 65 from South Ring Road connection to Main Street	Wheatland-Caltrans
SR 65 from Main Street to 1 st Street	Wheatland-Caltrans
SR 65 from 1 st Street to North Ring Road	Wheatland-Caltrans
SR 65 from North Ring Road to Wheatland Expressway	Wheatland-Caltrans
SR 65 from Wheatland Expressway to South Beale Road	Yuba-Caltrans
SR 65 from South Beale Road to Forty Mile Road	Yuba-Caltrans
SR 65 from Forty Mile Road to McGowan Parkway	Yuba-Caltrans
SR 65 from McGowan Parkway to SR 70	Yuba-Caltrans
SR 70 from SR 65 to North Beale Road	Yuba-Caltrans
Wheatland Expressway from SR 65 to New Arterial	Wheatland
Wheatland Expressway from New Arterial to Spenceville Road	Wheatland
Wheatland Expressway from Spenceville Road north to SR 65	Wheatland
Main Street from SR 65 to Spenceville Road	Wheatland
Fourth Street from SR 65 to Olive Street	Wheatland
Spenceville Road from Main Street to Ring Road	Wheatland
Spenceville Road from Ring Road to Wheatland Expressway	Wheatland
Spenceville Road from Wheatland Expressway to commercial access	Wheatland
Spenceville Road from commercial access to A Street	Wheatland
Spenceville Road from A Street to B Street	Wheatland
Spenceville Road from B Street to D Street	Wheatland
Spenceville Road from D Street to F Street	Wheatland
Spenceville Road from F Street to Camp Far West Road	Yuba
A Street from Ring Road to Wheatland Expressway	Wheatland
A Street from Wheatland Expressway to commercial access	Wheatland
A Street from commercial access to C Street	Wheatland
A Street from C Street to Spenceville Road	Wheatland
C Street from A Street to C Street (eastern portion)	Wheatland
C Street from C Street (eastern portion) to E Street	Wheatland
E Street from C Street to F Street	Wheatland
B Street from Spenceville Road to E Street	Wheatland
E Street from Spenceville Road to B Street	Wheatland
D Street from Spenceville Road to F Street	Wheatland
F Street from Spenceville Road to E Street	Wheatland
Ring Road from SR 65 to Street A	Wheatland

(Continued on next page)

Table 4.3-4 (continued) Roadway Segments Studied	
Road Location	Jurisdiction
Ring Road from Street A to Spenceville Rd	Wheatland
Ring Road north of Spenceville Rd	Wheatland
Jasper Lane from Spenceville Road to Ostrom Road	Yuba
Camp Far West Rd from Spenceville Rd to Blackford Rd–McCourtney Rd	Yuba
McCourtney Road from Yuba County line to Riosa Road	Placer
McCourtney Road from Riosa Road to Lincoln City limits	Placer
Wheatland Road from Forty Mile Rd to Wheatland City limits	Yuba
Forty Mile Road from Bear River to Wheatland Road	Yuba
Forty Mile Road from Wheatland Road to Plumas Arboga Road	Yuba
Plumas Arboga Road from SR 70 to Forty Mile Road	Yuba
McGowan Parkway from SR 65 to SR 70	Yuba
McGowan Parkway from SR 70 to Arboga Road	Yuba
Marysville Bypass – Yuba River Parkway from SR 70 to North Beale Rd	Yuba
Placer Parkway from SR 65 to Watt Avenue	Placer
Placer Parkway from Watt Avenue to Pleasant Grove Road	Placer
Baseline Road from Fiddymont Road to Watt Avenue	Placer
Watt Avenue from Baseline Road to Sacramento County line	Placer
Walerga Road from Baseline Road to Sacramento County line	Placer
Fiddymont Road from Moore Road to Placer Parkway	Placer
Fiddymont Road from Placer Parkway to Roseville WRSP limits	Placer
<i>Source: KD Anderson & Associates, Inc. Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.</i>	

Levels of Service

To quantitatively evaluate traffic conditions and to provide a basis for comparison of operating conditions with and without project generated traffic, Levels of Service (LOS) were determined at study area intersections and on individual roadway segments. LOS is a quantitative measure of traffic operating conditions whereby a letter grade "A" through "F" is assigned to an intersection. LOS A through F represents progressively worsening traffic conditions. The characteristics associated with the various LOS for intersections are presented in Table 4.3-1. LOS is calculated for different intersection control types using the applicable methodology contained in the *Highway Capacity Manual* (2000), while LOS can also be generally determined based on daily traffic volumes.

Evaluating LOS Based on Daily Traffic Volumes on Roadway Segments

In urban areas, LOS thresholds based on daily traffic volume have been used which suggest the volume of daily traffic that would normally produce the respective peak hour LOS, assuming the installation of typical traffic control devices (i.e., traffic signals, stop signs). Table 4.3-5 presents the daily traffic volume thresholds associated with each LOS grade in the City of Wheatland General Plan Update EIR.

Other agencies have adopted thresholds for LOS as well. Yuba County LOS thresholds were most recently published in the Country Club Estates EIR. Table 4.3-6 identifies the thresholds used by Yuba County. Yuba County's thresholds for LOS based on daily traffic volume lack specific information for controlled access facilities. Recent EIRs prepared for Yuba County have employed the methodologies contained in Chapter 23 of the 2000 HCM to determine LOS for freeways and Chapter 20 to evaluate LOS on two lane rural highways. The measures employed in this situation are noted in Table 4.3-7.

The Placer County General Plan Update EIR identified general "planning level" daily volume thresholds than can be used to identify operating LOS on streets and highways. These thresholds are re-printed in Table 4.3-8.

Signalized Intersections

Procedures used for calculating LOS at signalized intersections in Wheatland are as presented in the *Highway Capacity Manual* (2000). In addition to traffic volume, these procedures make use of geometric information and traffic signal timing data to estimate delay by approach and overall delay.

Table 4.3-5						
Evaluation Criteria Based on Daily Traffic Volume LOS Thresholds – Wheatland Streets						
Facility Type	LOS "C" v/c 0.71 ≤ 0.80		LOS "D" v/c 0.81 ≤ 0.90		LOS "E" v/c 0.91 ≤ 1.00	
<i>Urban Street</i>						
2 Lanes	10,700	12,000	12,000	13,500	13,500	15,000
3 Lanes	14,200	15,950	15,950	17,950	17,750	19,950
4 Lanes	21,300	24,000	24,000	27,000	27,000	30,000
5 Lanes (Divided 4-Lane)	28,300	31,900	31,900	35,900	35,900	39,900
7 Lanes (Divided 6-Lane)	37,800	43,200	43,200	48,600	48,600	54,000
<i>Rural Roads</i>						
2 Lane - Level - Typical Existing	3,675	6,000	6,000	10,500	10,500	17,500
Source: KD Anderson & Associates, Inc., Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.						

Table 4.3-6					
Evaluation Criteria for Roadway Segment LOS – Yuba County Roads					
Roadway Capacity Class	Maximum Daily Traffic Volume LOS				
	A	B	C	D	E
Two-Lane Rural Road	-	3,675	6,000	10,500	17,500
Two-Lane Urban Street	-	10,700	12,000	13,500	15,000
Four-Lane Undivided Road	-	21,400	24,000	27,000	30,000
Four-Lane Divided Road	-	25,200	28,800	32,400	36,000
Six-Lane Divided Road	-	37,800	43,200	48,600	54,000
<i>Source: Country Club Estates EIR, May 2008.</i>					

Table 4.3-7					
LOS Determination Criteria for State Highways in Yuba County					
Roadway Capacity Class	LOS				
	A	B	C	D	E
Two-Lane Rural Highway (Percent Time Following)					
Two-Lane State Highway	≤ 35	35 to 50	50 to 65	65 to 80	80 to 100
Multilane Freeway (Passenger Cars / Mile/ Lane)					
Two-Lane Urban Street	≤ 11	11-18	18-26	26-35	35-45
<i>Source: Transportation Research Board, Highway Capacity Manual, 2000.</i>					

Table 4.3-8					
Evaluation Criteria for Roadway Segment LOS – Placer County Roads					
Roadway Capacity Class – Terrain	Maximum Daily Traffic Volume Per Lane				
	LOS				
	A	B	C	D	E
1. Freeway – Level	6,300	10,620	13,680	17,740	18,000
2. Freeway – Rolling	5,290	8,920	11,650	14,070	15,120
3. Freeway – Mountainous	3,400	5,740	7,490	9,040	9,720
4. Arterial – High Access Control	6,000	7,000	8,000	9,000	10,000
5. Arterial – Moderate Access Control	5,400	6,300	7,200	8,100	9,000
6. Arterial – Low Access Control	4,500	5,250	6,000	6,870	7,500
7. Rural Two-Lane Highway – Level	1,500	2,950	4,800	7,750	12,500
8. Rural Two-Lane Highway – Rolling	800	2,100	3,800	5,700	10,500
9. Rural Two-Lane Highway – Mountainous	400	1,200	2,100	3,400	7,000
<i>Source: Placer County, Placer County General Plan FEIR, July 26, 1994.</i>					

Unsignalized Intersections

The procedure for calculating the LOS at unsignalized intersections is based on the relative availability of gaps in traffic and the delay experienced for each movement that must yield the right-of-way. The number of gaps is related to delay and is a function of the volume and speed of conflicting traffic, type of control (stop or yield), and qualitative intersection geometrics. Like signalized intersections where overall traffic operation is described by one LOS grade, a LOS is calculated for the intersection but can also be calculated for each movement yielding the right-of-way to others. LOS at unsignalized intersections controlled by side street stop signs are indicative of the magnitude of the delay incurred by motorists turning at the intersection. The signal warrant criteria employed for this study are those presented in the *California Manual of Uniform Traffic Control Devices* (CMUTCD).

Project Trip Generation and Distribution

The proposed project impacts have been quantified by estimating the number and directional distribution of project trips, and by superimposing those trips onto current traffic volumes.

Trip Generation

To quantify the amount of vehicular traffic generated by the proposed project, generalized trip generation rates originally employed for the Wheatland General Plan Update EIR were used. These trip generation rates for the uses proposed in the project area are indicated in Table 4.3-9.

Table 4.3-10 presents the proposed project's estimated site trip generation. As indicated, development of the entire project is expected to generate a gross total of 224,062 daily trip ends. Of that total, 172,541 trips are generated by areas that are identified as Urban Reserve in the current Wheatland General Plan, and the balance is generated by areas already planned for development under the current General Plan.

Table 4.3-9 Trip Generation Rates		
Land Use	Unit	Daily Trip Rate per Unit
Single Family Residence	Dwelling Unit	9.09
Multiple Family Residence	Dwelling Unit	6.83
Employment Center	Acre	112.00
Commercial	Acre	400.00
Middle School	Student	1.62
Elementary School	Student	1.29
<i>Source: KD Anderson & Associates, Inc., Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.</i>		

Table 4.3-10 Proposed Project Trip Generation Estimate		
Land Use	Quantity	Daily Trips
<i>Hop Farm Portion</i>		
Wheatland Hop Farm		
Single Family Residential	572 dwelling units (DUs)	
Commercial	4 acres	
Middle School (1)	900 students	
Subtotal		8,257
Bear River Hop Farm		
Single Family Residential	1,059 DUs	
Multiple Family Residential	206 DUs	
Employment Center	77.3 acres	
Commercial	25.0 acres	
Elementary School (1)	600 students	
Subtotal		30,665
Wheatland Parcels		
Single Family Residential	78 DUs	
Commercial	10 acres	
Subtotal		4,709
<i>Johnson Rancho Portion</i>		
Single Family Residential	12,121 DUs	
Multiple Family Residential	360 DUs	
Employment Center	197 acres	
Commercial	101 acres	
Middle School (1)	900 students	
Elementary Schools (5)	3,000 students	
Subtotal		180,431
<i>Gross Total</i>		224,062
<i>Source: KD Anderson & Associates, Inc., Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.</i>		

Trip Distribution

The distribution of project trips will reflect the general location of employment, shopping and schools within the project itself, within the limits of the City of Wheatland and within northern Placer County / southern Yuba County. The Wheatland General Plan traffic model was employed to distribute project trips onto the facilities within the City's SOI, while the SACMET model was employed to assign project traffic to areas outside of the City.

Traffic Models

Because the proposed project includes a request for a General Plan Amendment and annexation, and because development would occur over an extended time frame, the impacts of Johnson Rancho and Hop Farm Annexation Project were evaluated within the context of the Year 2025 "baseline" that was first identified in the City of Wheatland General Plan Update EIR and subsequently included in the Nichols Grove Draft EIR. It should be noted, however, that this is not the CEQA baseline for the purposes of this EIR. Each document addressed the traffic volume forecasts, LOS, and improvement requirements needed to accommodate buildout of the current General Plan. Because the adopted General Plan circulation system differs slightly from that identified in the General Plan Update EIR and in the Nichols Grove Draft EIR, the future traffic volumes presented herein for locations within the City SOI are based on new forecasts made using the General Plan Update EIR traffic model.

Outside the Wheatland SOI, the project's impacts have been evaluated within the context of future conditions projected in the current version of SACOG's SACMET traffic model. That modeling tool includes regional land use development assumptions made by individual planning agencies and circulation system improvements identified in the Regional Transportation Plan. Because the SACMET model land use data set does not include full buildout of the current Wheatland General Plan, the SACMET model had to be modified to include all of the land uses inherent to the current Wheatland General Plan to create the No Project baseline. Subsequently, the land uses contained in the Johnson Rancho and Hop Farm Annexation area were added to the SACMET model to generate Plus Project forecasts.

Traffic Model Forecasts

Traffic volume forecasts were made for the baseline condition that assumes buildout of the current General Plan (i.e., No Project) and for the "Plus Johnson Rancho Hop Farm Annexation Project" scenario (i.e., Plus Project). For this analysis, the Wheatland General Plan regional traffic model was also employed to identify a.m. and p.m. peak hour turning movement volumes at study intersections, as well as daily traffic volumes on study area streets.

Figure 4.3-3 identifies peak hour traffic volumes for Year 2025 conditions under the No Project scenario. These forecasts assume full buildout of the existing Wheatland General Plan, which includes the Hop Farm but not Urban Reserves. Figure 4.3-4 identifies future daily traffic volumes with and without the proposed project.

Figure 4.3-3
Year 2025 No Project Traffic Volumes and Lane Configurations

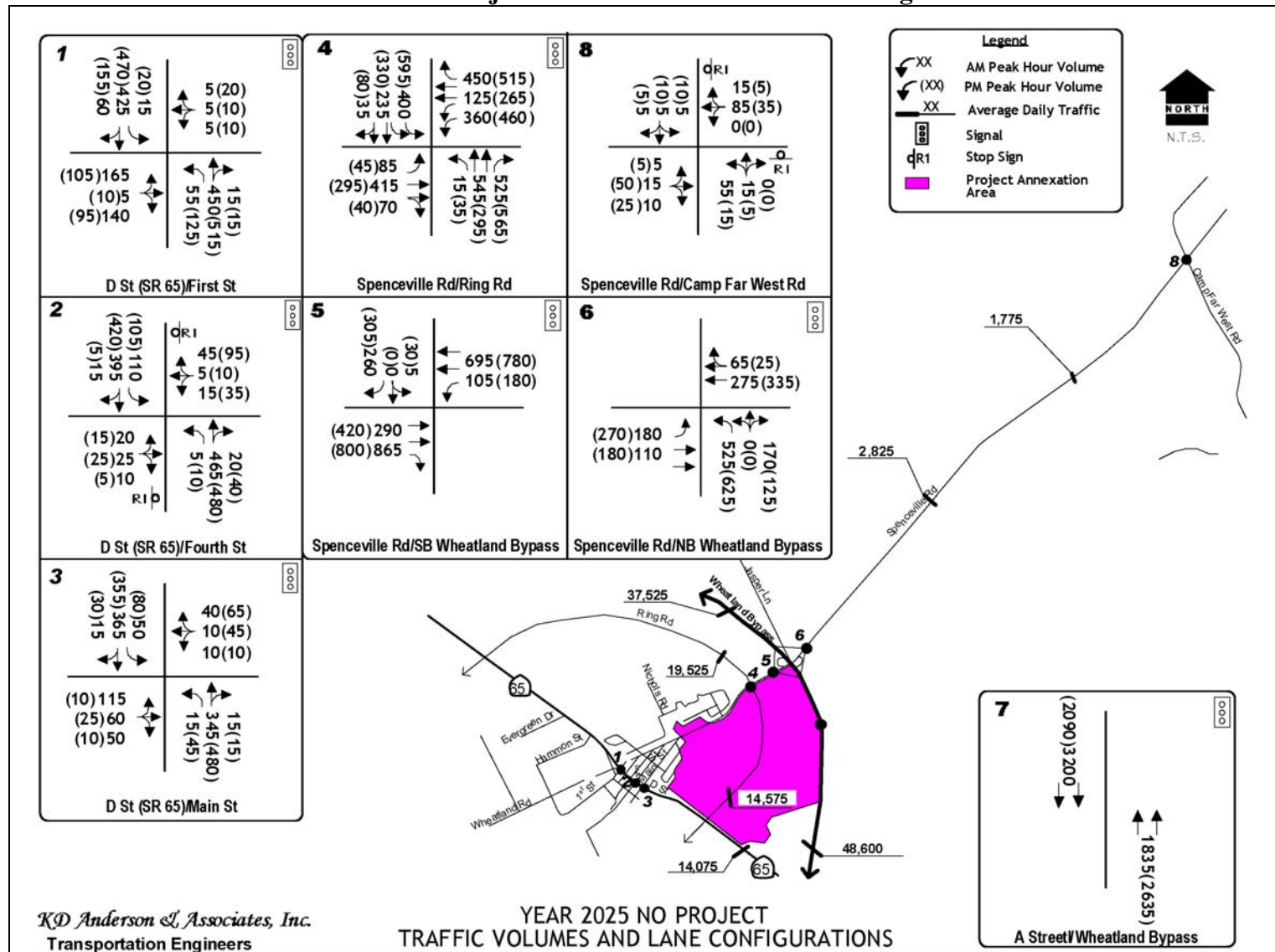
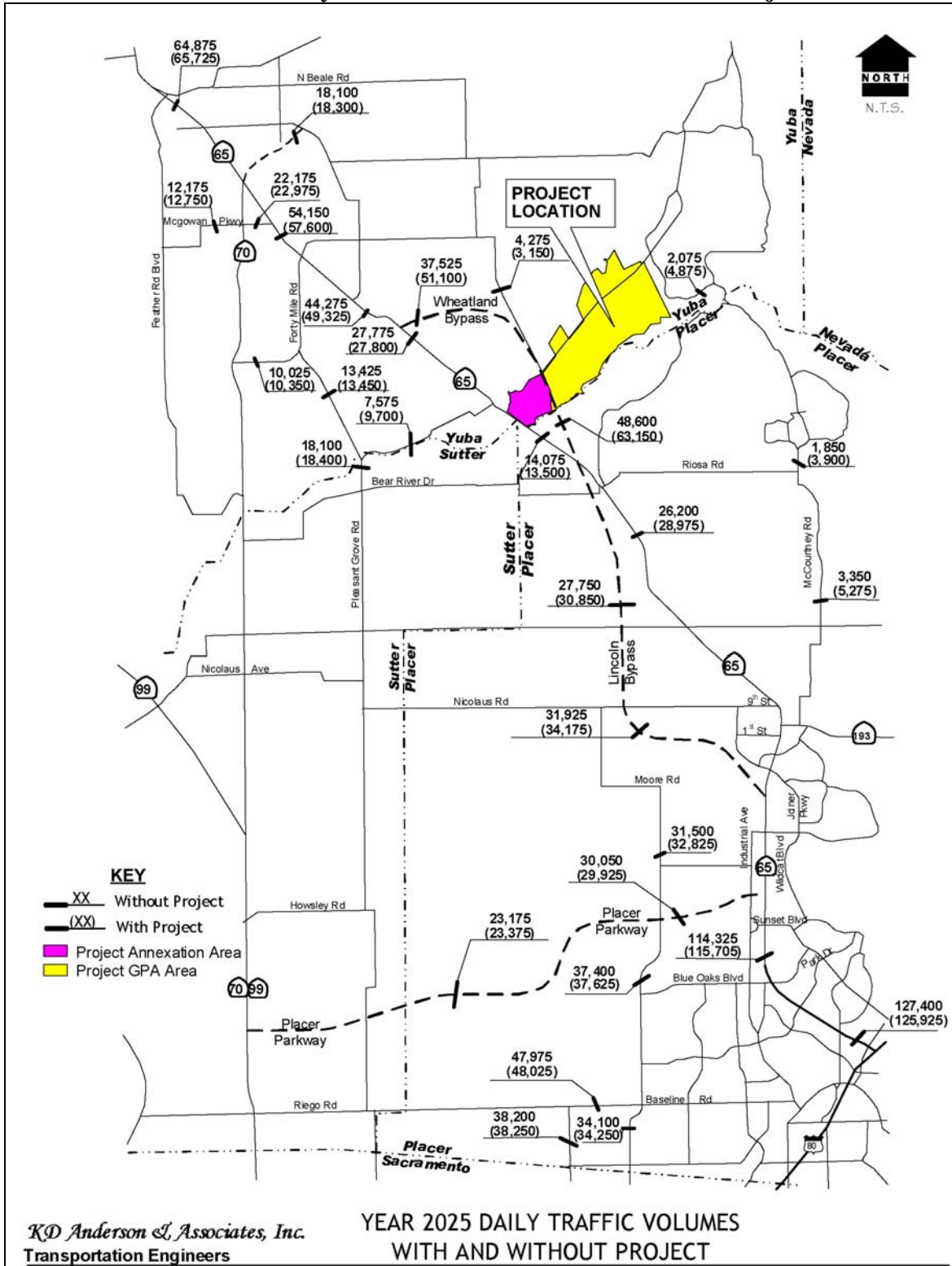


Figure 4.3-4
Year 2025 Daily Traffic Volumes With and Without Project



Assumed Circulation System Improvements

The future traffic scenarios addressed herein assume both area-wide development and implementation of the circulation system inherent to the Wheatland General Plan Circulation Element and anticipated by other jurisdictions. The Wheatland General Plan identifies creation of the Wheatland Expressway connecting SR 65 north and south of the community. The General Plan notes that a four-lane facility will eventually be required, but current funding mechanisms limit the facility to two lanes. The current General Plan assumes a grade-separated interchange on the Wheatland Expressway at Spenceville Road, and the General Plan Update EIR suggests that a diamond interchange could be developed at this location, but a formal plan for the interchange's construction has not been developed. The Wheatland General Plan adopted in 2006 assumed Spenceville Road to be a four-lane facility from downtown Wheatland to the interchange on the Wheatland Expressway. However, widening beyond that interchange was not assumed.

Other planned streets would affect the project area. The General Plan Circulation Diagram identifies an arterial road extending east from the Ring Road but not reaching the Wheatland Expressway. If the proposed project proceeds, this road would be extended to a new intersection on the Expressway and will continue easterly into the General Plan Amendment area. The assumption is made that the new connection to the expressway would be available until such time as the at-grade intersection ceases to provide acceptable LOS. At that time, access to the expressway would be limited to the Spenceville Road interchange, and the planned at-grade connection would be replaced by a grade-separated crossing.

Project-Specific Impacts and Mitigation Measures

The Project-Specific Impacts and Mitigation Measures section presents the projected LOS on study area roadway segments and at study area intersections. In addition, this section discusses the proposed project's potential impacts to Wheatland roadway segments and intersections, as well as roadway segments and intersections in South Yuba County and roadways in the extended region. Furthermore, this section addresses impacts to traffic traveling over the UPRR, bicycle and pedestrian traffic, and transit service.

It should be noted that the proposed project would include a prezone of the Johnson Rancho portion of the project to Planned Development (PD) District. The purpose of the PD District is to allow diversification in the relationship of various buildings, structures and open spaces in order to be relieved from the rigid standards of conventional zoning. A Stage 1 Development Plan has been prepared for the Johnson Rancho portion of the project and the project applicant(s) will submit, at a later date, Stage 2 Development Plans for portions of the entire Planned Development Zoning District as separate zoning ordinance amendment(s). Specific zoning designations for the Johnson Rancho portion of the project are not currently known and will not be established until the Stage 2 Development Plans are submitted.

As discussed in the Method of Analysis section above, the traffic impact analysis considered two scenarios that are cumulative in nature – Year 2025 No Project Conditions and Year 2025 Plus Project Conditions. The analysis determined what the potential future impacts of the project would be when the Wheatland General Plan and the proposed project are both fully built out. In addition,

the mitigation measures provided in the traffic impact analysis included improvements that would be necessary to mitigate the project's impacts at that time (See Mitigation Measure 4.3-1[a]). However, because the phasing of the proposed project is not yet known, the project site's zoning designations have not yet been established, and the project is not anticipated to be built out for another five to 10 years, it is not currently possible to determine the specific improvements that would be required to maintain acceptable levels of service within the project area.

It should also be noted that the traffic impact analysis did not include an examination of how existing traffic conditions within the City of Wheatland (conditions in 2011) would be impacted by implementation of the proposed project; however, it is necessary to include in the EIR a comparison of Existing Conditions versus Existing Plus Project Conditions. As discussed in Impact 4.3-1 below, existing traffic volumes within the Wheatland roadway network were compared to existing roadway capacities to determine the proposed project's estimated impact on the existing roadway network.

Table 4.3-11 identifies future LOS on study area roadway segments, assuming implementation of identified improvements associated with buildout of the Wheatland General Plan and development of the proposed project. As noted, several locations are projected to operate at an LOS that exceeds the minimum City of Wheatland LOS standard. Table 4.3-12 identifies Year 2025 intersection peak hour LOS with and without the proposed project. With one exception, these values assume implementation of the improvements noted in the General Plan Update EIR. The exception is the Wheatland Expressway / A Street intersection where an intersection was not contemplated within the General Plan. For the purposes of this analysis, maximum at-grade geometry (i.e., two through lanes in each direction, dual left turn lanes, and separate right turn lanes) has been assumed on each approach. AM and PM peak hour traffic volumes accompanying buildout of the adopted Wheatland General Plan and assuming implementation of the proposed project are shown in Figure 4.3-5.

The City's current Traffic Impact Fee is inadequate to mitigate the City-wide traffic impacts that would be generated by the proposed project. Therefore, the project applicant(s) would be required to fund and update to the City's Traffic Impact Fee Program, based on the impacts and associated roadway improvements needed to mitigate the project's future City-wide traffic impacts (See Mitigation Measure 4.3-1[b]). The purpose of the revised traffic impact fee is to mitigate, to the extent feasible, the proposed project's effects on the City street system and to provide revenue for the City to design and construct street and circulation system improvements to accommodate the additional traffic that would be generated by development of the proposed project.

**Table 4.3-11
Future Roadway LOS**

Location	Facility		Jurisdiction	Existing Wheatland GP			With Proposed Project		
	Class	Lanes		Daily Volume	LOS	v/c	Daily Volume	LOS	v/c
SR 65 from Interstate 80 to Washington Blvd	Freeway	4	Placer-Caltrans	136,850	F	1.90	137,525	F	1.91
SR 65 from Washington Blvd to Industrial Avenue	Freeway	4	Placer-Caltrans	118,925	F	1.65	120,375	F	1.67
Lincoln Bypass from Industrial Avenue to Nicolaus Road	Freeway	4	Placer-Caltrans	54,475	C	0.76	55,400	D	0.77
Lincoln Bypass from Nicolaus Road to Sheridan	Freeway	2	Placer-Caltrans	27,750	D		30,850	F	
Old SR 65 from Sheridan to Lincoln	Arterial - High	2	Placer	26,200	F	1.31	28,975	F	1.45
SR 65 from Bear River to South Ring Road connection	Urban	5	Wheatland-Cal	14,075	C	0.35	13,500	C	0.35
SR 65 from South Ring Road connection to Main Street	Urban	3	Wheatland-Cal	9,250	C	0.46	10,275	C	0.52
SR 65 from Main Street to 1 st Street	Urban	3	Wheatland-Cal	12,675	C	0.64	13,375	C	0.67
SR 65 from 1 st Street to North Ring Road	Urban	3	Wheatland-Cal	13,925	C	0.70	14,775	C	0.74
SR 65 from North Ring Road to Wheatland Expressway	Urban	3	Wheatland-Cal	27,775	F	1.39	27,800	F	1.39
SR 65 from Wheatland Expressway to South Beale Road	Rural Highway	2	Yuba-Caltrans	43,300 (3,900)	F	2.47	48,875 (4,400)	F	2.79
SR 65 from South Beale Road to Forty Mile Road	Freeway	4	Yuba-Caltrans	44,275 (3,975)	C (20.0)		49,325 (4,450)	C (22.3)	
SR 65 from Forty Mile Road to McGowan Parkway	Freeway	4	Yuba-Caltrans	54,150 (4,875)	C (24.8)		57,600 (5,175)	D (26.9)	

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Table 4.3-11 (continued) Future Roadway LOS									
Location	Facility		Jurisdiction	Existing Wheatland GP			With Proposed Project		
	Class	Lanes		Daily Volume	LOS	v/c	Daily Volume	LOS	v/c
SR 65 from McGowan Parkway to SR 70	Freeway	4	Yuba-Caltrans	49,675 (4,475)	C (22.5)		51,825 (4,675)	C (23.6)	
SR 70 from SR 65 to North Beale Road	Freeway	4	Yuba-Caltrans	64,875 (5,850)	D (32.0)		65,725 (5,925)	D (32.7)	
Wheatland Expressway from SR 65 to New Arterial	Expressway	2	Wheatland	48,600	F	2.44	63,150	F	3.17
Wheatland Expressway from New Arterial to Spenceville Road	Expressway	2	Wheatland	48,600	F	2.44	57,875	F	2.90
Wheatland Expressway from Spenceville Road north to SR 65	Expressway	2	Wheatland	37,525	F	1.88	51,100	F	2.56
Main Street from SR 65 to Spenceville Road	Urban	2	Wheatland	2,750	C	0.18	3,075	C	0.21
Fourth Street from SR 65 to Olive Street	Urban	2	Wheatland	3,075	C	0.21	3,700	C	0.25
Spenceville Road from Main Street to Ring Road	Urban	2	Wheatland	8,500	C	0.57	10,825	C	0.72
Spenceville Road from Ring Road to Wheatland Expressway	Urban	5	Wheatland	28,575	C	0.72	37,100	E	0.93
Spenceville Road from Wheatland Expressway to commercial access	Rural	2	Wheatland	7,075	D	0.40	41,800	F	2.39
Spenceville Road from commercial access to A Street	Rural	2	Wheatland	7,075	D	0.40	35,950	F	2.05
Spenceville Road from A Street to B Street	Rural	2	Wheatland	2,825	C	0.16	29,200	F	1.67
Spenceville Road from B Street to D Street	Rural	2	Wheatland	2,825	C	0.16	23,350	F	1.33
Spenceville Road from D Street to F Street	Rural	2	Wheatland	2,825	C	0.16	15,900	E	0.91
Spenceville Road from F Street to Camp Far West Road	Rural	2	Yuba	1,775	B	0.10	6,650	D	0.38
A Street from Ring Road to Wheatland Expressway	Urban	2	Wheatland	-	-		20,425	F	1.36
A Street from Wheatland Expressway to commercial access	Urban	2	Wheatland	-	-		38,750	F	2.58
A Street from commercial access to C Street	Urban	2	Wheatland	-	-		34,150	F	2.28

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**Table 4.3-11 (continued)
Future Roadway LOS**

Location	Facility		Jurisdiction	Existing Wheatland GP			With Proposed Project		
	Class	Lanes		Daily Volume	LOS	v/c	Daily Volume	LOS	v/c
A Street from C Street to Spenceville Road	Urban	2	Wheatland	-	-		10,000	C	0.67
C Street from A Street to C Street (eastern portion)	Urban	2	Wheatland	-	-		19,150	D	1.28
C Street from C Street (eastern portion) to E Street	Urban	2	Wheatland		-		13,050	D	0.87
E Street from C Street to F Street	Urban	2	Wheatland	-	-		4,325	C	0.29
B Street from Spenceville Road to E Street	Urban	2	Wheatland	-	-		11,275	C	0.75
E Street from Spenceville Road to B Street	Urban	2	Wheatland	-	-		7,000	C	0.47
D Street from Spenceville Road to F Street	Urban	2	Wheatland	-	-		10,425	C	0.70
F Street from Spenceville Road to E Street	Urban	2	Wheatland	-	-		7,775	C	0.52
Ring Road from SR 65 to Street A	Urban	4	Wheatland	14,575	C	0.49	23,850	C	0.80
Ring Road from Street A to Spenceville Road	Urban	4	Wheatland	19,525	C	0.65	19,700	C	0.66
Ring Road north of Spenceville Road	Urban	4	Wheatland	19,525	C	0.65	25,100	D	0.84
Jasper Lane from Spenceville Road to Ostrom Road	Rural	2	Yuba	4,275	C	0.24	3,150	C	0.18
Camp Far West Road from Spenceville Road to Blackford Road-McCourtney Road	Rural	2	Yuba	2,075	B	0.12	4,875	C	0.28
McCourtney Road from Yuba County line to Riosa Road	Rural	2	Placer	1,850	B	0.09	3,900	B	0.19
McCourtney Road from Riosa Road to Lincoln City limits	Rural	2	Placer	3,350	B	0.16	5,275	C	0.25
Wheatland Road from Forty Mile Road to Wheatland City Limits	Rural	2	Yuba	7,575	D	0.43	9,700	D	0.55
Forty Mile Road from Bear River to Wheatland Road	Rural	2	Yuba	18,100	F	1.03	18,400	F	1.05
Forty Mile Road from Wheatland Road to Plumas Arboga Road	Rural	2	Yuba	13,425	E	0.77	13,450	E	0.77
Plumas Arboga Road from SR 70 to Forty Mile Road	Rural	2	Yuba	10,025	D	0.57	10,350	D	0.59
McGowan Parkway from SR 65 to SR 70	Urban	2	Yuba	22,175	F	1.48	22,975	F	1.53
McGowan Parkway from SR 70 to Arboga Road	Urban	2	Yuba	12,175	D	0.81	12,750	D	0.85

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Table 4.3-11 (continued)									
Future Roadway LOS									
Location	Facility		Jurisdiction	Existing Wheatland GP			With Proposed Project		
	Class	Lanes		Daily Volume	LOS	v/c	Daily Volume	LOS	v/c
Marysville Bypass - Yuba River Parkway from SR 70 to North Beale Road	Urban	4	Yuba	18,100	B	0.60	18,300	B	0.61
Placer Parkway from SR 65 to Watt Avenue	Expressway	4	Placer	30,050	C	0.75	29,925	C	0.75
Placer Parkway from Watt Avenue to Pleasant Grove Road	Expressway	4	Placer	23,175	A	0.58	23,375	A	0.58
Baseline Road from Fiddymment Road to Watt Avenue	Arterial - High	6	Placer	47,975	C-D	0.80	48,025	D	0.80
Watt Avenue from Baseline Road to Sacramento County Line	Arterial - High	4	Placer	38,200	E	0.96	38,250	E	0.96
Walerga Road from Baseline Road to Sacramento County Line	Arterial - Mod	4	Placer	34,100	E	0.95	34,250	E	0.95
Fiddymment Road from Moore Road to Placer Parkway	Rural	2	Placer	31,500	F	1.26	32,825	F	1.31
Fiddymment Road from Placer Parkway to Roseville WRSP limits	Arterial- Mod	2	Placer	37,400	F	2.08	37,625	F	2.09
Notes: Bold indicates conditions in excess of minimum standards and highlighted values are significant impacts. v/c = volume-to-capacity ratio									
Source: KD Anderson & Associates, Inc. Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.									

**Table 4.3-12
Year 2025 Intersection LOS**

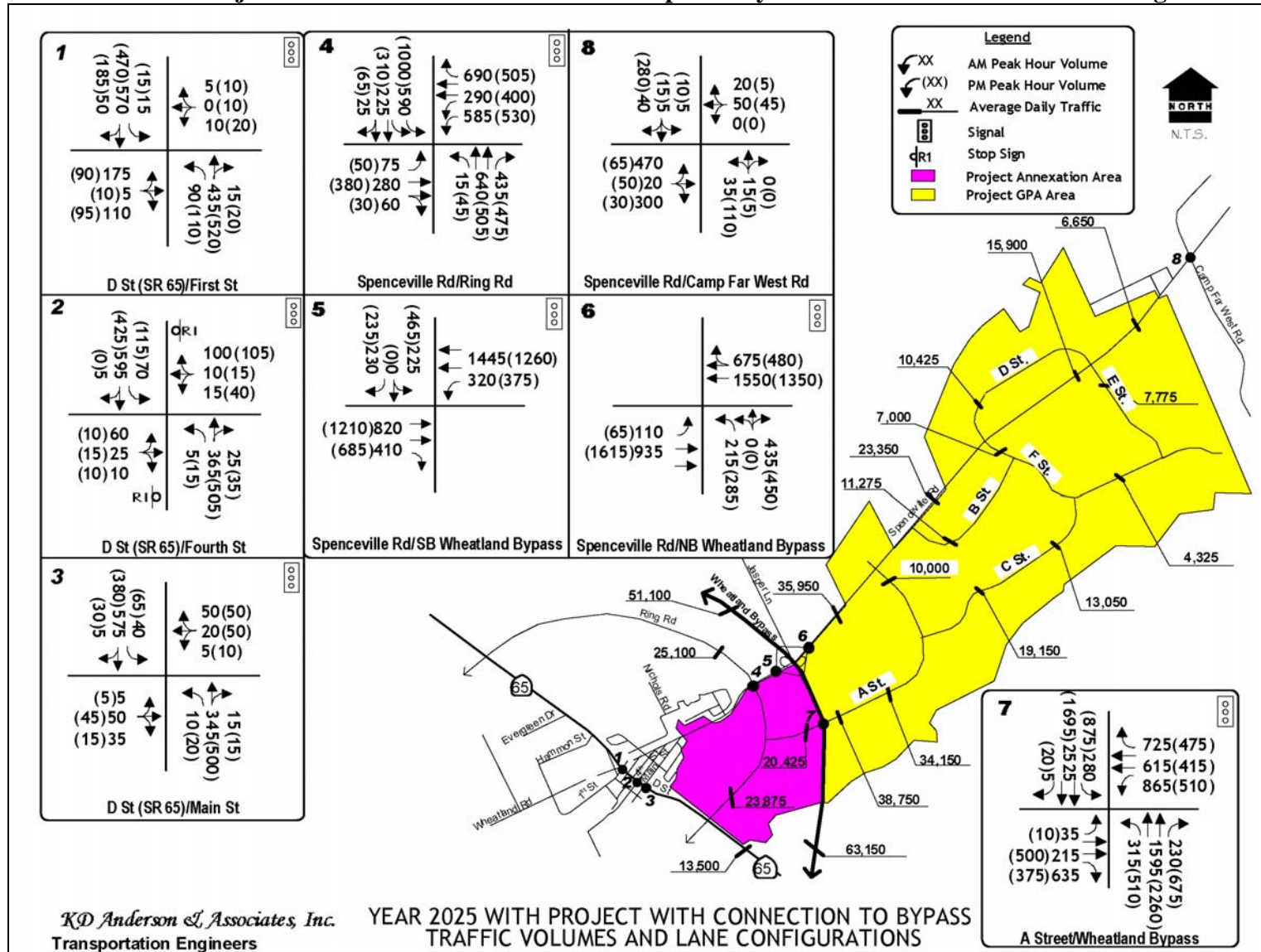
Location	Control	Year 2025 Under Wheatland GP					Year 2025 Plus Johnson Rancho and Hop Farm Annexation Project				
		AM Peak Hour		PM Peak Hour		Signal Warranted?	AM Peak Hour		PM Peak Hour		Signal Warranted?
		Average Delay (sec)	LOS	Average Delay (sec)	LOS		Average Delay (sec)	LOS	Average Delay (sec)	LOS	
SR 65 (D Street) / 1 st Street	Signal	20.8	C	21.8	C	N/A	22.3	C	20.8	C	N/A
SR 65 (D Street) / 4 th Street	EB / WB Stop					No					No
NB left turn		8.2	A	8.2	A		8.9	A	8.3	A	
SB left turn		8.9	B	8.9	B		9.4	A	9.2	A	
EB left+thru+right turn		38.8	E	39.7	E		99.6	F	41.7	E	
WB left+thru+right turn		22.5	C	31.3	E		20.4	C	56.1	F	
SR 65 (D Street) / Main Street	Signal	17.1	C	14.0	B	N/A	10.2	B	12.2	B	N/A
Spenceville Road / Ring Road	Signal	31.8	C	31.6	C	N/A	33.5	C	38.0	D	N/A
Spenceville Road / SB Wheatland Expressway	Signal	27.1	C	32.8	C	N/A	18.8	B	48.9	D	N/A
Spenceville Road / NB Wheatland Expressway	Signal	20.0	C	21.9	C	N/A	114.2	F	63.7	E	N/A
Wheatland Expressway / A Street	Signal	-	-	-	-	N/A	316.3	F	324.2	F	N/A
Spenceville Road / Camp Far West Road	NB / WB Stop					No					No
NB left+thru+right turn		9.8	A	9.7	A		230.6	F	15.6	C	
WB left+thru+right turn		10.0	B	9.8	A		71.7	F	14.3	B	

Note: **Bold** indicates conditions in excess of minimum standards and **highlighted** values are significant impacts.

Source: KD Anderson & Associates, Inc. Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.

Figure 4.3-5

Year 2025 Plus Project With Connection to Wheatland Expressway – Traffic Volumes and Lane Configurations



4.3-1 The addition of the approximately 224,062 new daily trips that would result with implementation of the Johnson Rancho and Hop Farm Annexation project would greatly exceed the capacity of the existing City of Wheatland roadway network.

According to the traffic impact analysis that was prepared for the proposed project, implementation of the project would generate a gross total of 224,062 daily trip ends. (It should be noted that, of that total, 172,541 trips would be generated by areas that are identified as Urban Reserve in the current Wheatland General Plan, and the balance would be generated by areas already planned for development under the current General Plan.)

The traffic impact analysis did not include an examination of how existing traffic conditions within the City of Wheatland (conditions in 2011) would be impacted by implementation of the proposed project; however, it is necessary to include in the EIR a comparison of Existing Conditions versus Existing Plus Project Conditions. Existing traffic volumes within the City of Wheatland are shown in Figures 4.3-1 and 4.3-2. For comparison purposes, as shown on Figure 4.3-2, at the time the traffic analysis was prepared, Spenceville Road carried 3,600 ADT between Main Street and Jasper Lane and 2,300 ADT between Jasper Lane and Camp Far West Road. Throughout the entire project area, the project would create 60 to 70 times the number of trips that are currently accommodated by Spenceville Road, which is one of the City's higher-capacity roadways.

Because the proposed project would add 224,062 daily trip ends to the existing roadway network, the project would overwhelm the network, creating levels of service that would exceed the City's thresholds for acceptable LOS on every road and at every intersection within the City. The existing roadway network would not be able to handle the trips that would be generated by the proposed project. Therefore, the project's impact would be *significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact, but not to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*. It should be noted that adequate mitigation for the Hop Farm property is to pay the appropriate Traffic Impact Fees, as the Hop Farm property was included in the Wheatland General Plan and buildout of that property is, therefore, covered by the existing Traffic Impact Fee Program.

Hop Farm

4.3-1(a) *The City shall include the following as a condition of approval on each tentative map application for any development within the Hop Farm area:*

"In conjunction with the submittal of each Tentative Map, the applicant(s) shall pay the City's Traffic Impact Fees in force at the time of application, as determined by the City Engineer."

Compliance with this condition shall be ensured by the City Engineer.

Johnson Rancho

4.3-1(b) *In conjunction with the submittal of the **first** zoning or tentative map application for any development within the Johnson Rancho portion of the project, the project applicant(s) shall provide funding to the City for the preparation of an updated Traffic and Circulation Master Plan for the Johnson Rancho and Hop Farm Annexation area. The updated Traffic and Circulation Master Plan shall evaluate and identify the potential traffic impacts and the future street and circulation system improvements necessary to mitigate said traffic impacts. These street and circulation system improvements could include, but would not be limited to, the following improvements:*

- *Widen SR 65 to four lanes in the area between the Northern Ring Road and the Wheatland;*
- *Construct the Ring Road crossing over the UPRR;*
- *Construct the Wheatland Expressway as a four-lane freeway facility;*
- *Widen Spenceville Road from planned four lanes to six lanes from Ring Road to Wheatland Expressway;*
- *Widen Spenceville Road to six lanes from Wheatland Expressway to B Street;*
- *Widen Spenceville Road to four lanes from B Street to F Street;*
- *Improve Spenceville Road to a two-lane standard arterial street from F Street to Camp Far West Road;*
- *Prior to approval of any Tentative Map(s) that would include the following roadways, the Tentative Map(s) shall include the following street sections:*
 - *A Street – indicate five lanes from Ring Road to C Street;*
 - *A Street – indicate three lanes from Spenceville Road to C Street;*
 - *C Street – indicate four lanes from A Street to C Street (eastern portion);*
 - *C Street – indicate three lanes from C Street (eastern portion) to F Street;*
- *Widen the planned Ring Road from a four-lane arterial to a five-lane divided arterial from Spenceville Road to McDevitt Road;*
- *Construct necessary improvements to the Spenceville Road / Ring Road intersection;*
- *Construct a partial cloverleaf interchange on Spenceville Road at the Wheatland Expressway;*
- *Construct an interim at-grade A Street / Wheatland Expressway intersection;*

- Construct a grade separation over the Wheatland Expressway at A Street; and
- Install traffic signals at the following five intersections: Spenceville Road / A Street; Spenceville Road / B Street; Spenceville Road / D Street; Spenceville Road / F Street; and A Street / C Street. Traffic signals shall be constructed when warranted, either as a condition of individual development proposals or by the City.

In addition, the project applicant(s) shall provide funding to the City for the preparation of an update to the City's Traffic Impact Fee Program, based on the findings of the updated Traffic and Circulation Master Plan.

*The updated Traffic and Circulation Master Plan and updated Traffic Impact Fee Program must be completed and adopted by the City Council prior to recording the final subdivision map for the project. The revised Traffic Impact Fee shall be collected from **each** project applicant within the Johnson Rancho portion of the project at the time of issuance of each building permit, unless otherwise provided by a Development Agreement entered into between the City and the project applicant(s).*

4.3-1(c)

***Any** project applicant within the Johnson Rancho annexation area shall be responsible for their project's fair share of all feasible physical improvements necessary and available to reduce the severity of the project's significant traffic-related impacts within the City of Wheatland and its Sphere of Influence, as determined in the updated Traffic and Circulation Master Plan, and consistent with the policies and exceptions set forth in the Wheatland General Plan. In cases where the project's fair share contribution is identified, the share will be based on the project's relative contribution to traffic growth.*

The project's contribution toward such improvements may take any or some combination of the following forms:

1. *Construction of roads and related facilities within and adjacent to the boundaries of the project, which may be subject to fee credits and or reimbursement, coordinated by the City, from other fee-paying development projects if available.*
2. *Construction of roads, road improvements or other transportation facilities outside of the project boundaries but within the incorporated Wheatland limits, subject in some instances to fee credit against other improvements necessitated by the project or future reimbursement, coordinated by the City, from other fee-paying development projects.*

3. *The payment of impact fees to the City of Wheatland in amounts that constitute the project's fair share contributions to the construction of transportation facilities to be built or improved within the City, consistent with the City's updated Traffic Impact Fee Program.*

4.3-2 Development of the proposed project would increase the volume of traffic over the UPRR until the Ring Road and Wheatland Expressway are constructed.

Development of the project would not, by itself, create new railroad crossings in Wheatland. Initially, the project would increase the volume of automobile traffic over existing crossings on Main Street and 4th Street, although with completion of the improvements identified in the Circulation Element of the Wheatland General Plan, the need to cross the UPRR at existing downtown at-grade crossings in order to reach SR 65 from the project site would be diminished. These improvements include grade-separated railroad crossings at the north and south ends of the City and the Wheatland Expressway, all of which are included in the City's Traffic Impact Fee Program. The Traffic Impact Fee Program also includes the cost of improving existing crossings.

The General Plan Circulation Element acknowledges the eventual need to close some existing UPRR crossings as new grade separations near SR 65 are available. The existing crossings at 2nd Street and 3rd Street are identified in the General Plan and are expected to be closed concurrent with the creation of a new at-grade crossing opposite McDevitt Drive. The at-grade crossing opposite McDevitt Drive is not part of the proposed project. Therefore, until the proposed Ring Road and Wheatland Expressway have been constructed, impacts related to increasing the volume of traffic traveling over the UPRR would be *significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact, but not to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*.

Hop Farm

4.3-2(a) *Implement Mitigation Measure 4.3-1(a).*

Johnson Rancho

4.3-2(b) *Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).*

4.3-3 Development of the proposed project would add traffic to the portion of SR 65 from Wheatland's northern Ring Road intersection to the Wheatland Expressway.

Project traffic represents a relatively small incremental increase in traffic on this portion of SR 65. The Wheatland General Plan notes that SR 65 will need to be widened to a four-lane section in the area north of the Ring Road to the Wheatland Expressway. The limits of this

improvement are linked to the location of the northern Wheatland Expressway connection to SR 65, which has not been determined. Without improvements, this roadway is expected to operate at LOS F with and without the project. Therefore, impacts to the portion of SR 65 from Wheatland's northern Ring Road intersection to the Wheatland Expressway would be *significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact, but not to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*.

Hop Farm

4.3-3(a) *Implement Mitigation Measure 4.3-1(a).*

Johnson Rancho

4.3-3(b) *Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).*

4.3-4 Development of the proposed project would add traffic to the Wheatland Expressway.

With and without implementation of the proposed project, the Wheatland Expressway would operate at LOS F. The Wheatland General Plan notes that four lanes will eventually be needed on the Wheatland Expressway although the City's current funding program addresses only the costs of a two-lane expressway. A four-lane freeway is needed to deliver LOS D conditions on the Wheatland Expressway. The extent to which the planned at-grade Wheatland Expressway / A Street intersection is consistent with the development of a four-lane freeway must be considered because the distance between the Spenceville Road interchange and the proposed at-grade intersection is roughly 2,000 feet. As a comparison, Caltrans' standards for interchange spacing are one mile in urban areas and two miles in rural locations. Impacts to the Wheatland Expressway would be *significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact, but not to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*.

Hop Farm

4.3-4(a) *Implement Mitigation Measure 4.3-1(a).*

Johnson Rancho

4.3-4(b) *Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).*

4.3-5 Development of the proposed project would increase the volume of traffic on Spenceville Road from the planned Ring Road intersection east over the Wheatland Expressway to Camp Far West Road.

Project traffic would result in LOS D (or worse) conditions on Spenceville Road from the Ring Road to Camp Far West Road if only the improvements addressed by the City's current fee program are in place. To achieve LOS C, Spenceville Road would need to be widened to provide a six-lane section from the Ring Road to B Street, a four-lane section from B Street to F Street, and a standard arterial street from F Street to Camp Far West Road. It should be noted that these improvements can be added to the City's Traffic Impact Fee program. However, because the impact does not occur without development of the Urban Reserve, these improvements could be addressed by an area of benefit that is specific to the proposed project. Therefore, impacts to Spenceville Road from the planned Ring Road intersection east over the Wheatland Expressway to Camp Far West Road would be *significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact, but not to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*.

Hop Farm

4.3-5(a) *Implement Mitigation Measure 4.3-1(a).*

Johnson Rancho

4.3-5(b) *Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).*

4.3-6 Development of the proposed project would result in LOS E or worse conditions on A Street and C Street within the proposed project area.

The traffic impact analysis assumed that future internal streets within the proposed project area would have two-lane roads installed by fronting developers. Traffic volumes at buildout on A and C Streets within the proposed project area are forecast to exceed the capacity of the two-lane street system; therefore, portions of the project street system would need to be widened to provide an acceptable LOS. It should be noted that these streets may be added to the City's Traffic Impact Fee program, and the extent to which an area of benefit is applicable would need to be determined. Impacts to future A Street and C Street within the proposed project site would be *significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact, but not to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*.

Hop Farm

4.3-6(a) *Implement Mitigation Measure 4.3-1(a).*

Johnson Rancho

4.3-6(b) *Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).*

4.3-7 Development of the proposed project would increase traffic at the Spenceville Road / NB Wheatland Expressway intersection, and the LOS at this intersection would drop to LOS E.

The Wheatland General Plan Update EIR assumed construction of a tight diamond interchange at the location of this intersection. A partial cloverleaf interchange would be needed to accommodate the project, with the elimination of the at-grade intersection at the Wheatland Expressway / A Street intersection. Figure 4.3-6 identifies the mitigated geometry needed at each location to achieve LOS C. It should be noted, however, that the requirement would be to mitigate only to LOS D, based on the City of Wheatland threshold for State highways and for locations within one-quarter mile of State highways.

This enhancement to the Spenceville Road / NB Wheatland Expressway interchange would add to the cost already included in the City of Wheatland traffic mitigation fee program for a diamond interchange and can be added to the City's Traffic Impact Fee program. Impacts to the Spenceville Road / NB Wheatland Expressway intersection would be *significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact, but not to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*.

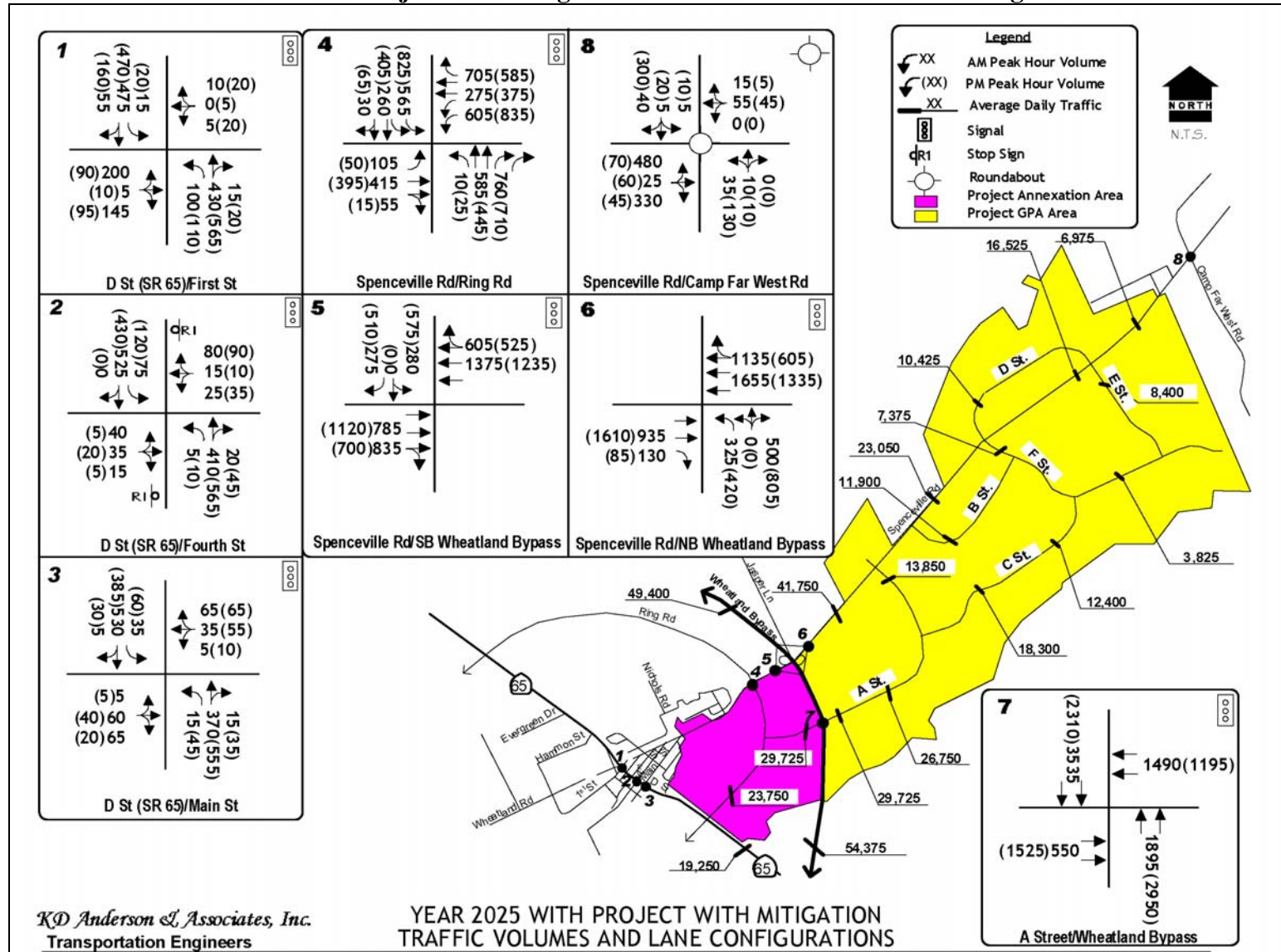
Hop Farm

4.3-7(a) *Implement Mitigation Measure 4.3-1(a).*

Johnson Rancho

4.3-7(b) *Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).*

Figure 4.3-6
Year 2025 Plus Project With Mitigation – Traffic Volumes and Lane Configurations



4.3-8 Development of the proposed project would result in LOS F conditions at the proposed Wheatland Expressway / A Street intersection.

Even with the maximum at-grade improvements that are consistent with a four-lane expressway (Wheatland Expressway) and with a four-lane A Street, the at-grade intersection is forecast to eventually operate at LOS F. As noted under the discussion of impacts to the Wheatland Expressway itself, a signalized intersection would eventually interfere with the ability of the roadway to operate as a freeway. Thus, while the plan area can initially be developed with at-grade access to the Wheatland Expressway, eventually the intersection would fail and changes would be needed.

While a second interchange on the Wheatland Expressway could be installed at this location, the distance between A Street and Spenceville Road would be roughly 2,000 feet, which would be too short of a distance to accommodate the system of on-ramps and off-ramps that are found on California freeways, and other options would have to be considered. A combined interchange that featured frontage roads linking ramps to the south at A Street and ramps to the north at Spenceville Road is an unconventional alternative. Alternatively, simply replacing the at-grade intersection with a grade separation without access to the expressway could be considered. However, either option would have a dramatic effect on the volume of traffic using roads throughout the Wheatland area.

Therefore, the introduction of a grade separation without access to Wheatland Expressway is the proposed mitigation measure because this can be accomplished without major changes to the planned circulation system. Because this mitigation would alter traffic volumes throughout the plan area, a new traffic model run was made and is the basis for the “mitigated” Wheatland area roadway and intersection LOS presented in Tables 4.3-13 and 4.3-14.

Impacts to the proposed Wheatland Expressway / A Street intersection would be *significant*.

It should be noted that the interim at-grade Wheatland Expressway / A Street intersection and the eventual grade separation can be included in the City’s Traffic Impact Fee Program.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact, but not to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*.

Hop Farm

4.3-8(a) *Implement Mitigation Measure 4.3-1(a).*

Johnson Rancho

4.3-8(b) *Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).*

**Table 4.3-13
Mitigated Roadway LOS**

Location	Facility		Jurisdiction	Mitigation		With Mitigation	
	Class	Lanes		Class	Lanes	Daily Volume	LOS
SR 65 from Interstate 80 to Washington Blvd	Freeway	4	Placer-Cal	Freeway	6	137,525	F
SR 65 from Washington Blvd to Industrial Avenue	Freeway	4	Placer-Cal	Freeway	6	120,375	F
Lincoln Bypass from Industrial Avenue to Nicolaus Road	Freeway	4	Lincoln-Cal	Freeway	4	55,400	D
Lincoln Bypass from Nicolaus Road to Sheridan	Freeway	2	Placer-Cal	Freeway	4	30,850	B
Old SR 65 from Sheridan to Lincoln	Arterial-High	2	Placer	Arterial-High	4	28,975	C
SR 65 from Bear River to South Ring Road connection	Urban	5	Wheatland-Cal	Urban	5	19,250	C
SR 65 from South Ring Road connection to Main Street	Urban	3	Wheatland-Cal	Urban	3	11,025	C
SR 65 from Main Street to 1 st Street	Urban	3	Wheatland-Cal	Urban	3	13,775	C
SR 65 from 1 st Street to North Ring Road	Urban	3	Wheatland-Cal	Urban	3	16,475	D
SR 65 from North Ring Road to Wheatland Expressway	Urban	3	Wheatland-Cal	Urban	5	29,250	C
SR 65 from Wheatland Expressway to South Beale Road	Rural Highway	2	Yuba-Cal	Freeway	4	48,875 (4,400)	C (22.2)
SR 65 from South Beale Road to Forty Mile Road	Freeway	4	Yuba-Cal	Freeway	4	49,325 (4,450)	C (22.3)
SR 65 from Forty Mile Road to McGowan Parkway	Freeway	4	Yuba-Cal	Freeway	6	57,600 (5,175)	B (17.3)
SR 65 from McGowan Parkway to SR 70	Freeway	4	Yuba-Cal	Freeway	4	51,825 (4,675)	C (23.6)
SR 70 from SR 65 to North Beale Road	Freeway	4	Yuba-Cal	Freeway	6	65,725 (5,925)	C (19.7)
Wheatland Expressway from SR 65 to New Arterial	Expressway	2	Wheatland	Freeway	4	54,375 (5,275)	C (25.0)

(Continued on next page)

Table 4.3-13 (continued)
Mitigated Roadway LOS

Location	Facility		Jurisdiction	Mitigation		With Mitigation	
	Class	Lanes		Class	Lanes	Daily Volume	LOS
Wheatland Expressway from New Arterial to Spenceville Road	Expressway	2	Wheatland	Freeway	4	54,375 (5,275)	C (25.0)
Wheatland Expressway from Spenceville Road north to SR 65	Expressway	2	Wheatland	Freeway	4	49,400 (4,585)	C (22.4)
Main Street from SR 65 to Spenceville Road	Urban	2	Wheatland	Urban	2	3,700	C
Fourth Street from SR 65 to Olive Street	Urban	2	Wheatland	Urban	2	3,6750	C
Spenceville Road from Main Street to Ring Road	Urban	2	Wheatland	Urban	2	10,625	C
Spenceville Road from Ring Road to Wheatland Expressway	Urban	5	Wheatland	Urban	7	39,950	C
Spenceville Road from Wheatland Expressway to commercial access	Rural	2	Wheatland	Urban	7	47,275	D
Spenceville Road from commercial access to A Street	Rural	2	Wheatland	Urban	7	41,750	C
Spenceville Road from A Street to B Street	Rural	2	Wheatland	Urban	5	29,775	C
Spenceville Road from B Street to D Street	Rural	2	Wheatland	Urban	4	23,050	C
Spenceville Road from D Street to F Street	Rural	2	Wheatland	Urban	4	16,525	C
Spenceville Road from F Street to Camp Far West Road	Rural	2	Yuba	Urban	2	6,650	C
A Street from Ring Road to Wheatland Expressway	Urban	2	Wheatland	Urban	5	29,725	C
A Street from Wheatland Expressway to commercial access	Urban	2	Wheatland	Urban	5	29,725	C
A Street from commercial access to C Street	Urban	2	Wheatland	Urban	5	26,750	C
A Street from C Street to Spenceville Road	Urban	2	Wheatland	Urban	3	13,850	C
C Street from A Street to Commercial limits	Urban	2	Wheatland	Urban	4	18,300	C
C Street from Commercial limits to E Street	Urban	2	Wheatland	Urban	3	12,400	C
E Street from C Street to F Street	Urban	2	Wheatland	Urban	2	3,825	C
B Street from Spenceville Road to E Street	Urban	2	Wheatland	Urban	2	11,900	C
E Street from Spenceville Road to B Street	Urban	2	Wheatland	Urban	2	7,375	C
D Street from Spenceville Road to F Street	Urban	2	Wheatland	Urban	2	10,425	C

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Table 4.3-13 (continued)
Mitigated Roadway LOS

Location	Facility		Jurisdiction	Mitigation		With Mitigation	
	Class	Lanes		Class	Lanes	Daily Volume	LOS
F Street from Spenceville Road to E Street	Urban	2	Wheatland	Urban	2	8,400	C
Ring Road from SR 65 to Street A	Urban	4	Wheatland	Urban	4	23,700	C
Ring Road from Street A to Spenceville Road	Urban	4	Wheatland	19,525	5	25,650	C
Ring Road north of Spenceville Road	Urban	4	Wheatland	19,525	5	24,725	C
Jasper Lane from Spenceville Road to Ostrom Road	Rural	2	Yuba	Rural	2	3,050	C
Camp Far West Road from Spenceville Rd to Blackford Road– McCourtney Road	Rural	2	Yuba	Rural	2	4,875	C
McCourtney Road from Yuba County line to Riosa Road	Rural	2	Placer	Rural	2	3,900	B
McCourtney Road from Riosa Road to Lincoln City limits	Rural	2	Placer	Rural	2	5,275	C
Wheatland Road from Forty Mile Road to Wheatland City limits	Rural	2	Yuba	Urban	2	9,700	B
Forty Mile Road from Bear River to Wheatland Road	Rural	2	Yuba	Rural	2	18,400	F
Forty Mile Road from Wheatland Road to Plumas Arboga Road	Rural	2	Yuba	Rural	2	13,450	E
Plumas Arboga Road from SR 70 to Forty Mile Road	Rural	2	Yuba	Rural	2	10,350	D
McGowan Parkway from SR 65 to SR 70	Urban	2	Yuba	Urban	4	22,975	C
McGowan Parkway from SR 70 to Arboga Road	Urban	2	Yuba	Urban	2	12,750	D
Marysville Bypass – Yuba River Parkway from SR 70 to North Beale Road	Urban	4	Yuba	Urban	4	18,300	B
Placer Parkway from SR 65 to Watt Avenue	Expressway	4	Placer	Expressway	4	29,925	C
Placer Parkway from Watt Avenue to Pleasant Grove Road	Expressway	4	Placer	Expressway	4	23,375	A
Baseline Road from Fiddymment Road to Watt Avenue	Arterial – High	6	Placer	Arterial-high	6	48,025	D
Watt Avenue from Baseline Road to Sacramento County line	Arterial – High	4	Placer	Arterial-high	4	38,250	E
Walerga Road from Baseline Road to Sacramento County line	Arterial – Mod	4	Placer	Arterial-mod	4	34,250	E
Fiddymment Road from Moore Road to Placer Parkway	Arterial–Mod	6	Placer	Arterial-mod	6	32,825	B
Fiddymment Road from Placer Parkway to Roseville WRSP limits	Rural	2	Placer	Rural	2	37,625	F

Note: **Bold** indicates conditions in excess of minimum standards and **highlighted** values are significant impacts.

Source: KD Anderson & Associates, Inc. Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.

**Table 4.3-14
Mitigated Year 2025 Intersection LOS**

Location	Control	Mitigation	Year 2025 Plus Johnson Crossing GPA				Signal Warranted?
			AM Peak Hour		PM Peak Hour		
			Average Delay (sec)	LOS	Average Delay (sec)	LOS	
SR 65 (D Street) / 1 st Street	Signal	None	24.1	C	20.8	C	N/A
SR 65 (D Street) / 4 th Street	EB / WB Stop	None					No
NB left turn			8.6	A	8.3	A	
SB left turn			8.6	A	9.5	A	
EB left+thru+right turn			65.2	F	45.5	E	
WB left+thru+right turn			29.3	C	51.1	F	
SR 65 (D Street) / Main Street	Signal	None	12.3	B	12.2	B	N/A
Spenceville Road / Ring Road	Signal	Add second NB right turn lane	33.2	C	33.7	C	N/A
Spenceville Road / SB Wheatland Expressway	Signal	Install L-9 interchange	11.5	B	18.8	B	N/A
Spenceville Road / NB Wheatland Expressway	Signal	Install L-9 interchange	33.4	C	22.8	C	N/A
Wheatland Expressway / A Street	Signal	Eliminate at-grade intersection	-	-	-	-	N/A
Spenceville Road / Camp Far West Road	Roundabout	Install roundabout	11.3	B	4.2	A	Yes
Note: Bold indicates conditions in excess of minimum standards and highlighted values are significant impacts.							
Source: KD Anderson & Associates, Inc. Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project, September 28, 2010.							

4.3-9 Development of the proposed project would result in various intersections in the area of the proposed project eventually carrying traffic volumes that would satisfy warrants for signalization.

While a full traffic signal warrant study has not been conducted, the locations that would likely satisfy warrants based on daily traffic volume can be identified. In addition to the locations addressed under a peak hour basis, under the mitigated conditions (i.e., with A Street grade separation) the following five intersections would eventually warrant signals:

- Spenceville Road / A Street;
- Spenceville Road / B Street;
- Spenceville Road / D Street;
- Spenceville Road / F Street; and
- A Street / C Street.

Other locations where local streets intersect major routes could also warrant signalization, depending on the eventual plans for access to specific parcels. Impacts to the above five intersections that would satisfy warrants for signalization would be *significant*.

It should be noted that traffic signals at public street intersections in Wheatland are addressed by the City's Traffic Impact Fee program, and these signals may be added to the program.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact, but not to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*.

Hop Farm

4.3-9(a) *Implement Mitigation Measure 4.3-1(a).*

Johnson Rancho

4.3-9(b) *Implement Mitigation Measures 4.3-1(b) and 4.3-1(c).*

4.3-10 Development of the proposed project would generate new pedestrian and bicycle traffic within the project area and on existing City of Wheatland streets.

As the project area is developed, new pedestrian and bicycle activity would occur in the annexation area and between the site and existing Wheatland schools and shopping areas. Development of the proposed project would create the need for safe pedestrian routes along major and minor streets, as well as adequate bicycle facilities. Because current Wheatland design standards call for the creation of sidewalks along new streets, as well as bicycle lanes on arterial streets, a Bicycle and Pedestrian Plan for the annexation area would be required to be prepared to guide implementation of current City policies. The plan would note the

location of current termini for facilities under the current General Plan and would note the locations of extensions into the plan area. The location of pedestrian and bicycle connections across the creek to link northern and southern annexations areas would also be included.

With development of a six-lane Spenceville Road, the area near the Wheatland Expressway may not be suitable for Class II bicycle lanes. Development of separated bicycle paths (Class I) would be needed along Spenceville Road from the Ring Road intersection to the A Street intersection. Impacts related to new pedestrian and bicycle traffic within the project area and on existing City of Wheatland streets would be *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.3-10 *In conjunction with the submittal of the **first** zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall prepare a Bicycle and Pedestrian Plan for the annexation area, and identified facilities shall be constructed by development in the plan area. The plan shall include Class I bicycle paths along Spenceville Road. Prior to approval of the first Tentative Map within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall fund the preparation and implementation of the Bicycle and Pedestrian Master Plan. All subsequent development applications in the project area shall implement and demonstrate consistency with this plan.*

4.3-11 Development of the proposed project could result in the demand for expanded transit services.

Development within the plan area would incrementally create demand for transit services in the annexation area, as well as in the Wheatland area as a whole. Some area residents are likely to be seniors or other transit-dependent individuals who would be candidates for the services provided by Yuba-Sutter Transit. Given the size of the project, the proposed project's development would likely create the need to extend the Wheatland Route easterly into the plan area. The project's infrastructure plan would, therefore, need to include facilities that accommodate future transit (i.e., bus pullouts/shelters on arterial streets).

Funding for expanded transit service in Wheatland is limited. The 2008 Transit Plan indicates that the current service has an annual cost of roughly \$27,000 and funding for the increased cost of extending service to the annexation area would need to be identified. The extent to which development in the project area would need to subsidize the operating costs of future transit service is speculative at this time and would need to be considered as the area develops. Impacts related to demand for expanded transit services would be *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.3-11 *In conjunction with the submittal of the **first** zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall consult Yuba-Sutter Transit regarding transit stop planning for both the Johnson Rancho and Hop Farm properties. The Stage One Development Plans for the Hop Farm and Johnson Rancho properties shall discuss and illustrate the location of planned transit stops for each development, for review and approval by the City Engineer and Yuba-Sutter Transit.*

4.3-12 Development of the proposed project would add traffic to roadways in the extended region (i.e., Yuba County and Placer County), potentially increasing the LOS on these roadways to a level that exceeds existing thresholds.

Without improvements, the future portion of SR 65 from the Wheatland Expressway connection to the South Beale Road intersection (within Yuba County) is expected to operate at LOS F with and without the project. While the layout of the Wheatland Expressway is uncertain, if the connection to SR 65 occurs in the two-lane section south of the South Beale Road intersection, then four lanes are needed between South Beale Road and the connection in order to improve the operation of the road. A four-lane facility would yield the LOS D standard.

In addition, the traffic impact analysis determined that implementation of the proposed project would add vehicle trips to roadways located within Yuba County, such as Forty Mile Road, and McGowan Parkway, and roadways located within Placer County, such as SR 65, the Lincoln Bypass, Baseline Road, Watt Avenue, Walerga Road, and Fiddymont Road. Some of the roadways in the extended region would operate at LOS E or worse, which would exceed significance thresholds.

Overall, impacts to roadways in the extended region (i.e., Yuba County and Placer County) would be *significant*.

Mitigation Measure(s)

The following mitigation measure is consistent with the goals and policies in regard to regional transportation planning in the Yuba County General Plan Update, and implementation would reduce the above impact, but not to a level that is less-than-significant. Because these roadways are outside the City of Wheatland's jurisdiction, any existing regional program for the construction of traffic improvements to mitigate the impacts would also be outside the City's jurisdiction. Moreover, such a program may not currently exist where the improvements are needed. Therefore, impacts related to development of the proposed project adding traffic to roadways in the extended region would remain *significant and unavoidable*.

- 4.3-12 *At the time of submittal of the **first** tentative map application within the Johnson Rancho and Hop Farm Annexation area, if the City of Wheatland is a participant in any new Yuba County and/or Placer County regional traffic fee program(s) and the new fee program(s) include the improvements identified in the Traffic and Circulation Master Plan as necessary to mitigate the significant impacts to roadways in the region(s) generated by the project, the project applicant(s) shall pay the applicable fees toward the improvements prior to final map approval.*

Endnotes

¹ KD Anderson & Associates, Inc. *Traffic Impact Analysis for the Johnson Rancho and Hop Farm Annexation Project*. January 28, 2011.

² LSC Transportation Consultants, Inc. *Yuba-Sutter Transit Short-Range Transit Plan*. February 4, 2003.

³ KD Anderson & Associates, Inc. *Traffic Analysis Report for Improvements to SR 65 from Main Street to Olive Street*. March 14, 2002.

4.4

AIR QUALITY AND CLIMATE CHANGE

INTRODUCTION

The Air Quality and Climate Change chapter of the EIR describes the impacts of the proposed project on local and regional air quality, impacts to sensitive receptors on or adjacent to the project site, and impacts related to greenhouse gas (GHG) emissions and global climate change. The chapter was prepared using methodologies and assumptions recommended within the guidelines of the Feather River Air Quality Management District (FRAQMD). In keeping with these guidelines, the chapter describes existing air quality, construction-related impacts, direct and indirect emissions associated with the project, the impacts of these emissions on both the local and regional scale, and mitigation measures warranted to reduce or eliminate any identified significant impacts.

The chapter is based on the *City of Wheatland General Plan*,¹ the *City of Wheatland General Plan EIR*,² and URBEMIS-2007 (Version 9.2.4) modeling conducted by Raney Planning & Management, Inc. (See Appendix E).

EXISTING ENVIRONMENTAL SETTING

The project site is located in the northern Sacramento Valley, a broad, flat valley bounded by the Coastal Ranges to the west and the Sierra Nevada to the east. The entire air basin is approximately 200 miles long in a north-south direction, and averages approximately 50 miles in width, with a maximum width of 150 miles.

The climate of the project area is characterized by hot, dry summers and cool, wet winters. During the summer months from a mid-April to mid-October, significant precipitation is unlikely and temperatures range from a daily maximum approaching 100 degrees Fahrenheit (F) to evening lows in high 50s and low 60s. Winter conditions are characterized by occasional rainstorms interspersed with stagnant and sometimes foggy weather. Winter daytime temperatures average in the low 50s and nighttime temperatures average in the upper 30s.

The Wheatland area prevailing wind direction is primarily up- and down-valley due to the channeling effect of the mountains on either side of the valley. During the summer months surface air movement is from the south, particularly during the afternoon hours. During the winter months wind direction is more variable. Prevailing wind patterns control the rate of dispersion of local pollutant emissions. An inversion is a change of atmospheric property with altitude creating a “lid” of air. Yuba County experiences two types of inversions that affect the air quality. The first type of inversion layer contributes to photochemical smog problems by confining pollution to a shallow layer near the ground. This inversion occurs in the summer, when sinking air forms a “lid” over the region. The second type of inversion occurs when the air near the ground cools while the air aloft remains warm. These inversions occur during winter

nights and can cause localized air pollution “hot spots” near emission sources because of poor dispersion.

Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. The federal standards are divided into primary standards, which are designed to protect the public health, and secondary standards, which are designed to protect the public welfare. California standards for air quality tend to be more stringent than the federal standards.

The ambient air quality standards represent the safest levels for each contaminant, according to the various thresholds of each pollutant for causing adverse health effects. The standards cover what are called “criteria” pollutants. The federal and State ambient standards were developed independently with differing purposes and methods. As a result, the federal and State standards differ in some cases. In general, the State of California standards are more stringent, particularly for ozone and particulate matter (PM₁₀ and PM_{2.5}). Table 4.4-1 identifies the major pollutants, characteristics, health effects, and typical sources. The federal and State ambient air quality standards are summarized in Table 4.4-2.

The State and federal ambient air quality standards cover a wide variety of pollutants. Only a few of these pollutants are problems in Yuba County either due to the strength of the emission or the climate of the region. The Federal Clean Air Act (FCAA) required States to classify basins (or portions thereof) as either “attainment,” “non-attainment,” or “unclassified” based on whether or not the National Ambient Air Quality Standards (NAAQS) had been achieved, with respect to the criteria air pollutants and applicable standards, and to prepare air quality plans containing emission reduction strategies for those areas designated as “non-attainment.” An “attainment” designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A “non-attainment” designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An “unclassified” designation signifies that the data does not support either an attainment or a non-attainment status. The California Clean Air Act (CCAA) divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

Under the federal Clean Air Act, the FRAQMD has been designated attainment or unclassified for all national ambient air quality standards, other than the national PM_{2.5} standard. Under the State system, the FRAQMD is designated nonattainment for the California standards for ozone and PM₁₀, and is designated attainment or unclassified for all other pollutants.

**Table 4.4-1
Major Criteria Pollutants**

Pollutant	Characteristics	Health Effects	Examples of Sources
Ozone	A strong smelling, pale blue, reactive toxic chemical gas consisting of three oxygen atoms. Ozone exists in the upper atmosphere ozone layer (stratospheric ozone) as well as at the Earth's surface in the troposphere (ground-level ozone). Ozone in the troposphere causes numerous adverse health effects, is a criteria air pollutant, and is a major component of smog.	<ul style="list-style-type: none"> Breathing difficulties Lung tissue damage Damage to rubber and some plastics Eye and skin irritation 	Formed when reactive organic gases (ROG) and nitrogen oxide gases (NO _x) react in the presence of sunlight. ROG and NO _x sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil), solvents, petroleum processing and storage, and pesticides.
Carbon Monoxide	A colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels. Over 80 percent of the carbon monoxide emitted in urban areas is contributed by motor vehicles.	<ul style="list-style-type: none"> Chest pain in heart patients Headaches and nausea Reduced mental alertness High concentration can result in death 	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.
Nitrogen Dioxide	Nitrogen dioxide is typically created during combustion processes, and is a major contributor to smog formation and acid deposition.	<ul style="list-style-type: none"> Lung irritation and damage Reacts in the atmosphere to form ozone and acid rain 	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.
Sulfur Dioxide	A strong smelling, colorless gas that is formed by the combustion of fossil fuels.	<ul style="list-style-type: none"> Increased lung disease and breathing problems for asthmatics Reacts in the atmosphere to form acid rain 	Coal or oil burning power plants and industries, refineries, and diesel engines.
Particulate Matter (PM ₁₀ and PM _{2.5})	Any material, except pure water, that exists in the solid or liquid state in the atmosphere. The size of particulate matter can vary from coarse, wind-blown dust particles to fine particle combustion products.	<ul style="list-style-type: none"> Increased respiratory disease Lung damage Premature death Reduced visibility 	Fuel combustion in motor vehicles, equipment and industrial sources, residential and agricultural burning. Particulate matter is also formed from reaction of other pollutants (acid rain, NO _x , SO _x , organics).

Source: California Air Resources Board, <http://www.arb.ca.gov/html/gloss.htm>, accessed August 2010.

Table 4.4-2 Ambient Air Quality Standards				
Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary	Secondary
Ozone	1 Hour	0.09 ppm	-	Same as primary
	8 Hour	0.07 ppm	0.075 ppm	
Carbon Monoxide	8 Hour	9 ppm	9 ppm	None
	1 Hour	20 ppm	35 ppm	
Nitrogen Dioxide	Annual Mean	0.03 ppm	53 ppb	Same as primary
	1 Hour	0.18 ppm	100 ppb	None
Sulfur Dioxide	24 Hour	0.04 ppm	-	-
	3 Hour	-	-	0.50 ppm
	1 Hour	0.25 ppm	75 ppb	-
Respirable Particulate Matter (PM₁₀)	Annual Mean	20 ug/m ³	-	Same as primary
	24 Hour	50 ug/m ³	150 ug/m ³	
Fine Particulate Matter (PM_{2.5})	Annual Mean	12 ug/m ³	15 ug/m ³	Same as primary
	24 Hour	-	35 ug/m ³	
Sulfates	24 Hour	25 ug/m ³	N/A	N/A
Lead	30 Day Average	1.5 ug/m ³	-	-
	Calendar Quarter	-	1.5 ug/m ³	Same as primary
Hydrogen Sulfide	1 Hour	0.03 ppm	N/A	N/A
Vinyl Chloride	24 Hour	0.01 ppm	N/A	N/A
ppm = parts per million ppb = parts per billion ug/m ³ = micrograms per cubic meter <i>Source: California Air Resources Board, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed February 23, 2011.</i>				

The following is a discussion of important air pollutants within the NSVAB.

Ozone

Ozone is produced by chemical reactions involving nitrogen oxides (NO_x) and reactive organic gases (ROG) that are triggered by sunlight. Nitrogen oxides are created during combustion of fuels, ROG are emitted during combustion and evaporation of organic solvents. Because ozone is not directly emitted to the atmosphere, but is formed as a result of photochemical reactions, ozone is considered a secondary pollutant. In the SVAB, ozone is a seasonal problem occurring roughly from April through October.

Ozone is a strong irritant that attacks the respiratory system, leading to the damage of lung tissue. Asthma, bronchitis and other respiratory ailments, as well as cardiovascular diseases, are aggravated by exposure to ozone. A healthy person exposed to high concentrations of ozone may become nauseated or dizzy, may develop a headache or cough, or may experience a burning sensation in the chest. Research has shown that exposure to ozone damages the alveoli (the

individual air sacs in the lung where the exchange of oxygen and carbon dioxide between the air and blood takes place). In addition, research has shown that ozone damages vegetation.

Particulate Matter

Suspended particulate matter (PM) is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition and can be made up of many different materials such as metals, soot, soil, and dust. "Respirable" PM consists of particles less than 10 microns in diameter, and is defined as "suspended particulate matter" or PM₁₀. Particles between 2.5 and 10 microns in diameter arise primarily from natural processes, such as wind-blown dust or soil.

Fine particles are less than 2.5 microns in diameter (PM_{2.5}). PM_{2.5}, by definition, is included in PM₁₀. Fine particles are produced mostly from combustion or burning activities. Fuel burned in cars and trucks, power plants, factories, fireplaces, and wood stoves produces fine particles.

The level of fine particulate matter in the air is a public health concern because the fine particles can bypass the body's natural filtration system more easily than larger particles, and can lodge deep in the lungs. The health effects vary depending on a variety of factors, including the type and size of particles. Research has demonstrated a correlation between high PM concentrations and increased mortality rates. Elevated PM concentrations can also aggravate chronic respiratory illnesses such as bronchitis and asthma.

Carbon Monoxide

Carbon monoxide (CO) is a local pollutant in that high concentrations are only found very near the source. The major source of carbon monoxide, which is a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. The health effects of CO are related to the affinity of CO for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulties, reduced lung capacity, and impaired mental abilities.

Concentrations of CO are highly seasonal, with the highest concentrations occurring in the winter. This is partly due to the fact that automobiles create more CO in colder weather and partly due to the very stable atmospheric conditions that exist on cold winter evenings when winds are calm. Concentrations of CO are typically highest during stagnant air periods within the period of November through January.

Nitrogen Oxide Gases

Nitrogen dioxide is an NO_x gas that is produced from burning fuels, including gasoline and coal. Nitrogen oxides react with ROG (found in paints and solvents) to form smog, which can harm health, damage the environment, and cause poor visibility. Additionally, NO_x emissions are a major component of acid rain. Health effects related to NO_x include lung irritation and lung damage.

Sulfur Dioxide

Sulfur dioxide (SO₂) is a strong smelling colorless gas that is formed by the combustion of fossil fuels. SO₂ is produced from burning coal and oil, power plants and industries, refineries, and diesel engines. Additionally, SO₂ emissions react in the atmosphere and form acid rain. Health effects related to SO₂ include increases in lung disease and breathing problems for asthmatics.

Toxic Air Contaminants

Toxic air contaminants (TACs) are not considered criteria pollutants in that the federal and California Clean Air Acts do not address them specifically through the setting of National or State Ambient Air Quality Standards. Instead, the U.S. EPA and ARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with rules developed by air districts, they establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), as required by the federal Clean Air Act Amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

At the State level, the ARB has authority for the regulation of emissions from motor vehicles, fuels, and consumer products. Most recently, Diesel-exhaust particulate matter (DPM) was added to the ARB list of TACs. DPM is the primary TAC of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. The ARB has made the reduction of the public's exposure to DPM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (ARB 2005).

Attainment Status and Regional Air Quality Plans

Under the CCAA, the ARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with

extreme nonattainment being the most severe of the classifications. An “unclassified” designation signifies that the data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO₂ as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For SO₂, areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified,” or “better than national standards.” However, the ARB terminology of attainment, nonattainment, and unclassified is more frequently used. The sub-categories for nonattainment status; serious, severe, and extreme; are also used by U.S. EPA. In 1991, new nonattainment designations were assigned to areas that had previously been classified as Group I, II, or III for PM₁₀ based on the likelihood that they would violate national PM₁₀ standards. All other areas are designated “unclassified.” The FRAQMD’s current ambient air quality attainment designations are summarized in Table 4.4-3.

Table 4.4-3 FRAQMD Attainment Designation Status			
Pollutant	Averaging Time	State Standards	National Standards
Ozone	1-Hour 8-Hour	Nonattainment- Transitional Nonattainment- Transitional	N/A Unclassified/Attainment
Carbon Monoxide	1-Hour 8-Hour	Unclassified Unclassified	Unclassified/Attainment Unclassified/Attainment
Nitrogen Dioxide	1-Hour Annual	Attainment N/A	N/A Unclassified/Attainment
Sulfur Dioxide	1-Hour 24-Hour Annual	Attainment Attainment N/A	N/A Unclassified Unclassified
Coarse Particulate Matter (PM ₁₀)	24-Hour Annual Average	Nonattainment Nonattainment	Unclassified N/A
Fine Particulate Matter (PM _{2.5})	24-Hour Annual Average	Attainment Attainment	Nonattainment Nonattainment
Sulfates	24-Hour	Attainment	N/A
Lead	30-Day Average Calendar Quarter	Attainment N/A	N/A N/A
Hydrogen Sulfide	1-Hour	Unclassified	N/A
Visibility Reducing Particles	8-Hour	Unclassified	N/A
Notes: N/A = not applicable (State or federal standard does not exist for the combination of pollutant and averaging time). Unclassified areas are those for which air monitoring has not been conducted but which are assumed to be in attainment.			
Source: Feather River Air Quality Management District, <i>Indirect Source Review Guidelines: A Technical Guide to Assess the Air Quality Impact of Land Use Projects Under the California Environmental Quality Act</i> , June 7, 2010.			

Local Air Quality Monitoring

The federal Clean Air Act and the California Clean Air Act require all areas of California to be classified as attainment, non-attainment, or unclassified as to their status with regard to the national and/or State Ambient Air Quality Standards. The nearest NSVAB multi-pollutant monitoring site where concentrations of ozone, PM₁₀, PM_{2.5}, CO, and nitrogen dioxide (NO₂) are measured is located in Yuba City. Table 4.4-4 shows historical occurrences of pollutant levels exceeding the State/federal ambient air quality standards for the three-year period of 2004 to 2006. It should be noted that information for 2007-2010 is not available via CARB. The number of days that each standard was exceeded is shown below.

Table 4.4-4					
Air Quality Data Summary for Yuba County (2004-2006)					
Pollutant	Standard		Days Exceeding Standard During:		
	State	Federal	2004	2005	2006
Ozone	1-Hour	—	2	0	1
	—	1-Hour	0	0	0
	—	8-Hour	0	0	0
Carbon Monoxide	8-Hour	8-Hour	0	0	0
	1-Hour	—	0	0	0
Nitrogen Dioxide	1-Hour	—	0	0	0
PM ₁₀	24-Hour	—	1	5	4
	—	24-Hour	0	0	0
PM _{2.5}	—	24-Hour	0	0	0
Source: Air Resources Board, Aerometric Data Analysis and Management (ADAM), http://www.arb.ca.gov/adam/welcome.html , accessed August 2010.					

As depicted, the State (1-hour) and federal (1-hour/8-hour) ozone standards were exceeded on numerous occasions from 2004 to 2006. The standards for suspended particulates (i.e., PM₁₀ and PM_{2.5}) were also exceeded on various occasions from 2004 to 2006 (CARB 2009[b]).

Sensitive Receptors

The NSVAB defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. The land uses include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. Sensitive land uses near the project site include residential neighborhoods northwest of the project site.

Global Climate Change

Introduction

GHGs are gases that trap heat in the atmosphere. These gases are emitted by both natural processes and human activities. The accumulation of GHG in the atmosphere regulates the earth's temperature. Without natural GHG, scientists estimate that the Earth's surface would be

approximately 61 degrees Fahrenheit cooler.³ However, scientists also believe that the combustion of fossil fuels (coal, petroleum, natural gas, etc.) for human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The increase in atmospheric concentrations of GHG has resulted in more heat being held within the atmosphere, which is the accepted explanation for Global Climate Change (GCC).

Global Warming Potential

Global Warming Potentials (GWP) are one type of simplified index (based upon radiative properties) that can be used to estimate the potential future impacts of emissions of various gases. According to the U.S. EPA, the global warming potential of a gas, or aerosol, to trap heat in the atmosphere is the “cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas.” GWP is based on a number of factors, including the heat-absorbing ability of each gas relative to that of carbon dioxide, as well as the decay rate of each gas relative to that of carbon dioxide. Common GHG components include water vapor, carbon dioxide, methane, nitrous dioxide, chlorofluorocarbons, hydro-fluorocarbons, perfluorocarbons, sulfur hexafluoride, and ozone.

Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere water vapor maintains a climate necessary for life. Changes in the concentration of water vapor are primarily considered to be a result of climate feedback related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher, leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor; this is referred to as a “positive feedback loop.”

Water vapor does not have any known health effects; however, when some pollutants come in contact with water vapor, the pollutants can dissolve and the water vapor can then act as a pollutant-carrying agent. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas), from sea ice and snow, and transpiration from plant leaves.

Carbon Dioxide

Carbon dioxide (CO₂) is an odorless and colorless GHG that is emitted from natural and manmade sources. Natural sources of CO₂ include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include the burning of coal, oil, natural gas, and

wood. Outdoor levels of CO₂ are not high enough to result in negative health effects. CO₂ is naturally removed from the air by photosynthesis, dissolution into water, transfer to soils and ice caps, and chemical weathering of carbonate rocks.

Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. For example, prior to the industrial revolution, CO₂ concentrations were fairly stable at 280 ppm. Today, CO₂ concentrations are around 370 ppm, which is an increase of more than 30 percent. Left unchecked, the concentration of CO₂ in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources.

Methane

Methane (CH₄) is an extremely effective absorber of radiation, though the atmospheric concentration of CH₄ is less than that of CO₂ and its lifetime in the atmosphere is brief (10 to 12 years), compared to other GHGs. Health effects are not known to occur from exposure to CH₄. CH₄ has both natural and anthropogenic sources. CH₄ is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production. Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH₄. Other anthropogenic sources include fossil fuel combustion and biomass burning.

Nitrous Oxide

Nitrous oxide (N₂O), also known as laughing gas, is a colorless GHG that can cause dizziness, euphoria and slight hallucinations. In small doses, N₂O is considered harmless; however, in some cases, heavy and extended use can cause brain damage. Concentrations of N₂O began to rise at the beginning of the industrial revolution. In 1998, the global concentration of N₂O was 314 parts per billion (ppb). N₂O is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to the atmospheric load of N₂O. N₂O can be transported into the stratosphere, deposited on the earth's surface, and converted to other compounds by chemical reaction.

Chlorofluorocarbons

Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH₄ or ethane (C₂H₆) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs are no longer being used; therefore, the likelihood of health effects being experienced is very low. Nonetheless, in confined indoor locations, working with some CFCs is thought to result in death by cardiac arrhythmia or asphyxiation. CFCs, which were first synthesized in 1928, do not have any natural sources. CFCs were used as refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that CFCs are able to destroy stratospheric ozone, a

global effort to halt their production was undertaken. This effort was very successful, such that levels of the major CFCs are now steady or declining. However, the long atmospheric lifetimes of CFCs mean that some CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons

Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all of the GHGs, HFCs are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are the following: HFC-23, HFC-134a, and HFC-152a. Prior to 1990, the only significant emissions were of HFC-23. However HFC-134a emissions are increasing due to its use as a refrigerant. The U.S. EPA estimates that concentrations of HFC-23 and HFC-134a are now approximately 10 parts per trillion (ppt) each, while concentrations of HFC-152a are approximately one ppt. Health effects are not known to result from exposure to HFCs.

Perfluorocarbons

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur approximately 37 miles above the surface of the earth, are able to destroy PFCs. Because of this, PFCs have very long lifetimes – between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF₄) and hexafluoroethane (C₂F₆). The two main sources of PFCs are primary aluminum production and semiconductor manufacture. The U.S. EPA estimates that concentrations of CF₄ in the atmosphere are over 70 ppt. Health effects are not known to result from exposure to PFCs.

Sulfur Hexafluoride

Sulfur hexafluoride (SF₆) is an inorganic, colorless, odorless, nontoxic, nonflammable gas. SF₆ has the highest global warming potential of any gas evaluated. The U.S. EPA indicates that concentrations of SF₆ in the 1990s were approximately four ppt. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing. SF₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Carbon Dioxide Equivalents

Carbon dioxide is widely used as the reference gas for comparison of equivalent global warming potential. The CO₂ equivalent is a good way to assess emissions because the use of an equivalent gives weight to the global warming potential of the gas. Methane gas, for example, is estimated by the Association of Environmental Professionals and the U.S. EPA to have a comparative global warming potential 21 times greater than that of CO₂, as shown in Table 4.4-5.

Table 4.4-5 Global Warming Potentials and Atmospheric Lifetimes of Select GHGs		
Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CF ₄)	50,000	6,500
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	9,200
Sulfur Hexafluoride (SF ₆)	3,200	23,900
<i>Source: U.S. Environmental Protection Agency, Office of Atmospheric Programs. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 -2000. April 2002.</i>		

At the extreme end of the scale, sulfur hexafluoride is estimated to have a comparative global warming potential 23,900 times that of CO₂. The “specified time horizon” is related to the atmospheric lifetimes of such GHGs, which are estimated by the U.S. EPA to vary from 50-200 years for CO₂, to 50,000 years for tetrafluoromethane. Longer atmospheric lifetimes allow GHG to buildup in the atmosphere; therefore, longer lifetimes correlate with the global warming potential of a gas.

One teragram (equal to one million metric tons) of CO₂ equivalent (Tg CO₂ Eq.) is defined by the U.S. EPA as the emissions of the reference GHG multiplied by the equivalent global warming potential. In 2004, total worldwide GHG emissions have been estimated to be 20,135 Tg in CO₂ equivalents. In 2004, the U.S. contributed the greatest percentage of worldwide GHG emissions (35 percent). In 2004, the U.S. EPA estimates that GHG emissions in the U.S. were 7074.4 Tg of CO₂ equivalents, which is an increase of 15.8 percent from 1990 emissions. California is a substantial contributor of GHG as the State is the second largest contributor in the U.S. and the sixteenth largest in the world. In 2004, California is estimated to have produced seven percent of the total U.S. emissions. The major source of GHG in California is transportation, which contributes 41 percent of the State’s total GHG emissions, followed by electricity generation, which contributes 22 percent of the State’s GHG emissions.

Global Changes

The Intergovernmental Panel on Climate Change (IPCC) *Climate Change 2007*⁴ report indicates that the average global temperature is likely to increase between 3.6 and 8.1 degrees Fahrenheit by the year 2100, with larger increases possible but not likely. Temperature increases are expected to vary widely in specific locations depending on a variety of factors. The increase in temperature is expected to lead to higher temperature extremes, a larger variability in precipitation leading to increased flooding and droughts, ocean acidification from increased carbon content, and rising sea levels.

Projected Impacts of Global Warming in the Western United States and California Climates

Climate models indicate that if GHG emissions continue to proceed at a medium or high rate, temperatures in California are expected to increase by 4.7 to 10.5 degrees Fahrenheit by the end of the century.⁵ Lower emission rates would reduce the projected warming to three to 5.6 degrees Fahrenheit. Almost all climate scenarios include a continuing trend of warming through the end of the century given the vast amounts of GHGs already released, and the difficulties associated with reducing emissions to a level that would stabilize the climate. According to the 2006 Climate Action Team Report⁶ the following climate change effects are predicted in California over the course of the next century:

- A diminishing Sierra snowpack declining by 70 percent to 90 percent, threatening the State's water supply;
- Increasing temperatures under the higher emission scenarios, leading to a 25 to 35 percent increase in the number of days ozone pollution levels are exceeded in most urban areas;
- Increased coastal erosion along the length of California and seawater intrusion into the Delta from a four to 33-inch rise in sea level. This would exacerbate flooding in already vulnerable regions;
- Increased vulnerability of forests to forest fires due to pest infestation and increased temperatures;
- Increased challenges for the State's important agriculture industry from water shortages, increasing temperatures, and saltwater intrusion into the Delta; and
- Increased electricity demand, particularly in the hot summer months.

Therefore, temperature increases would lead to environmental impacts in a wide variety of areas, including reduced snowpack resulting in changes to the existing water resources, increased risk of wildfires, changing weather expectations for farmers and ranchers, and public health hazards associated with higher peak temperatures, heat waves, and decreased air quality.

Air Quality

Increased temperatures create the conditions in which ozone formation can increase, which would lead to adverse impacts to air quality. In addition, hotter temperatures would likely result in increased electricity use to power air conditioners and refrigerators. Increased power use has the potential to result in increased air pollutant emissions, as more electrical generation is needed to meet the demand.

Wildfires

Increased temperatures would lead to increases in evapotranspiration. The summers would likely be drier, and vegetation would also be more likely to dry out, resulting in increasingly more flammable forests and wildlands. In addition, warmer temperatures could lead to the expansion of pests that kill and weaken trees, leading to increases in the amount of highly flammable dead trees, increasing the risk of large forest fires.

Water Resources

Depending on the climate model, precipitation for temperate climates is expected to decrease with an increased potential for drought. Topographical and geographical factors will likely result in substantial variation in the net change in precipitation. However, the form in which precipitation occurs is anticipated to change substantially. Warmer winters would lead to less snow and more rain. As a result, the Sierra snowpack would be reduced and would melt earlier. This change could lead to increased flood risks as more water flows into reservoirs and rivers during the winter rainy period. Furthermore, earlier melting of the snowpack would reduce late spring and summer flows to reservoirs, which combined with hotter, drier summers, could lead to water shortages and restricted water supplies for cities, agriculture, and rivers.

Agriculture

Increased GHG emissions could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply they need. Although higher CO₂ levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate O₃ pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts.

In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

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, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, because 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. In contrast, wildfires in northern California could increase by up to 90 percent due to decreased precipitation.

Moreover, continued global climate change has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the State's forests has the potential to decrease as a result of global climate change.

Rising Sea Levels

Increased temperatures would also lead to a rise in the sea level, from both thermal expansion and the melting of land-based glaciers. During the past century, sea levels along the California coast have risen by approximately seven inches. Climate forecasts indicate the sea level would rise by seven to 23 inches over the next 100 years depending on the climate model.⁷ Substantial melting of either the Greenland or Antarctic ice sheets would lead to an even greater increase; however, the IPCC models do not indicate that this would occur within the next 100 years, which is the boundary of most climate models. Longer forecast periods are inherently less reliable as they require more assumptions, and tend to compound the effects of assumptions that may be incorrect. Increases in sea level could lead to increased coastal flooding, salt water intrusion into aquifers, and disrupt wetlands and estuaries.

Weather Extremes

The temperature increases presented in climate change models are yearly averages. Within those averages is the potential for substantially hotter summers and/or colder winters. As a result of GCC, the weather is expected to become more variable, with larger extremes. In California, the increase in temperatures is expected to lead to more days with temperatures in excess of 95 degrees. More days of extreme heat has implications for public health, as Californians would face greater risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat. In addition, increased temperatures have implications for agricultural crops, particularly long-term crops such as grapes and fruit trees that are planted in particular locations to take advantage of micro-climates.

Uncertainty Regarding Global Climate Change

The scientific community has largely agreed that the earth is warming, and that humans are contributing to that change. However, the earth's climate is composed of many complex mechanisms, including: ocean currents, cloud cover, as well as the jet-stream and other pressure/temperature weather guiding systems. These systems are in turn influenced by changes in ocean salinity, changes in the evapotranspiration of vegetation, the reflectivity (albedo) of groundcover, as well as numerous other factors. Some changes have the potential to reduce climate change, while others could form a feedback mechanism that would speed the warming process beyond what is currently projected. The climate system is inherently dynamic; however, the overall trend is towards a gradually warming planet.

REGULATORY CONTEXT

Air quality is monitored through the efforts of various federal, State, and regional government agencies. The agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies and/or regulations targeting improvement of the air quality within the Wheatland area are discussed below.

Federal Regulations

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

The FCAA required the U.S. EPA to establish National Ambient Air Quality Standards (NAAQS), and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. National AAQS are summarized in Table 4.4-2.

In addition, the FCAA required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA has responsibility to review all state SIPs to determine conformance to the mandates of the FCAA, and the amendments thereof, and determine if implementation would achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

State Regulations

At the State level, the CARB is the agency responsible for coordination and oversight of state and local air pollution control programs and for implementing the California Clean Air Act (CCAA) of 1988. Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts), establishing California Ambient Air Quality Standards (CAAQS) which, in many cases, are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

California Clean Air Act

The CCAA requires that all air districts in the State endeavor to achieve and maintain CAAQS for Ozone, CO, Sulfur Dioxide (SO₂), and Nitrogen Dioxide (NO₂) by the earliest practical date. The CAAQS are summarized in Table 4.4-2.

The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources. The act also provides districts with authority to regulate indirect sources. Each district plan is required to either 1) achieve a five percent annual reduction, averaged over consecutive three-year periods, in district-wide emissions of each non-attainment pollutant or the precursors, or 2) provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both State and federal planning requirements.

California Building Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. These standards are codified in Title 24, Part 6, of the California Code of Regulations and are generally referred to as "Title 24 Standards." The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The most recent update was adopted in 2003 and took effect as of October 1, 2005. Additional updates are due to take effect at a later date. By reducing the heating and cooling demands of buildings, California's Energy Efficiency Standards result in decreased emissions associated with the use of natural gas fired appliances and electricity production. Reduction in energy consumption reduces the amount of air pollutants emitted by energy purveyors.

Senate Bill 656

In 2003, the Legislature passed Senate Bill 656 to reduce public exposure to PM₁₀ and PM_{2.5}. The legislation requires the CARB, in consultation with local air pollution control and air quality management districts, to adopt a list of the most readily available, feasible, and cost-effective control measures that could be implemented by air districts to reduce PM₁₀ and PM_{2.5}. The legislation establishes a process for achieving near-term reductions in PM throughout California ahead of federally required deadlines for PM_{2.5}, and provides new direction on PM reductions in those areas not subject to federal requirements for PM. Sources categories addressed by SB 656 include measures to address residential wood combustion and outdoor greenwaste burning, fugitive dust sources such as paved and unpaved roads and construction, combustion sources such as boilers, heaters, and charbroiling, solvents and coatings, and product manufacturing.

Senate Bill 1771

Senate Bill 1771, chaptered in September of 2000, specified the creation of a non-profit organization, the California Climate Action Registry. The California Climate Action Registry helps various California entities establish GHG emission baselines. In addition, the Registry

enables participating entities to voluntarily record their annual GHG emissions inventories (CAPCOA 2009[b]).

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 requires the CARB to develop and adopt the nation's first GHG emission standards for automobiles. The legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in the state. The Assembly Bill cited several risks that California faces from climate change, including reduction in the state's water supply, increased air pollution created by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. Further, the legislature stated that technological solutions to reduce GHG emissions would stimulate the California economy and provide jobs (CAPCOA 2009[b]).

Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. The Executive Order declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat the concerns, the Executive Order established total GHG emission targets. More specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary will submit biannual reports to the governor and state legislature describing the following: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California's resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created a Climate Act Team (CAT) made up of members from various State agencies and commissions. CAT released their first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs (CAPCOA 2009[b]).

Assembly Bill 32

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs the CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 includes language stating

that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that the CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels, and disclose how the emission would arrive at the cap. Furthermore, the Bill requires the CARB to institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the State achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions (CAPCOA 2009[b]).

Senate Bill 1368

SB 1368 is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 required that the California Public Utilities Commission (PUC) establish a GHG emission performance standard for baseload generation from investor owned utilities by February 1, 2007. In addition, the California Energy Commission (CEC) was required to establish a similar standard for local publicly owned utilities. The standards are not to exceed the GHG emission rate from a baseload combined-cycle natural gas fired plant. The legislation further required that all electricity provided to California, including imported electricity, be generated from plants that meet the standards set by the PUC and CEC (CAPCOA 2009[b]). The PUC and CEC have adopted GHG emission performance standards.

Senate Bill 97

Senate Bill 97, signed in August 2007, acknowledged that climate change is an important environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the State Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The Natural Resources Agency was then required to certify or adopt the guidelines by January 1, 2010. As directed by SB 97, the Natural Resources Agency adopted amendments to the CEQA Guidelines for greenhouse gas emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, which subsequently became effective on March 18, 2010. The proposed amendments include revisions to the *Appendix G Initial Study Checklist* that incorporates a new subdivision to address project-generated GHG emissions and contribution to climate change.

California Code of Regulations Title 17, Sections 95100 to 95133

On December 6, 2007, the CARB approved a regulation mandating the reporting of GHG emissions from major sources, pursuant to the California Global Warming Solutions Act of 2006. Sections 95100 to 95133 of Title 17 of the California Code of Regulations enacts mandatory reporting that applies to major sources including but not limited to cement plants, refineries, and electricity generating facilities.

Senate Bill 375

SB 375 enhances the CARB's ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from the automobile and light truck sectors for 2020 and 2035. In addition, SB 375 directs the CARB to work with California's 18 metropolitan planning organizations to align regional transportation, housing and land use plans, and to prepare a "sustainable communities strategy" in order to reduce the amount of vehicle miles traveled in the respective regions, and demonstrate the region's ability to attain GHG reduction targets. SB 375 requires the CARB to establish GHG emission reduction targets on a regional scale, as opposed to individual cities or households.

Assembly Bills 1807 and 2588

Within California, toxic air contaminants (TACs) are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for the CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before the CARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to complete the following: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

Local Regulations

Feather River Air Quality Management District

The project is within the FRAQMD, which is within the Sacramento Valley Air Basin (SVAB). The SVAB has been further divided into two planning areas called the NSVAB and the Greater Sacramento Air Region. Yuba County is located in the NSVAB. The FRAQMD is the local air quality agency. The FRAQMD adopts and enforces controls on stationary sources of air pollutants through permit and inspection programs, and regulates agricultural burning. Other responsibilities of the FRAQMD include monitoring air quality, preparation of clean air plans, and responding to citizen air quality complaints. Consistent with General Plan Policy 8.E.4., the City bases its air pollutant emissions thresholds on those of the FRAQMD.

City of Wheatland General Plan

The General Plan sets forth various goals, policies and programs that would apply to projects in the City of Wheatland and proposed annexations. The following goals, policies and actions are applicable to the proposed project.

Environmental Resources - Air Quality

Goal 8.E To protect and improve air quality in the Wheatland area with the goal of attaining federal and State health-based air quality standards.

- Policy 8.E.1. The City shall cooperate with other agencies to develop a consistent and effective approach to regional air quality planning and management.
- Policy 8.E.2. The City shall support the Feather River Air Quality Management District in its development of improved ambient air quality monitoring capabilities and the establishment of standards, thresholds, and rules to more adequately address the air quality impacts of new development.
- Policy 8.E.3. The City shall require major new development projects to submit an air quality analysis for review and approval. Based on this analysis, the City shall require appropriate mitigation measures.
- Policy 8.E.4. In cooperation with the Feather River Air Quality Management District, the City shall develop emission thresholds to serve as the basis for requiring air quality analysis and mitigation.
- Policy 8.E.5. The City shall solicit and consider comments from local and regional agencies on proposed projects that may affect regional air quality. The City shall submit development proposals to the Feather River Air Quality Management District for review and comment in compliance with the California Environmental Quality Act (CEQA) prior to consideration by the City.
- Policy 8.E.6. In reviewing project applications, the City shall require consideration of alternatives or amendments that reduce emissions of air pollutants.
- Policy 8.E.7. The City shall require the use of EPA-certified woodstoves and fireplace inserts in lieu of wood burning indoor fireplaces in new development.
- Policy 8.E.8. The City shall encourage inclusion of exterior electrical outlets and natural gas hookups in new residential development to encourage the use of electric, rather than gas-powered, equipment, and to encourage the use of natural gas-fired barbecues.

Goal 8.F To integrate air quality planning with the land use and transportation process.

- Policy 8.F.1. The City shall require new development to be planned to resulting satisfactory traffic conditions for major roadways. This includes traffic signals and traffic signal coordination, parallel roadways, and intra- and inter-neighborhood connections where significant reductions in overall emissions can be achieved.

Policy 8.F.3. The City shall encourage the use of alternative modes of transportation by incorporating public transit, bicycle, and pedestrian modes in the City transportation planning and requiring new development to provide adequate pedestrian and bikeway facilities.

Policy 8.F.4. The City shall promote the use of clean alternative fuel vehicles.

Goal 8.G To encourage energy conservation in new and existing developments.

Policy 8.G.1. In addition to the energy regulations of Title 24, the City shall encourage the energy efficiency of new development. Possible energy efficient design techniques include: provisions for solar access; building siting to maximize natural heating and cooling; and landscaping to aid passive cooling and protection from winter winds.

Policy 8.G.2. The City shall encourage the planting of shade trees along all City streets to reduce radiation heating.

Policy 8.G.3. The City shall coordinate with local utility providers to promote public education energy conservation programs.

Policy 8.G.4. The City will promote local and State programs that strive to reduce the consumption of natural or manmade energy sources.

Policy 8.G.5. The City shall ensure that new development incorporates open space areas that provide community and neighborhood identity and insulate conflicting land uses and noise generators.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

The air quality impact analysis is based on the following criteria identified in Appendix G of the CEQA Guidelines (Environmental Checklist Form):

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute to an existing or projected air quality violation;
- Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or

- Create objectionable odors affecting a substantial number of people.

In addition, the FRAQMD's Board of Directors has approved thresholds of significance to be used in the environmental review of development projects under CEQA, which are as follows:

- An increase in emissions of ROG or NO_x greater than 25 pounds per day; or
- An increase in emissions of PM₁₀ greater than 80 pounds per day.

Method of Analysis

The project site is currently made up of the following ownerships: Johnson's Crossing, AKT Wheatland Ranch, Dave Browne, and Browne Cattle Company; Bear River Hop Farm and Wheatland Hop Farm; and the five "Wheatland Parcels." For ease of discussion throughout the remainder of this Draft EIR, the project area east of the Wheatland Expressway alignment, outside of the General Plan Study Area, and currently designated as Urban Reserve, will be referred to as the "Johnson Rancho" portion of the project site. The area west of the Wheatland Expressway alignment, within the General Plan Study Area, will be referred to as the "Hop Farm" portion of the project site.

For the purposes of this analysis, each of the following three scenarios has been analyzed for their respective air quality impacts: 1) buildout of only the Hop Farm property; 2) buildout of only the Johnson Rancho property; and 3) buildout of both the Hop Farm and Johnson Rancho properties.

Short-Term Impacts

Short-term construction emissions were estimated using the URBEMIS-2007 (Version 9.2.4) computer program. The URBEMIS-2007 program is designed to model construction emissions for land use development projects and allows for the input of project-specific information. Detailed construction information and schedules are not currently available. As a result, modeling was based on the default model settings for Yuba County. To ensure a conservative analysis, modeling assumes a default overall construction period of twelve months. Actual construction of the proposed land uses would likely occur over a longer duration, in which case, daily and annual emissions would likely be less. Modeled construction-generated emissions include emissions from off-highway mobile equipment, travel on unpaved surfaces, soil disturbance, evaporative emissions from asphalt paving and architectural coating applications, and on-highway vehicle trips.

Long-Term Impacts

Regional area- and mobile-source emissions were estimated using the URBEMIS-2007 (Version 9.2.4) computer program. Emissions were calculated based on the default parameters contained in the model for Yuba County. Default trip-generation rates contained in the model were amended to correspond with trip-generation rates identified in the traffic analysis prepared for this project. Modeling was conducted for weekday and annual operational conditions.

Recommended mitigation measures and emission reduction methodologies are based on the FRAQMD's *Indirect Source Review Guidelines*.⁸

Estimated GHGs attributable to the proposed project were calculated using the URBEMIS-2007 computer program and emission factors obtained from existing environmental documentation. Emissions of CO₂ associated with mobile and area sources were obtained from the URBEMIS-2007 computer program. Mobile-source emissions of nitrous oxide (N₂O) and CH₄ were calculated based on estimated vehicle miles traveled obtained from the URBEMIS-2007 computer program and emission factors obtained from the *California Climate Action Registry General Reporting Protocol* (2008) (GRP). Emissions of N₂O and CH₄ associated with electricity and natural gas use were calculated based on emission factors obtained from the GRP and usage rates obtained from the California Energy Commission. Emissions were converted to CO₂ equivalent units of measure, expressed in annual metric tons (i.e., MT CO_{2e}), based on the global warming potential of the individual pollutants.

Toxic Air Contaminants

The local air districts have the authority over stationary or industrial sources. The FRAQMD recommends that CEQA documents analyze potential impacts resulting from exposure of TACs. These analyses should consider the following situations: 1) A new or modified source of TACs is proposed for a location near an existing residential area or other sensitive receptor; and/or 2) A residential development or other sensitive receptor is proposed for a site near an existing source of TACs. The CEQA analysis shall include the following:

- A discussion of types of construction activities that would occur and the TAC emission sources associated with those activities (typically Diesel PM and asbestos);
- A discussion of TAC emission sources generated during operational phase;
- A significance determination about construction-generated TAC emissions, without mitigation;
- A significance determination about exposure to TACs from project operational phase without mitigation; and
- A discussion of feasible mitigation necessary to reduce TAC exposure resulting from project construction and operational phases, and whether the reduction would be sufficient to reduce the impact to a less-than-significant level.

Odors

According to the FRAQMD *Indirect Source Review Guidelines*, the evaluation of potential odor impacts pertains directly to the following question regarding air quality impacts from the Environmental Checklist Form (Appendix G) of the State CEQA Guidelines:

- Would the project create objectionable odors affecting a substantial number of people?

Therefore, Lead Agencies should consider the impacts from two different situations:

- The proposed project would locate receptors near an existing source of odor; or
- The proposed project would locate a source of odor near existing receptors.

The FRAQMD has prepared a screening table for Lead Agencies use in determining whether an impact may occur. If the project is within the distances listed in Table 4.4-6, the Lead Agency should consult with the FRAQMD. Sources of odor are subject to the Prohibited Discharges regulations in HSC 41700. However, agricultural operations and some composting operations are exempt from these regulations. The agricultural industry is prevalent throughout Yuba and Sutter Counties, and as such the FRAQMD recommends that Lead Agencies consider the potential odor impacts of agricultural operations when locating a residential neighborhood, or other sensitive receptor, near existing agricultural areas.

Table 4.4-6 Recommended Odor Screening Distances	
Land Use/Type of Operations	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	5 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Green Waste/Recycling Operations	2 miles
Metal Smelting Plant	1 mile
Note: Odor screening distances should not be used as absolute threshold of significance for an odor significance determination. Depending on topography, meteorology, and other factors, impacts may occur at distances greater than on the screening table.	
Source: Feather River Air Quality Management District, <i>Indirect Source Review Guidelines: A Technical Guide to Assess the Air Quality Impact of Land Use Projects Under the California Environmental Quality Act</i> , June 7, 2010.	

Greenhouse Gas Emissions

At the present time, federal, State, or locally adopted thresholds do not exist for the evaluation of project-generated GHG emissions and contribution to global climate change. However, as directed by SB 97, the Natural Resources Agency adopted amendments to the CEQA Guidelines for GHGs on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, which subsequently became effective on March 18, 2010. The proposed amendments include revisions to the *Appendix G Initial Study Checklist* that

incorporates a new subdivision to address project-generated GHG emissions and contribution to climate change. The proposed new subdivision emphasizes that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. OPR further proposed a new subdivision to assist lead agencies in determining the significance of project related GHG emissions. In addition to quantification of GHG emissions, this section provides for the consideration of several other qualitative factors that may be used in the determination of significance.

Under OPR's proposed guidance a lead agency may consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

For purposes of analyzing the proposed project's contribution to climate change, an impact to climate change would be considered significant if it would do one of the following: a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions.

It should be noted that implementation of the mitigation measures included in this chapter would not create additional significant environmental impacts beyond those addressed in this EIR. Because this EIR has been prepared as a program-level EIR, future projects will be required to undergo further analysis pursuant to CEQA, which will ensure that any future impacts are addressed.

Cumulative Impacts

In accordance with the FRAQMD's recommendations, if a proposed project would individually have a significant air quality impact, the project would also be considered to have a significant cumulative impact.

As discussed in the Introduction to the Analysis chapter of this Draft EIR, impacts identified in the Initial Study as less-than-significant or having no impact, which do not require mitigation, have already been addressed in the Initial Study. All impacts related to air quality were identified as potentially significant within the Initial Study and are, therefore, addressed below.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Johnson Rancho and Hop Farm) unless otherwise noted.

4.4-1 Construction-related impacts resulting in temporary increases in criteria air pollutants that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Although this Draft EIR includes analysis of the proposed project on a program level, eventual buildout of the project area would result in specific projects, which would include construction activities. In addition, buildout of the project area would likely involve numerous infrastructure projects to provide roadways, sewer service, and water service to development within the area. Analyzing the potential impacts to air quality is complicated by the unknown development timetable. Development of the project area will occur over a number of years; as a result, construction emissions would also occur over a potentially lengthy period of time.

Maximum construction-related emissions of ROG and NO_x are associated with paving operations, while maximum construction-related emissions of PM₁₀ occur during the first phases of construction when clearing, earthmoving and grading occur. The majority of PM₁₀ particles generated from construction would be from soil particles, while a small fraction would be from diesel exhaust.

Construction activities would also generate exhaust emissions from vehicles/equipment that would affect local air quality. During construction, various diesel-powered vehicles and equipment would be in use in the project area. In 1998, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines. High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truckstop) were identified as having the highest associated risk.

Health risks from TACs are functions of both concentration and duration of exposure. However, construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks. In addition, construction-related sources are mobile and transient in nature, and the bulk of the emission occurs within the project area at a substantial distance from nearby receptors. Because of the short duration of construction activities, health risks from construction emissions of diesel particulate would not be considered substantial.

Construction activities are also a source of organic gas emissions. Solvents in adhesives, non-waterbased paints, thinners, some insulating materials, and caulking materials evaporate into the atmosphere and through a photochemical reaction contribute to the creation of urban ozone. Asphalt used in paving is also a source of organic gases for a period of time following application.

Conclusion

Because the end users within the project area are not known at this time, and because this environmental analysis is being prepared as a program-level EIR, the URBEMIS-2007

(Version 9.2.4) program could not be used with any accuracy to estimate the maximum construction emissions that would be generated by buildout of the Hop Farm and Johnson Rancho Properties. It is known, however, that future development of the properties would result in construction-related emissions of air quality pollutants that could exceed the FRAQMD's standards. Pursuant to Policy 8.E.3 of the Wheatland General Plan, the City requires that all major new development projects submit a project-specific air quality analysis for the review and approval of the City. Therefore, should the project-specific developments within the proposed project area not submit a project-specific air quality analysis, impacts associated with construction activities resulting in temporary increases in criteria air pollutants would be *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.4-1(a) *In conjunction with the submittal of **each** zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, an air quality analysis shall be performed. The analysis shall include, but not be limited to, a determination of air quality impacts, quantification of construction and operational emissions, an assessment of impacts related to CO emissions and TACs, an assessment of impacts related to GHG emissions, and identification of mitigation measures needed to reduce any significant impacts. The mitigation measures shall include, but not necessarily be limited to, the FRAQMD's standard mitigation measures for all projects within the FRAQMD. The applicant shall be required to implement all mitigation measures recommended in the air quality impact analysis, pursuant to the review and approval of the Planning Commission and/or City Council in conjunction with the review of the development project.*

4.4-1(b) *The City shall include the following as a condition of approval on **each** tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

"Prior to recording any Final Map within the Johnson Rancho and Hop Farm Annexation area, pursuant to the FRAQMD Indirect Source Review Guidelines, a Fugitive Dust Control Plan shall be submitted for the review and approval of the Community Development Department. The developer shall implement the approved plan."

Compliance with this condition shall be ensured by the Community Development Department prior to the recording of any Final Map.

4.4-1(c) *The City shall include the following as a condition of approval on **each** tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

*“Prior to issuance of **any** grading permit, all construction contracts shall stipulate the following:*

- Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringelmann 2.0).*
- The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of on-site operation.*
- Idling time for construction vehicles shall be limited to five minutes.*
- Existing power sources (e.g., power poles) or clean fuel generators shall be utilized instead of temporary power generators.*
- A traffic plan shall be developed to minimize traffic flow interference from construction activities. Portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, may require California Air Resources Board (ARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the ARB or the District to determine registration and permitting requirements prior to equipment operation at the site.*
- All grading operations on a project shall be suspended when winds exceed 20 miles per hour or when winds carry dust beyond the property line despite implementation of all feasible dust control measures.*
- Construction sites shall be watered as directed by the Department of Public Works or Air Quality Management District and as necessary to prevent fugitive dust violations.*
- An operational water truck shall be available at all times. Water shall be applied to control dust, as needed, to prevent visible emissions violations and off-site dust impacts.*
- On-site dirt piles or other stockpiled particulate matter shall be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce windblown dust emissions. The use of approved non-toxic soil stabilizers shall be incorporated, according to manufacturer's specifications, to all inactive construction areas.*
- All transfer processes involving a free fall of soil or other particulate matter shall be operated in such a manner as to minimize the free fall distance and fugitive dust emissions.*
- Approved chemical soil stabilizers shall be applied, according to the manufacturers' specifications, to all inactive construction areas*

(previously graded areas that remain inactive for 96 hours) including unpaved roads and employee/equipment parking areas.

- To prevent track-out, wheel washers shall be installed where project vehicles and/or equipment exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed prior to each trip. (Alternatively, a gravel bed may be installed as appropriate at vehicle/equipment site exit points to effectively remove soil buildup on tires and tracks to prevent/diminish track-out.)*
- Paved streets shall be swept frequently (water sweeper with reclaimed water recommended; wet broom) if soil material has been carried onto adjacent paved, public thoroughfares from the project site.*
- Temporary traffic control shall be provided, as needed, during all phases of construction to improve traffic flow, as deemed appropriate by the Department of Public Works and/or Caltrans and to reduce vehicle dust emissions. An effective measure is to enforce vehicle traffic speeds at or below 15 mph.*
- Traffic speeds on all unpaved surfaces shall not exceed 15 miles per hour and unnecessary vehicle traffic shall be reduced by restricting access to unpaved surfaces. In addition, appropriate training, on-site enforcement, and signage shall be provided in order to enforce the speed limit.*
- Ground cover on the construction site shall be reestablished as soon as possible and prior to final occupancy, through seeding and watering.*
- Open burning of vegetative waste (natural plant growth wastes) or other legal or illegal burn materials (trash, demolition debris, et. al.) shall not be conducted at the project site. Vegetative wastes shall be chipped or delivered to waste-to-energy facilities (permitted biomass facilities) or mulched or composted. Waste materials shall not be hauled off-site for disposal by open burning.”*

Compliance with this condition shall be ensured by the City Engineer prior to the issuance of any grading permit.

4.4-2 Operational impacts resulting in long-term increases of criteria air pollutants that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Project traffic emissions would have an effect on air quality outside of the project vicinity. Trips to and from the project would result in air pollutant emissions within the air basin. Project land uses would also result in a number of area source pollutants such as natural gas combustion, and landscape maintenance equipment exhaust emissions.

Hop Farm Property

Total ROG, NO_x, and PM₁₀ emissions associated with operation of the Hop Farm property are shown in Table 4.4-7. It should be noted that project emissions for PM₁₀ are greatest in winter; therefore, winter emissions for PM₁₀ are shown in Table 4.4-7.

Table 4.4-7			
Hop Farm Property – Project Regional Emissions (Pounds per Day)			
	ROG	NO_x	PM₁₀
Area Sources	151.16	25.08	325.89
Vehicles	110.27	92.58	508.02
Total	261.43	117.66	833.91
FRAQMD Threshold of Significance	25.0	25.0	80.0
<i>Source: Raney Planning & Management, Inc., URBEMIS-2007 (Version 9.2.4), June 21, 2010.</i>			

Emissions of PM₁₀ would exceed the FRAQMD threshold of significance of 80 pounds per day. In addition, project emissions of ROG and NO_x would exceed the FRAQMD thresholds of significance. Therefore, buildout of the Hop Farm property would result in an adverse impact to regional air quality.

Johnson Rancho Property

Total ROG, NO_x, and PM₁₀ emissions associated with operation of the Johnson Rancho property are shown in Table 4.4-8. It should be noted that project emissions for PM₁₀ are greatest in winter; therefore, winter emissions for PM₁₀ are shown in Table 4.4-8.

Table 4.4-8			
Johnson Rancho Property – Project Regional Emissions (Pounds per Day)			
	ROG	NO_x	PM₁₀
Area Sources	935.65	163.59	2,124.06
Vehicles	476.32	397.47	2,188.86
Total	1,411.97	561.06	4,312.92
FRAQMD Threshold of Significance	25.0	25.0	80.0
<i>Source: Raney Planning & Management, Inc., URBEMIS-2007 (Version 9.2.4), June 21, 2010.</i>			

Emissions of PM₁₀ would exceed the FRAQMD threshold of significance of 80 pounds per day. In addition, project emissions of ROG and NO_x would exceed the FRAQMD thresholds of significance. Therefore, buildout of the Johnson Rancho property would result in an adverse impact to regional air quality.

Hop Farm and Johnson Rancho Properties

Total ROG, NO_x, and PM₁₀ emissions associated with operation of the Hop Farm and Johnson Rancho properties are shown in Table 4.4-9. It should be noted that project emissions for PM₁₀ are greatest in winter; therefore, winter emissions for PM₁₀ are shown in Table 4.4-9. Emissions of PM₁₀ would exceed the FRAQMD threshold of significance of 80 pounds per day. In addition, project emissions of ROG and NO_x would also exceed the FRAQMD thresholds of significance. Therefore, buildout of the Hop Farm and Johnson Rancho properties would result in an adverse impact to regional air quality.

Table 4.4-9 Hop Farm and Johnson Rancho Properties – Project Regional Emissions (Pounds per Day)			
	ROG	NO_x	PM₁₀
Area Sources	1,086.20	188.57	2,449.94
Vehicles	586.61	490.06	2,696.88
Total	1,672.81	678.63	5,146.82
FRAQMD Threshold of Significance	25.0	25.0	80.0
<i>Source: Raney Planning & Management, Inc., URBEMIS-2007 (Version 9.2.4), June 21, 2010.</i>			

Conclusion

As shown above in Tables 4.4-7 through 4.4-9, emissions resulting from development of the Hop Farm property and the Johnson Rancho property, as well as development of both the Hop Farm and Johnson Rancho properties simultaneously, would exceed the FRAQMD thresholds of significance. Therefore, the proposed project would result in a *significant* impact to local air quality.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce project impacts associated with the creation of ROG, NO_x, and PM₁₀ emissions. However, it should be noted that this EIR has been prepared at a program level and it cannot be guaranteed that emissions from future development in the project area would not exceed the FRAQMD thresholds of significance. Therefore, the impact would remain *significant and unavoidable*.

- 4.4-2(a) *Implement Mitigation Measure 4.4-1(a). If operational impacts associated with emissions of ROG, NO_x, or PM₁₀ are determined to be significant for a particular project, the air quality impact analysis shall require implementation of Mitigation Measure 4.4-2(b).*
- 4.4-2(b) *In conjunction with the submittal of **each** tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the applicant(s) shall submit an Operational Emissions Reduction Plan for review and approval of the FRAQMD. The Plan shall be the applicant's commitment to feasible mitigation measures from the*

FRAQMD's current list of Best Available Mitigation Measures (BAMM), recommended measures from FRAQMD staff, or voluntary off-site mitigation projects sufficient to provide a minimum 35 percent reduction in emissions. The applicant shall be required to implement all mitigation measures recommended in the Operational Emissions Reduction Plan, pursuant to the review and approval of the Planning Commission and/or City Council in conjunction with the review of the tentative map.

4.4-3 Contribution to local mobile-source concentrations of CO.

Concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations. Concentrations of CO approaching the ambient air quality standards are only expected where background levels are high and traffic volumes and congestion levels are high. The Statewide CO protocol document identifies signalized intersections operating at Level of Service (LOS) E or F as having the potential to result in localized exceedences of the State or federal ambient air quality standards (Garza et al, 1997), as a result of large numbers of cars idling at stop lights.

As discussed in Impact 4.3-1 in Chapter 4.3, Transportation and Circulation, of the Draft EIR, the project applicant(s) will be required to provide funding to the City for the preparation of an updated Traffic and Circulation Master Plan for the Johnson Rancho and Hop Farm Annexation area. The updated Traffic and Circulation Master Plan will evaluate and identify potential traffic impacts and the future street and circulation system improvements necessary to mitigate said traffic impacts. When the Traffic and Circulation Master Plan is completed, the Plan will be reviewed to determine whether implementation of the project would result in any signalized intersections operating at LOS E or worse. If so, a CALINE "hot spot" CO analysis will be performed for any signalized intersection that operates at LOS E or worse. However, at the present time, determining whether a CALINE "hot spot" CO analysis is necessary for any of the intersections in the project area is speculative, and the project would not result in the addition of any traffic to existing roadways until an updated Traffic and Circulation Master Plan has been reviewed and approved. Therefore, the impact related to the project's contribution to local mobile-source concentrations of CO would be *less-than-significant*.

Mitigation Measure(s)

None required.

4.4-4 Impacts to nearby sensitive receptors from odors associated with the project.

Major stationary sources of odors have not been identified within the vicinity of the project site. At full buildout, the proposed project's uses could include, but would not be limited to, residential, commercial, office, school, and open space uses on approximately 4,149 acres. It should be noted that the proposed project would not include industrial or

intensive agricultural uses. Odors are not typical of residential or office uses; however, commercial uses may include sources of odorous emissions (e.g., charbroiling restaurants, dry cleaners), and the operation of such sources could result in the frequent exposure of on-site receptors to substantial objectionable odorous emissions. As a result, the potential that the proposed project could result in the emission of objectionable odors is considered to be a **potentially significant** impact.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.4-4(a) *In conjunction with the submittal of **each** zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s), in consultation with the Community Development Department, shall take into consideration any odor-producing potential facilities that would occupy the proposed project site. To the extent feasible, proposed land uses that have the potential to emit objectionable odorous emissions shall be located as far away as possible from existing and proposed sensitive receptors. The location of potential facilities shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of the development application.*

4.4-4(b) *The City shall include the following as a condition of approval on **each** tentative map application for any non-residential development within the Johnson Rancho and Hop Farm Annexation area:*

“If an odor-emitting facility is to occupy space in the proposed project site, odor control devices shall be installed for the review and approval of the Community Development Department prior to the issuance of occupancy permits to reduce the exposure of receptors to objectionable odorous emissions.”

Compliance with this condition shall be ensured by the Community Development Department prior to the issuance of a certificate of occupancy for any odor-emitting facility.

Cumulative Impacts and Mitigation Measures

4.4-5 Cumulative impacts to regional air quality.

According to the FRAQMD significance criteria, any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. Emissions from development projects have several cumulative impacts. Growth in emissions would delay attainment of the ambient air quality standards for which the region is non-attainment (ozone and particulate

matter), contribute to visibility reduction, and contribute to mobile-source toxic air contaminants. Because ozone, particulate matter, and some constituents of ROG that are also TACs have been shown to be correlated with adverse health effects, cumulative emissions increases in the region would have potential cumulative health effects. The proposed project (under all three scenarios: buildout of the Hop Farm property, buildout of the Johnson Rancho property, and buildout of both properties) would exceed the FRAQMD thresholds of significance for ROG, NO_x and PM₁₀; therefore, because the proposed project would have a cumulatively considerable contribution to degradation of regional air quality, the project would have a *significant* cumulative impact on regional air quality.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce project impacts associated with the creation of ROG, NO_x, and PM₁₀ emissions. However, it should be noted that this EIR has been prepared at a program level and it cannot be guaranteed that emissions from future development in the project area would not exceed the FRAQMD thresholds of significance. Therefore, the impact would remain *significant and unavoidable*.

4.4-5 *Implement Mitigation Measure 4.4-2(a).*

4.4-6 Project impacts concerning the production of greenhouse gases.

Global Climate Change and CEQA

Analyzing global warming under CEQA raises several unique challenges, largely due to the “global” nature of climate change. Typical CEQA analyses address local actions that have local – or, at most, regional – impacts, whereas global warming presents the considerable challenge of analyzing the relationship between local and global activities and the resulting potential, if any, for local and/or global environmental impacts. Most environmental analyses examine the project-specific impacts that a particular project is likely to generate. With regard to global warming, however, it is generally accepted that the magnitude of global warming effects is so substantial and the contribution of an individual project to global warming is so small that direct significant adverse impacts (albeit not necessarily cumulative significant adverse impacts) would be highly unlikely.

The issue of global climate change is also fundamentally different from any other areas of air quality impact analysis, which are all linked to some region or area in which the impact is significant. Instead, a global climate change analysis must be conducted on a global level, rather than the typical local or regional setting, and requires consideration of not only emissions from the project under consideration, but also the extent of the displacement, translocation, and redistribution of emissions. In the usual context, where air quality is linked to a particular location or area, it is appropriate to consider the creation of new emissions in that specific area to be an environmental impact whether or not the emissions are truly “new” emissions to the overall globe. In fact, the approval of a new developmental plan or project does not necessarily create new automobile drivers –

the primary source of a land use project's emissions. Rather, a new land use project may simply be redistributing existing mobile emissions; accordingly, the use of models that measure overall emissions increases without accounting for existing emissions will substantially overstate the impact of the development project on global warming. This makes an accurate analysis of GHG emissions substantially different from other air quality impacts, where the "addition" of redistributed emissions to a new locale can make a substantial difference to overall air quality in that area.

Pursuant to the CEQA Guidelines, the Lead Agency for the project "[...] shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use [...]; and/or (2) Rely on a qualitative analysis or performance based standards." It should be noted that the approach in option (1) was used for the purposes of this EIR. In addition, "[...] A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment: (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting; (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions [...]"

Guidance from the FRAQMD *Indirect Source Review Guidelines* states that a threshold of significance has not yet been adopted by the FRAQMD for GHG emissions.⁹

Carbon Dioxide Emissions Estimate for the Proposed Project

The proposed project area is currently mostly vacant and is used for agricultural operations. Implementation of the proposed project would result in the buildout of residential, commercial, office, school, civic, and recreational uses, the operation of which would result in an increase in GHG emissions, which are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO₂ from mobile sources. To a lesser extent, other GHG pollutants, such as CH₄ and N₂O would also be generated, largely associated with electricity use and natural-gas consumption.

The CO₂ emissions estimate for the proposed project analyzed the project's potential vehicle and area source emissions, as well as emissions associated with utility usage.

The major source of GHG emissions generated from the proposed project would be vehicle source CO₂ emissions. Vehicle transportation is one of the major contributors to GHG emissions in Yuba County. Based on the URBEMIS-2007 outputs used for the air quality analysis (See Appendix E), the proposed project is estimated to generate approximately 290,720 tons of CO₂ per year from vehicle emissions. Approximately 58 percent of the project's total CO₂ emissions would be generated by vehicle emissions. By comparison, the CO₂ emissions of the State of California totaled approximately 494

million metric tons in 2006.¹⁰ It should be noted that while the CO₂ emissions factor does assume certain reductions in vehicle emissions due to future vehicle models operating more efficiently, the factor does not take into account additional reductions in vehicle emissions that might take place in response to AB 1493, if mobile source emission reductions are ultimately implemented through legislation.

Utilizing the URBEMIS-2007 outputs, area source emissions from the proposed project would result in a total of approximately 58,787 tons of CO₂ per year.

Additional GHG emissions would result from the energy used to create materials used for development of the proposed project. The proposed project is estimated to generate approximately 149,257 tons of CO₂ per year from utility usage, based on PG&E carbon footprint factsheet.

In total, the proposed project would generate approximately 498,764 tons of CO₂ per year, as shown in Table 4.4-10. This figure represents approximately 0.09 percent of the State's estimated 494 million metric tons of CO₂ emissions in 2006.

Table 4.4-10 Proposed Project CO₂ emissions	
Emission Source	CO₂ emissions (tons/yr)
Area Source ¹	58,787.19
Vehicle Emissions ¹	290,720.28
Utility Usage ²	149,256.65
Total	498,764.12
¹ Project's URBEMIS-2007 modeling results from the ADEIR. ² Includes electric and natural gas CO ₂ emissions. Please see the calculations provided in Appendix E of this Draft EIR.	

Climate Action Plan

Many California cities and counties have recently adopted Climate Action Plans in order to address the issue of GHG emissions. These plans usually involve setting emission reduction goals and adopting implementation measures to achieve those goals. It should be noted that a Climate Action Plan has not yet been adopted for either the City of Wheatland or Yuba County.

Conclusion

Greenhouse gas emission estimates from an individual project have a relatively high uncertainty. In addition, the potential effects of current and future regulations on CO₂ emissions attributable to the project and cumulative CO₂ emissions from other sources in the State cannot be quantified. Furthermore, the way in which CO₂ emissions associated with the project might or might not influence actual physical effects of global climate

change cannot be determined. For these reasons, whether the project would generate a substantial increase in GHG emissions relative to existing conditions, and whether emissions from the project would make a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change is uncertain.

For this analysis, a conservative approach is taken and the project is considered to have a **significant** incremental contribution to the cumulatively considerable production of greenhouse gases resulting in the cumulative impact of global climate change.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the GHG emissions that would be associated with implementation of the proposed project. In addition, the mitigation measures that are intended to reduce air quality pollutants resulting from combustion of fuels and emissions of ROG would also reduce the project's GHG impact. Furthermore, the following mitigation measures are consistent with Wheatland General Plan Goal 8.G and Policies 8.G.1. through 8.G.5., which encourage energy conservation in new and existing developments, and Policy 8.E.2, which requires that the City support the FRAQMD in its development of improved ambient air quality monitoring capabilities and the establishment of standards, thresholds, and rules to more adequately address the air quality impacts of new development. However, as described in the preceding discussion, the project's impact is uncertain and thus the effectiveness of the mitigation on GHG emissions is uncertain. As a result, GHG emission impacts would remain *significant and unavoidable*.

4.4-6(a) *In conjunction with the submittal of the **first** zoning or tentative map application for development within the Johnson Rancho and Hop Farm Annexation area, a Climate Action Plan that includes the proposed project area, in addition to the Wheatland Planning Area, shall be prepared by the developer in cooperation with the FRAQMD and the City Community Development Department. The Climate Action Plan shall include feasible mitigation measures that, in combination with existing and future regulatory measures developed under AB 32, would reduce emissions associated with operation of the proposed project and supporting infrastructure by 15 percent from business-as-usual emissions levels projected for the year 2020 or the applicable percent reduction as adopted by FRAQMD and/or CARB at the time of application submittal. Furthermore, if a Climate Action Plan has previously been adopted by the City of Wheatland and is in place at the time of submittal of the first zoning or tentative map application, the proposed project shall adhere to the emission reduction requirements within the Climate Action Plan.*

4.4-6(b) *After the Climate Action Plan has been adopted by the City of Wheatland, all future project applicants within the Johnson Rancho and Hop Farm Annexation area shall demonstrate compliance with the Climate Action Plan at the time of submittal of **each** development application. Compliance shall be reviewed and approved by the Planning Commission*

and/or City Council in conjunction with the review of the development application.

- 4.4-6(c) *At the time of submittal of **each** zoning or tentative map application within the Johnson Rancho and Hop Farm Annexation area, a GHG reduction strategy shall be prepared that shall describe how the following measures (or alternate measures as approved by the Planning Commission) will be implemented to achieve the reduction in GHG emissions that is required in Mitigation Measure 4.4-6(a):*

Residential Development

- *All homes within the proposed subdivision will utilize AC units that are two points above the Seasonal Energy Efficient Ratio (SEER) energy efficiency rating in effect at the time of the approval of the Tentative Map. Any plans submitted to the Community Development Department must clearly show that this condition is being met.*
- *All homes within the subdivision will include “whole house fans.” Any plans submitted to the Community Development Department must clearly show that this condition is being met.*
- *All homes within the subdivision will include, at the builder’s discretion, one of the following: a) a “tankless” water heater, or b) upgraded insulation in all walls and ceilings to exceed the Title 24 requirements in place at the time of building permit issuance. Any plans submitted to the Community Development Department must clearly show that this condition is being met.*

Commercial and Office Development

- *Provide plentiful short-term and long-term bicycle parking facilities to meet peak season maximum demand;*
- *Provide “end-of-trip” facilities including showers, lockers, and changing space;*
- *Provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site;*
- *Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances;*
- *Provide safe and convenient bicycle/pedestrian access to transit stop(s) and provide essential transit stop improvements (i.e., shelters, route information, benches, and lighting); and*
- *Provide employee carpool parking stalls.*

The GHG reduction strategy shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of the development applications.

Endnotes

¹City of Wheatland. *City of Wheatland General Plan Policy Document*, July 2006.

²Raney Planning & Management, Inc. *City of Wheatland General Plan EIR*. July 11, 2006.

³Association of Environmental Professionals, *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*, June 29, 2007.

⁴Meehl, G.A., T.F. Stocker, W.D. Collins, P. Friedlingstein, A.T. Gaye, J.M. Gregory, A. Kitoh, R. Knutti, J.M. Murphy, A. Noda, S.C.B. Raper, I.G. Watterson, A.J. Weaver and Z.-C. Zhao. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. 2007.

⁵California Climate Change Center. *Our Changing Climate: Assessing the Risks to California*. 2006.

⁶California Climate Action Team. *Climate Action Team Report*. March 2006.

⁷Ibid.

⁸Feather River Air Quality Management District. *Indirect Source Review Guidelines: A Technical Guide to Assess the Air Quality Impact of Land Use Projects Under the California Environmental Quality Act*. June 7, 2010.

⁹Ibid.

¹⁰California Environmental Protection Agency. *Greenhouse Gas Emissions Inventory Summary: 2000 – 2006*. http://www.arb.ca.gov/app/ghg/2000_2006/ghg_sector_data.php. Accessed July 1, 2009.

4.5

NOISE

INTRODUCTION

The Noise chapter of the EIR discusses the existing noise environment in the immediate project vicinity and identifies potential noise-related impacts and mitigation measures associated with the proposed project. Specifically, this chapter analyzes potential noise impacts due to and upon development within the project site relative to applicable noise criteria and to the existing ambient noise environment. Information presented in this chapter is primarily drawn from the *Environmental Noise Analysis* prepared specifically for the Johnson Rancho and Hop Farm Annexation project by j.c. brennan & associates, Inc. (See Appendix F),¹ as well as the *City of Wheatland General Plan*² and the *City of Wheatland General Plan EIR*.³

EXISTING ENVIRONMENTAL SETTING

Sound is a mechanical energy of vibrating transmitted by pressure waves through a medium to human ears. If the pressure variations occur frequently enough, 20 times per second, they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

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

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted. A list of several examples of noise level associated with common situation is shown on Table 4.5-1.

Table 4.5-1 Typical Noise Levels		
Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing
<i>Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol, October 1998.</i>		

Existing Land Uses in the Project Vicinity

The project site is currently made up of the following ownerships: Johnson's Crossing, AKT Wheatland Ranch, Dave Browne, and Browne Cattle Company; Bear River Hop Farm and Wheatland Hop Farm; and the five "Wheatland Parcels." The project includes the development of approximately 14,396 dwelling including 3,249 acres of residential, 131 acres of commercial, 274 acres of employment, 55 acres of elementary schools, 40 acres of middle schools, 24 acres of civic center, 50 acres of parks, 57 acres of linear parkway, approximately 238 acres of open space/drainage, and 31 acres for the potential Wheatland Expressway. Surrounding land uses include agricultural lands and rural residences to the northeast, east, south, and southeast, as well as State Route 65 (SR 65) west of the adjacent property; to the south the site is bordered by the Yuba-Placer County line and agricultural land and Bear River beyond the county line; and to the northwest by the southern Wheatland city limits and single-family residential development.

Certain land uses are more sensitive to ambient noise levels than others due to the amount of noise exposure (in terms of both exposure time and shielding from noise sources) and the type of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks, and outdoor recreation areas are generally more sensitive to noise than are commercial and industrial land uses and thus are referred to as sensitive receptors.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. Along the southeast side of the City of

Wheatland sensitive land uses include Wheatland Elementary School, several churches, and various residential uses. Additionally, various single-family residential uses are located north of Spenceville Road.

Existing Noise Environment

Because of the size of the project site (4,149 acres), the existing ambient noise environment in the project vicinity varies considerably. For example, the existing ambient noise environment in the western portion of the project site is defined by traffic noise from SR 65, Union Pacific Railroad (UPRR) operations, and aircraft operations associated with Beale Air Force Base (AFB), while the existing ambient noise in the eastern portion is primarily from Beale AFB.

General Ambient Noise Levels

To generally quantify the existing ambient noise environment in the project vicinity, a short-term ambient noise level measurement survey was conducted at two locations on the Johnson Rancho and Hop Farm area on May 12, 2009. In addition, continuous noise monitoring was conducted at four locations over a seven day period at the northeastern, northern, western, and southern boundaries of the project area. The noise measurement locations (Sites 1-4 and A & B) are shown in Figure 4.5-1, Ambient Noise Measurement Sites.

The noise level meters were programmed to record the maximum and average noise level at each site during the survey. The maximum value, denoted L_{max} , represents the highest noise level measured. The average value, denoted L_{eq} , represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50} , represents the sound level exceeded 50 percent of the time during the monitoring period. At the continuous noise measurement sites, the meters were also programmed to log single events once thresholds for event duration and maximum levels were triggered. The ambient noise level measurement results are provided in Table 4.5-2.

Roadway Noise Levels

Traffic volumes were obtained from the traffic study prepared for the project by KD Anderson & Associates, Inc. (September 7, 2010). Truck usage and vehicle speeds on the project roadways were estimated from field observations and Caltrans. Table 4.5-3 shows the existing traffic noise levels in terms of L_{dn} at a reference distance of 100 feet from the centerlines of the existing project-area roadways identified in the traffic study (existing conditions). In addition, Table 4.5-3 shows the distances to existing traffic noise contours. A complete listing of the FHWA Model input data is contained in Appendix B of Appendix F of the Draft EIR.

Figure 4.5-1
Ambient Noise Measurement Sites

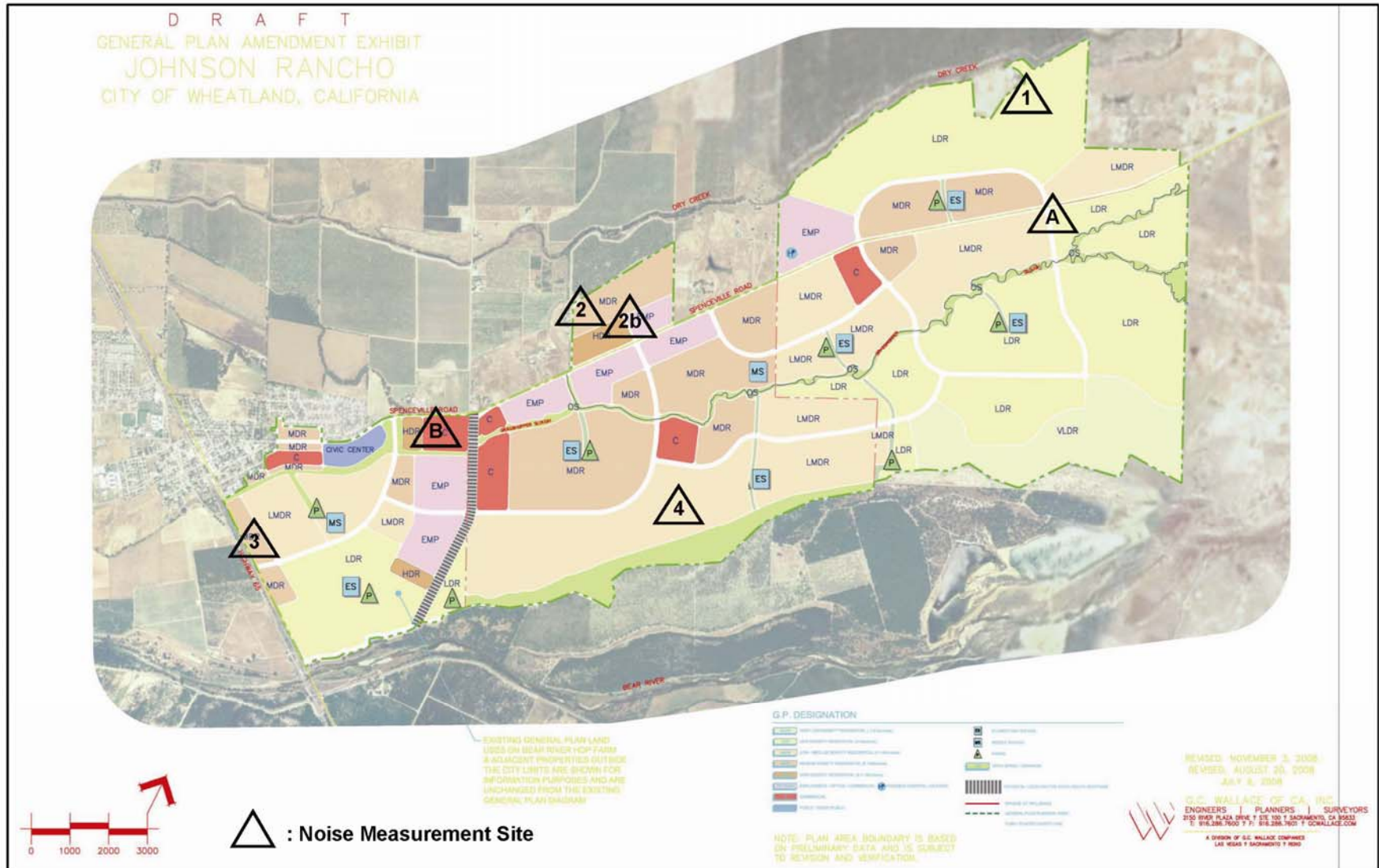


Table 4.5-2 Ambient Noise Monitoring Results for Johnson Rancho and Hop Farm									
Site	Location	Date	Average Measured Hourly Noise Levels, dBA						
			Ldn/ CNEL	Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm - 7 am)		
				Leq	L ₅₀	Lmax	Leq	L ₅₀	Lmax
Continuous 24-hour Noise Measurement Sites									
1	Northeastern boundary	May 12, 2009	47.7	44.8	37.7	63.7	40.2	35.9	49.8
2	North boundary	May 12, 2009	55.7	56.6	41.1	67.8	43.7	39.5	55.1
3	West boundary	May 12, 2009	67.4	62.6	52.1	75.3	60.6	47.0	69.4
4	South boundary	May 12, 2009	50.1	49.9	34.6	67.8	40.3	32.3	51.9
Short-term Noise Measurement Sites									
A	Southeast side of site, south of Spenceville	May 12, 2009	--	50.8	41.5	70.0	@ 1:11 p.m.		
B	West side of site, south of Spenceville	May 12, 2009	--	56.3	48.0	76.6	@ 4:42 p.m.		
Note: Sites A and B were monitored on a short-term basis, whereas sites 1-4 were monitored continuously for a 24-hour period.									
Source: j.c. brendan & associates, Inc., Environmental Noise Analysis, August 27, 2010.									

Railroad Noise Levels

Railroad activity within the project vicinity occurs along the Union Pacific Railroad (UPRR) line which borders the western boundary of the project area. j.c. brennan & associates, Inc. staff conducted continuous hourly noise measurements adjacent to the railroad tracks on Tuesday, May 12, 2009. The sound level meter was programmed to collect single event noise level data due to train pass bys on the project site, as well as overall hourly noise level data. The noise level measurements were conducted at a distance of approximately 210 feet east of the centerline of the UP railroad tracks. Figure 4.5-1 shows the location of the noise measurement site (Site #3).

The results of the noise level measurements indicated that the typical train operations resulted in an average sound exposure level (SEL) of 100 dB at a distance of 210 feet from the railroad track centerline. Based upon file data collected in the area of the project site, approximately 13 trains per day operate along the track. Using accepted noise prediction methodology to account for attenuation over distance, the predicted railroad noise levels and distances to noise contours are shown in Table 4.5-4. An even day/night distribution of trains was assumed. A complete listing a railroad contour calculation input calculations and results is provided in Appendix C of Appendix F of the Draft EIR.

Table 4.5-3					
Ambient Noise Levels and Distances to Contours for Johnson Rancho and Hop Farm					
Roadway	Segment	Ldn @ 100 Feet (dB)	Distance to Contours (feet)		
			70 dB	65 dB	60 dB
Camp Far West Road	South of Spenceville	54	8	17	38
First St.	West of SR 65	55	10	22	48
First St.	East of SR 65	49	4	8	17
Fourth St.	West of SR 65	41	1	3	6
Fourth St.	East of SR 65	56	11	24	51
Main St.	West of SR 65	44	2	4	8
Main St.	East of SR 65	56	12	25	55
McCourtney Road	North of Riosa Road	55	9	20	43
McCourtney Road	South of Riosa Road	58	15	33	70
Ring Road	SR 65 to "A" St	NA	NA	NA	NA
Ring Road	"A" St. to Spenceville	NA	NA	NA	NA
Ring Road	Spenceville to SR 65	NA	NA	NA	NA
Spenceville Road	West of Ring Road	56	11	24	51
Spenceville Road	Ring to Wheatland Expressway	56	11	24	51
Spenceville Road	Wheatland Expressway to "A" St.	59	19	41	89
Spenceville Road	"A" St. to "D" St.	59	19	41	89
Spenceville Road	"D" St. to Camp Far West	59	18	39	85
Spenceville Road	East of Camp Far West	57	14	31	67
SR 65	North of Wheatland Expressway	73	161	347	748
SR 65	Wheatland Expressway to Riosa Road	73	167	360	776
SR 65	South of Riosa Road	73	167	360	776
Wheatland Expressway	South of Spenceville	NA	NA	NA	NA
Wheatland Expressway	North of Spenceville	NA	NA	NA	NA
Note: Distances to traffic noise contours are measured in feet from the centerlines of the roadways.					
Source: FHWA-RD-77-108 with inputs from KD Anderson, Caltrans, and j.c. brennan & associates, Inc., 2010.					

Table 4.5-4			
Predicted UPRR Noise Contours for Johnson Rancho and Hop Farm			
Ldn at 210 feet	Distance to Railroad Noise Contours, Ldn*		
	60 dB	65 dB	70 dB
67.8 dB	699 feet	324 feet	150 feet
*Distances to noise contours are measured in feet from the centerline of the railroad tracks.			
Source: j.c. brennan & associates, Inc., Environmental Noise Analysis, August 27, 2010.			

Aviation Noise Levels

Beale AFB is located approximately three miles north of the proposed project. Figure 4.5-2 is an illustration of the Community Noise Exposure Level (CNEL) Beale AFB Safety Zones and Noise Contours taken from the Draft Initial Study for the updated Beale AFB Airport Land Use Compatibility Plan.⁴ As indicated on Figure 4.5-2, the entire Johnson Rancho and Hop Farm Annexation area is located well outside of the 60 dB CNEL contours predicted for Beale AFB.

For an evaluation of the worst-case scenario, as a means of addressing single event noise levels due to aircraft overflights associated with Beale AFB on the project site, j.c. brennan & associates, Inc. conducted short-term noise level measurements and observations of aircraft overflights on May 11, 12, and 13, 2009. Field observations of aircraft primarily included various fighter aircraft and U2 reconnaissance planes. The observations and measurements were conducted primarily at Sites 2b and 4 as shown on Figure 4.5-1. Table 4.5-5 shows a summary of the aircraft flyovers at each noise level measurement site, as observed during site observations.

REGULATORY CONTEXT

In order to limit population exposure to physically and/or psychologically damaging noise levels, the State of California, various county governments, and most municipalities in the State have established standards and ordinances to control noise. CEQA and the City of Wheatland General Plan Noise Element provide regulations regarding noise levels for uses relevant to the proposed project. The following provides a general overview of the existing regulations established by CEQA and the City.

State Regulations

Appendix G of the California Environmental Quality Act (CEQA) Guidelines indicates that a significant noise impact may occur if a project exposes persons to noise levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels.

State Building Code, Title 24

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including single and multi-family residences. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. Title 24 also mandates that for structures containing noise-sensitive uses to be located where the Ldn or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

Figure 4.5-2
Beale AFB Safety Zones and Noise Contours

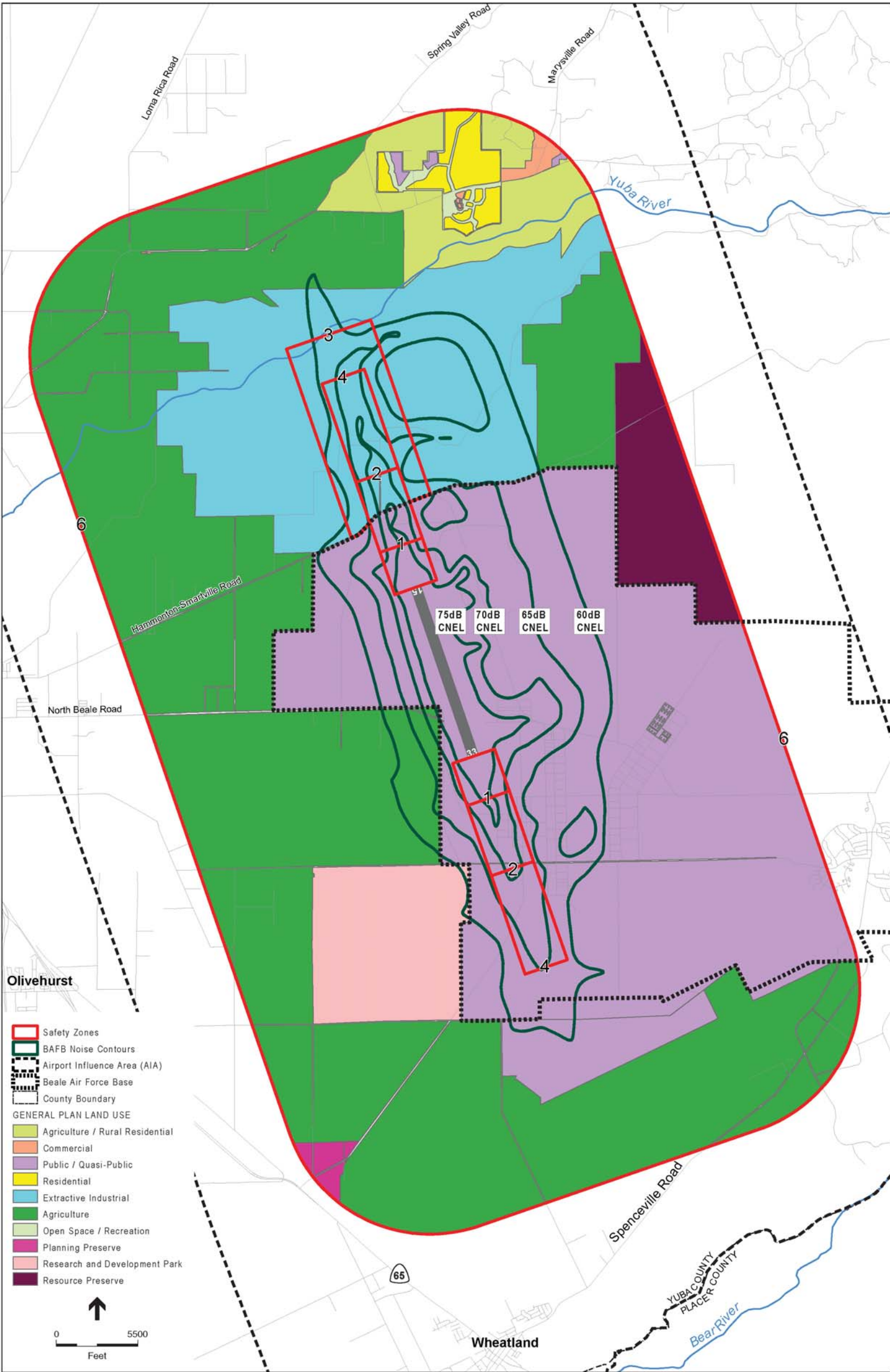


Table 4.5-5				
Summary of Observed Individual Aircraft Noise Levels				
May 11 th through 13 th for Johnson Rancho and Hop Farm				
Aircraft	No. Events	Exterior Sound Level, dB		
		Duration	SEL	Lmax
Site 1				
Two jet fighters, inbound	1	00:50.1	75	63
Jet flyover, west to east	1	00:24.4	73	63
Site 2				
Jet fighter, west to east turn	1	00:16.3	65	56
Single engine, takeoff	1	00:19.8	67	57
Jet fighter, west to east	1	00:21.8	73	68
Jet fighter overflight	1	00:28.8	76	67
Jet fighter overflight	1	00:43.2	78	68
U2 approach and overflight	1	01:06.2	80	69
Jet fighter overflight	1	00:28.7	81	73
U2 approach and overflight	1	01:34.3	82	69
Jet fighter overflight	1	01:09.7	84	74
Two jet fighters, inbound, slow	1	01:19.7	90	79
Site 3				
Single engine, takeoff	1	00:23.0	69	58
Jet fighter overflight	1	00:17.9	75	66
Jet fighter overflight	1	00:19.6	79	71
Jet fighter overflight	1	00:28.5	79	70
U2 approach and overflight	1	00:47.5	83	73
U2 approach and overflight	1	00:52.0	86	75
U2 approach and overflight	1	01:22.9	86	73
Jet fighter overflight	1	00:45.2	89	80
Two jet fighters, inbound, slow	1	01:12.8	94	84
Source: j.c. brennan & associates, Inc., Environmental Noise Analysis, August 27, 2010.				

State of California Public Utilities Code

Section 21669, Article 3, Chapter 4, Part 1, Division 9 of the California Public Utilities Code (PUC) (Aeronautics Law) provides the legislative authority to adopt noise standards governing the operation of aircraft and aircraft engines for airports. Caltrans Division of Aeronautics is the agency responsible for compliance with this PUC section. Section 21662.4 (a), Article 3, Chapter 4, Part 1, Division 9 of the PUC exempts emergency service helicopters from local ordinances (Caltrans 2002[a]).

State Aeronautics Act

Chapter 4, Article 3, Section 21669 of the State Aeronautics Act (Division 9, Part 1 of the California Public Utilities Code) requires the State Department of Transportation to adopt—to an extent not prohibited by federal law—noise standards applicable to all airports operating under a State permit (Caltrans 2002[a]).

California Airport Noise Regulations

The airport noise standards promulgated in accordance with the State Aeronautics Act are set forth in Section 5000 et seq. of the California Code of Regulations (Title 21, Division 2.5, Chapter 6). The current version of the regulations became effective in March 1990.

In Section 5006, the regulations state, “The level of noise acceptable to a reasonable person residing in the vicinity of an airport is established as a community noise equivalent level (CNEL) value of 65 dBA for purposes of these regulations. This criterion level has been chosen for reasonable persons residing in urban residential areas where houses are of typical California construction and may have windows partially open. It has been selected with reference to speech, sleep and community reaction.” In accordance with procedures listed in Section 5020, the county board of supervisors can declare an airport to have a “noise problem.” As specified in Section 5012, no such airport shall operate “[...] with a noise impact area based on the standard of 65 dBA CNEL unless the operator has applied for or received a variance as prescribed in [...]” the regulations. For designated noise problem airports, the “noise impact area” is the area within the airport’s 65 dB CNEL contour that is composed of incompatible land uses. The following four types of land uses are defined as incompatible (Caltrans 2002[a]):

- Residences of all types;
- Public and private schools;
- Hospitals and convalescent homes; and
- Churches, synagogues, temples, and other places of worship.

However, these uses are not deemed incompatible if any of several mitigative actions has been taken as spelled out in Section 5014. Among these measures are airport acquisitions of an aviation easement for aircraft noise and, except for some residential uses, acoustical insulation adequate to ensure that the interior CNEL due to aircraft noise is 45 dBA or less in all habitable rooms (Caltrans 2002[a]).

Caltrans Division of Aeronautics

The California Department of Transportation (Caltrans), Division of Aeronautics, has adopted the Community Noise Equivalent Level (CNEL) as the noise descriptor to be used in describing the noise impact boundary of California airports. The Division of Aeronautics has identified a noise impact criterion of 65 dBA CNEL for noise-sensitive land uses, such as single family dwellings. The CNEL descriptor is typically about 1 dB more than the Ldn because it applies an additional penalty for noise sources between the hours of 7:00 p.m. and 10:00 p.m. The Ldn descriptor only applies a penalty to noise levels between the hours of 10:00 p.m. and 7:00 a.m. (Caltrans 2002[a]).

Beale Joint Land Use Study

The *Beale Joint Land Use Study*, prepared in May 2008 by the Governor's Office of Planning and Research, prepared existing ("current mission") and future ("hypothetical") noise contours for Beale AFB. The study also notes that residential uses are compatible with noise levels up to 65 dB CNEL.

Local

City of Wheatland General Plan

The City of Wheatland contains the following General Plan goals and policies regarding noise.

Goal 9.G To protect Wheatland residents from the harmful and annoying effects of exposure to excessive noise.

Policy 9.G.1. The City shall prohibit development of new noise-sensitive uses where the noise level due to non-transportation noise sources would exceed the noise level standards of Wheatland. The noise level standards are included in the following Table 4.5-6.

Table 4.5-6		
Noise Level Performance Standards		
New Projects Affected by or Including Non-Transportation Sources		
Noise Level Descriptor	Daytime (7am-10pm)	Nighttime (10pm-7am)
Hourly Leq, dB	50	45
Maximum Level, dB	70	65
<i>Source: Wheatland General Plan EIR, 2006.</i>		

Policy 9.G.2. The City shall require that noise created by new non-transportation sources might be mitigated so as not to exceed the noise level standards of Wheatland, as measured immediately within the property line of lands designated for sensitive uses.

Policy 9.G.3 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 9-1 at existing or planned noise-sensitive uses, the City shall require an acoustical analysis as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 9.G.4. The City shall prohibit new development of noise-sensitive land uses in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the noise level standards of Wheatland, unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to levels of Wheatland standards.

Policy 9.G.5. The noise created by new transportation noise sources shall be mitigated so as not to exceed the levels specified in Table 4.5-7 at outdoor activity areas or interior spaces of existing noise-sensitive land uses.

Table 4.5-7 Maximum Allowable Noise Exposure Transportation Noise Sources			
Land Use	Outdoor Activity Areas¹ Leq/CNEL dB	Interior Spaces	
		Leq/CNEL dB	Leq,dB²
Residential	60 ³	45	-
Transient Lodging	60 ³	45	-
Hospitals, Nursing Homes	60 ³	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls	60 ³	-	40
Office Buildings	-	-	45
Schools, Libraries, Museums	-	-	45
Playground, Neighborhood Parks	70	-	-
¹ Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB Ldn shall be applied at the building façade, in addition to a 60 dB Ldn criterion at the outdoor activity area. 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 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table. <i>Source: City of Wheatland General Plan Background Report, July 11, 2006.</i>			

Policy 9.G.6. New roadway improvement projects will be needed to accommodate development permitted according to the Land Use Diagram. Where existing noise-sensitive uses may be exposed to

increased noise levels due to increased roadway capacity and increases in travel speeds associated with roadway improvements, the City will apply the following criteria to determine the significance of increases in noise related to roadway improvement projects:

- a. Where existing traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +5 dB Ldn increase in noise levels due to a roadway improvement project will be considered significant;
- b. Where existing traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +3 dB Ldn increase in noise levels due to a roadway improvement project will be considered significant; and
- c. Where existing traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +1.5 dB Ldn increase in noise levels due to a roadway improvement project will be considered significant.

Policy 9.G.7. An increase of 3 dB Ldn or greater due to additional traffic volumes is considered a potentially significant impact if the resultant noise level exceeds the thresholds set forth in Policy 9.G.5, Table 4.5-7.

Goal 9.H To protect the economic base of the City by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.

Policy 9.H.1 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels set out in Table 9-2 or the performance standards of Table 9-1, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 9.H.2 Where noise mitigation measures are required to achieve the standards of Tables 9-1 and 9-2, the emphasis in such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.

Policy 9.H.3 City shall support the Right-to-Farm Ordinance, especially as it relates to noise emanating from the agricultural operations adjacent to urban uses.

- Policy 9.H.4 The City shall work with the Sacramento Area Council of Governments (SACOG) to ensure that the City's noise policies and contours are consistent with the Beale Air Force Base Land Use Plan.

Criteria for Acceptable Vibration

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

The City of Wheatland does not contain specific policies pertaining to vibration levels. However, vibration levels associated with construction activities are discussed in this report.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 4.5-8, which was developed by Caltrans, shows the vibration levels which would normally be required to result in damage to structures. The vibration levels are presented in terms of peak particle velocity in inches per second.

Table 4.5-8 indicates that the threshold for damage to structures ranges from 2 to 6 in/sec. One-half this minimum threshold or 1 in/sec peak particle velocity (ppv) is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is noted as 0.1 in/sec ppv.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

Generally, a project may have a significant effect on the environment if the project were to result in a substantial increase in ambient noise levels for adjoining areas, or if the project would expose people to severe noise levels. In practice, more specific professional standards have been developed, as discussed previously in the Regulatory Setting heading of this Section. The applicable standards state that a noise impact may be considered significant if the project would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses.

Table 4.5-8 Effects of Various Vibration Levels on People and Buildings			
Peak Particle Velocity (inches/second)	Peak Particle Velocity (mm/second)	Human Reaction	Effect on Buildings
0-0.006	0.15	Imperceptible by people	Vibrations unlikely to cause damage of any type
0.006-0.02	0.5	Range of Threshold of perception	Vibrations unlikely to cause damage of any type
0.08	2.0	Vibrations clearly perceptible	Recommended upper level of which ruins and ancient monuments should be subjected
0.1	2.54	Level at which continuous vibrations begin to annoy people	Virtually no risk of architectural damage to normal buildings
0.2	5.0	Vibrations annoying to people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
1.0	25.4		Architectural Damage
2.0	50.4		Structural Damage to Residential Buildings
6.0	151.0		Structural Damage to Commercial Buildings
<i>Source: Caltrans, Survey of Earth-borne Vibrations due to Highway Construction and Highway Traffic, 1976.</i>			

For this analysis, noise impacts associated with the proposed project would be considered significant if the following were to occur:

- Expose residential uses near an identified noise source, to exterior noise levels exceeding 65 dB Ldn at the building façade or 60 dB Ldn at the outdoor activity area;
- An increase of 3 dB Ldn or greater due to additional traffic volumes resulting in a substantial permanent increase in ambient noise levels in the project vicinity above levels 60 dB for outdoor activity areas with land uses of residential, transient lodging, hospitals, nursing homes, churches, and meeting halls or 70 dB for playground and neighborhood parks;
- An increase of 3 dB Ldn or greater due to additional traffic volumes resulting in a substantial permanent increase in ambient noise levels in the project vicinity above levels 45 dB for interior spaces with lands of residential, transient lodging, hospitals, nursing homes, office buildings, schools, libraries, and museums, 35 dB for theaters, auditoriums, and music halls, or 40 dB for churches and meeting halls;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, where the project would expose people residing or working in the area to excessive noise levels; or
- A single-event noise resulting in interior SEL in excess of 65 dB within residences.

Single-Event Noise Level Criteria

The City of Wheatland Noise Element, like most cities and counties, does not contain noise level standards for single events. However, since a recent court case in Berkeley, California (*Berkeley keep jets over the bay*), there has been increased attention to the evaluation of single-event noise levels due to aircraft overflights in addition to the more typical evaluation of aircraft noise sources using 24-hour average descriptors such as Ldn and CNEL. Because the Berkeley case involved an *increase* in aircraft overflights in an existing residential area, and this project involves the introduction of new residential uses into an area where aircraft overflights already occur (without a proposed increase in Beale AFB operations due to this project), the situations are considerably different.

While the Berkeley case ruling required that single-event noise be considered, the ruling did not recommend an appropriate single event noise level standard. Extensive studies have been conducted regarding the effects of single-event noise on sleep disturbance, but due to the wide variation in test subjects' reactions to noises of various levels (Some test subjects were awakened by indoor SEL values of 50 dB, whereas others slept through indoor SEL values exceeding 80 dB), a definitive consensus has not been reached with respect to a universal criterion to apply. Because the recent Berkeley case drew concerns due to interior SEL values in excess of 65 dB, this analysis considers an interior SEL criterion of 65 dB for the assessment of single event noise levels within residences. It should be noted that this single-event (SEL) threshold is in response to the Berkeley case and is a completely separate measurement than the 45 dB 24-hour average interior threshold.

Method of Analysis

Larson Davis Laboratories (LDL) Model 820 and 824 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

A combination of use of existing literature, and application of accepted noise prediction and sound propagation algorithms, were used to predict impacts due to and upon development of the Johnson Rancho and Hop Farm project. Specific noise sources evaluated in this section include surface traffic, railroad, aircraft, and construction. Potential noise impacts of each of these major noise sources are described below.

Traffic Noise Impact Assessment Methodology

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at a representative distance for the future, project and no-project conditions for the Johnson Rancho and Hop Farm project. Noise impacts are identified at existing noise-sensitive areas if the project generated noise levels would result significant increases in noise levels.

To describe existing and projected noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calvenio reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. To predict traffic noise levels in terms of Ldn, the input volume was adjusted to account for the day/night distribution of traffic.

In most locations, the project traffic consultant provided daily roadway traffic volumes in the form of ADT segments. In some locations, the PM peak hour traffic volumes were compiled into segment volumes and converted into daily traffic volumes using a factor of 10. Truck usage and vehicle speeds on the local area roadways were estimated from field observations and Caltrans, where available. Roadway input assumptions are consistent with the Noise Element of the City of Wheatland General Plan, where applicable. The predicted increases in traffic noise levels on the local roadway network for future conditions which would result from the project are provided in terms of Ldn at a standard distance of 100 feet from the centerlines of the project-area roadways.

Construction Noise and Vibration Impact Methodology

Construction noise and vibration was analyzed using data compiled for various pieces of construction equipment at representative distances of 25-50 feet. Construction activities are discussed relative to the applicable City of Wheatland General Plan Noise Ordinance policies. Potential impacts and mitigation measures are discussed.

Aviation Noise Impact Methodology

Aviation noise is addressed through a combination of short-term and continuous site noise measurements of aircraft operations and review of adopted airport land-use compatibility policies and noise contours. The potential for sleep disturbance is discussed based upon the results of single event noise measurements conducted on the project site.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Johnson Rancho and Hop Farm) unless otherwise noted.

4.5-1 Impacts related to construction noise.

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in Table 4.5-9, ranging from 77 to 90 dB at a distance of 50 feet. Construction activities involving blasting or pile driving could consist of impulsive noise levels of approximately 94-95 dB L_{max} at a distance of 50 feet.

**Table 4.5-9
Construction Equipment Noise**

Equipment	Typical Noise Level (dBA) 50 feet from Source ¹		Distance to Noise Contours (feet, dBA Lmax)		
	Lmax	Leq	70 dBA	65 dBA	60 dBA
Air Compressor	80	76	158	281	500
Auger/Rock Drill	85	78	281	500	889
Backhoe/Front End Loader	80	76	158	281	500
Blasting	94	74	792	1409	2506
Boring Hydraulic Jack/Power Unit	80	77	158	281	500
Compactor (Ground)	80	73	158	281	500
Concrete Batch Plant	83	75	223	397	706
Concrete Mixer Truck	85	81	281	500	889
Concrete Mixer (Vibratory)	80	73	158	281	500
Concrete Pump Truck	82	75	199	354	629
Concrete Saw	90	83	500	889	1581
Crane	85	77	281	500	889
Dozer/Grader/Excavator/Scraper	85	81	281	500	889
Drill Rig Truck	84	77	251	446	792
Generator	82	79	199	354	629
Gradall	85	81	281	500	889
Hydraulic Break Ram	90	80	500	889	1581
Jack Hammer	85	78	281	500	889
Impact Hammer/Hoe Ram (Mounted)	90	83	500	889	1581
Pavement Scarifier/Roller	85	78	281	500	889
Paver	85	82	281	500	889
Pile Driver (Impact/Vibratory)	95	88	889	1581	2812
Pneumatic Tools	85	82	281	500	889
Pumps	77	74	112	199	354
Truck (Dump/Flat Bed)	84	80	251	446	792

¹ Based on typical equipment noise levels and default equipment usage rates obtained from the FHWA Road Construction Noise Model (2006). Distances to noise contours are approximate and assume do not include excess ground attenuation or shielding. Actual noise levels and contour distances will vary depending on project and site-specific conditions.

Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration, FHWA-HEP-05-054, January 2006.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration, and would likely occur primarily during daytime hours.

Based upon the noise contour distances shown in Table 4.5-9, typical construction activities could generate noise level that would exceed the City's 65 dB Lmax and 70 dB

Lmax exterior noise level standards at distances of 500 feet, or more. The Hop Farm portion of the project is located adjacent to existing residences within the City of Wheatland and activities associated with construction could result in elevated noise levels, with maximum noise levels ranging from 77-90 dB at 50 feet. In addition, construction of the project would occur in phases and construction-related noise levels could impact existing or future sensitive receptors. Construction activities would be temporary in nature and would likely occur during normal daytime working hours. However, because construction activities would result in periods of elevated noise levels, this impact is considered *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.5-1 *In conjunction with submittal of **each** tentative map application within the Johnson Rancho and Hop Farm Annexation area, a site-specific noise mitigation plan shall be prepared. The noise mitigation plan shall be required to show that the project would be consistent with the Wheatland General Plan and shall include, but not be limited to, the following mitigation measures:*

- *Construction activities shall occur between the hours of 7 a.m. to 6 p.m. weekdays and 8 a.m. to 5 p.m. on the weekends;*
- *All heavy construction equipment and all stationary noise sources (such as diesel generators) shall have manufacturers installed mufflers;*
- *Fixed construction equipment shall be located as far as possible from sensitive receptors;*
- *Consideration of temporary sound curtain and noise barriers for long-term stationary equipment;*
- *Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible; and*
- *A disturbance coordinator shall be designated to receive all public complaints regarding construction noise disturbances and responsible for determining the cause of the complaint and implement any feasible measures to alleviate the problem. The coordinator contact information shall be conspicuously posted around the project site and adjacent public spaces.*

The noise mitigation plan shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of each tentative map. The developer shall implement and comply with the approved noise mitigation plan.

4.5-2 Impacts related to construction vibration to existing receptors or sensitive structures.

Primary construction activities associated with the project, including infrastructure such as roadways and utilities, would generate vibration. Table 4.5-10 shows the velocity level generation by construction activities at distances of 25 feet or greater.

Table 4.5-10 Vibration Levels for Varying Construction Equipment		
Type of Equipment	Peak Particle Velocity @ 25 feet (inches/second)	Approximate Velocity Level @ 25 feet (VdB)
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Small Bulldozer	0.003	58
Auger/drill Rigs	0.089	87
Jackhammer	0.035	79
Vibratory Hammer	0.070	85
Vibratory Compactor/roller	0.210	94
<i>Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.</i>		

Most construction activities would not generate vibrations exceeding thresholds of annoyance or risk to buildings, peak particle velocity of 0.2 inches per second. Therefore, as a majority of construction activity are anticipated to occur at distances greater than 25 feet from occupied residences, the impact related to vibration would be considered *less-than-significant*.

Mitigation Measure(s)
None required.

4.5-3 Impacts related to exposure of existing receptors to significant increases in traffic noise levels.

Development of the project area includes the construction of approximately 4,396 acres including 3,249 acres of residential, 131 acres of commercial, 274 acres of employment, and additional urban uses. Buildout of the project area would result in changes to traffic on the existing roadway network in the City of Wheatland and immediate vicinity. As a result, project buildout would cause an increase in traffic noise levels on the local roadway network. At buildout, the Johnson Rancho and Hop Farm project would increase trip generation and noise levels, varying with the proximity to the roadways.

Table 4.5-11 shows the predicted change in noise levels with development of the proposed project and change in noise levels with implementation of traffic mitigation measures. Relative to the anticipated cumulative traffic noise levels, the increases in

traffic noise levels on City of Wheatland roadways with implementation of traffic mitigation measures are predicted to range from 0 to 10.1 dB, as indicated in Table 4.5-11. In addition, Table 4.5-11 shows the cumulative with project and cumulative with project with traffic mitigation distances to predicted noise level contours. A complete dataset for the inputs and results for the FHWA traffic model are in Appendix B of Appendix F of the Draft EIR.

As shown in Table 4.5-12, sensitive receptors would be within the 60 dB contours, which extend from 132 feet to 616 feet, at Spenceville Road for roadway segments that exceed a 3 dB increase. In addition, sensitive receptors would be within the 60 dB noise contour along Camp Far West Road and McCourtney Road, which extends 147 feet from roadway centerline.

A substantial increase in traffic noise levels, as stated in Policy 9.G.7, is defined as 3 dB or greater if the resultant noise level exceeds the applicable noise threshold, which is 60 dB for residential outdoor areas or 65 dB at the building façade. Buildout of the Johnson Rancho and Hop Farm Annexation project would result in an increase of traffic noise levels greater than 3 dB on the following project roadways:

- McCourtney Road – North of Riosa Road;
- Spenceville Road – Wheatland Expressway to A Street;
- Spenceville Road – A Street to D Street;
- Spenceville Road – D Street to Camp Far West; and
- Spenceville Road – East of Camp Far West.

Therefore, development of the project could expose residences to traffic related noise increases exceeding 3 dB and traffic noise levels exceeding 60 dB Ldn, resulting in a *significant* impact.

Mitigation Measure(s)

Implementation of mitigation measures to reduce the above impact includes a combination of noise barriers, noise-reducing pavements, and speed reductions measures. However, implementation of the mitigation measures at appropriate locations along the affected roadways (e.g., application of noise reducing pavements on Spenceville Road would reduce noise levels by 4 dB but the residual increases would be greater than 3 dB) would not be feasible. Therefore, the impact from traffic noise levels would be *significant and unavoidable*.

**Table 4.5-11
Cumulative (2025) Noise Levels for Johnson Rancho and Hop Farm Annexation Project**

Roadway	Segment	Noise Levels (Ldn, dB) 100 Feet From Centerline ¹					
		Cumulative (2025) vs. Cumulative (2025) with Project			Cumulative (2025) vs. Cumulative (2025) with Project with Mitigation		
		Cumulative	Plus Project	Change (dB)	Cumulative	Plus Project + Mitigation	Change (dB)
Camp Far West Road	South of Spenceville	58.8	62.5	3.7	58.8	58.8	0.0
First St.	West of SR 65	58.2	58.2	0.0	58.2	58.0	-0.2
First St.	East of SR 65	50.5	50.5	0.0	50.5	51.0	0.5
Fourth St.	West of SR 65	49.7	49.4	-0.3	49.7	48.2	-1.5
Fourth St.	East of SR 65	56.2	56.4	0.2	56.2	56.3	0.1
Main St.	West of SR 65	53.4	53.4	0.0	53.4	54.2	0.8
Main St.	East of SR 65	55.1	55.0	-0.1	55.1	55.5	0.4
McCourtney Road	North of Riosa Road	58.3	61.5	3.2	58.3	61.5	3.2
McCourtney Road	South of Riosa Road	60.9	62.9	2.0	60.9	62.9	2.0
Ring Road	SR 65 to "A" St	62.9	65.0	2.1	62.9	65.0	2.1
Ring Road	"A" St. to Spenceville	62.9	65.0	2.1	62.9	65.0	2.1
Ring Road	Spenceville to SR 65	64.2	65.2	1.0	64.2	65.2	1.0
Spenceville Road	West of Ring Road	60.1	61.1	1.0	60.1	60.9	0.8
Spenceville Road	Ring to Wheatland Expressway	64.9	66.6	1.7	64.9	66.8	1.9
Spenceville Road	Wheatland Expressway to "A" St.	63.9	71.2	7.3	63.9	71.8	7.9
Spenceville Road	"A" St. to "D" St.	60.1	69.3	9.2	60.1	69.3	9.2
Spenceville Road	"D" St. to Camp Far West	58.1	67.7	9.6	58.1	67.8	9.7
Spenceville Road	East of Camp Far West	51.7	61.4	9.7	51.7	61.8	10.1
SR 65	North of Wheatland Expressway	77.1	77.6	0.5	77.1	77.6	0.5
SR 65	Wheatland Expressway to Riosa Road	77.5	78.7	1.2	77.5	78.7	1.2
SR 65	South of Riosa Road	75.1	75.6	0.5	75.1	75.6	0.5
Wheatland Expressway	South of Spenceville	77.5	78.7	1.2	77.5	78.7	1.2
Wheatland Expressway	North of Spenceville	76.4	77.8	1.4	76.4	77.8	1.4

¹ Traffic noise levels do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.

Source: FHWA RD-77-108 with inputs from KD Anderson, Caltrans, and j.c. breman & associates, Inc., 2010.

**Table 4.5-12
Cumulative (2025) Plus Project Noise Contour Distances**

Roadway	Segment	Distances to Noise Contours ($L_{dn}/CNEL$) ¹					
		Cumulative (2025) vs. Cumulative (2025) with Project			Cumulative (2025) vs. Cumulative (2025) with Project with Mitigation		
		70 dBA	65 dBA	60 dBA	70 dBA	65 dBA	60 dBA
Camp Far West Road	South of Spenceville	32	68	147	18	38	83
First St.	West of SR 65	16	35	76	16	34	73
First St.	East of SR 65	5	11	23	5	12	25
Fourth St.	West of SR 65	4	9	20	4	8	16
Fourth St.	East of SR 65	12	27	57	12	26	57
Main St.	West of SR 65	8	17	36	9	19	41
Main St.	East of SR 65	10	21	46	11	23	50
McCourtney Road	North of Riosa Road	27	59	127	27	59	127
McCourtney Road	South of Riosa Road	33	72	155	33	72	155
Ring Road	SR 65 to "A" St	47	100	216	46	100	216
Ring Road	"A" St. to Spenceville	47	100	216	46	100	216
Ring Road	Spenceville to SR 65	48	104	224	48	104	224
Spenceville Road	West of Ring Road	26	55	119	25	53	115
Spenceville Road	Ring to Wheatland Bypass	59	127	273	61	131	283
Spenceville Road	Wheatland Expressway to "A" St.	120	259	558	133	286	616
Spenceville Road	"A" St. to "D" St.	90	194	418	89	192	415
Spenceville Road	"D" St. to Camp Far West	70	150	324	72	154	332
Spenceville Road	East of Camp Far West	27	58	125	28	61	132
SR 65	North of Wheatland Expressway	321	693	1492	321	693	1,492
SR 65	Wheatland Expressway to Riosa Road	379	817	1759	379	817	1,759
SR 65	South of Riosa Road	235	507	1091	235	507	1,091
Wheatland Expressway	South of Spenceville	379	817	1759	379	817	1,759
Wheatland Expressway	North of Spenceville	329	709	1528	329	709	1,528
"A" St.	Ring Road to Wheatland Bypass	42	91	195	54	116	250
"A" St.	Wheatland Expressway to "C" St.	64	139	299	50	108	233
"A" St.	"C" St. to Spenceville	40	87	187	32	70	151
"B" St.	Spenceville to "F" St.	28	61	131	29	63	136
"C" St.	"A" St. to "F" St.	40	87	187	39	84	181
"D" St.	North of Spenceville	27	58	125	27	58	125

Table 4.5-12 (continued)
Cumulative (2025) Plus Project Noise Contour Distances

Roadway	Segment	Distances to Noise Contours (L_{dn} /CNEL) ¹					
		Cumulative (2025) vs. Cumulative (2025) with Project			Cumulative (2025) vs. Cumulative (2025) with Project with Mitigation		
		70 dBA	65 dBA	60 dBA	70 dBA	65 dBA	60 dBA
"E" St.	Spenceville to "F" St.	22	48	102	23	50	108
"F" St.	Spenceville to "C" Street	15	32	69	21	46	99

¹ Distances to traffic noise contours are measured in feet from the centerlines of the roadways.

Source: FHWA RD-77-108 with inputs from KD Anderson, Caltrans, and j.c. brennan & associates, Inc., 2010.

4.5-4 Impacts related to exposure of existing or proposed receptors to project-generated noise levels exceeding applicable noise standards.

Buildout of the Johnson Rancho and Hop Farm Annexation project includes the development of a variety of noise generating uses, such as commercial, that have the potential to generate noise levels, in excess of the applicable City of Wheatland noise standards or result in annoyance at existing or future noise-sensitive developments with the project area. The project analysis is a program-level EIR as site specific uses are not known.

The project includes commercial land uses which typically generate parking lot noise, HVAC equipment, and truck delivery noise. In addition, children playing at neighborhood parks are often considered significant noise sources which could adversely affect adjacent noise-sensitive uses. Typical noise levels associated with groups of approximately 50 children playing at a distance of 50 feet generally range from 55 to 60 dB Leq, with maximum noise levels ranging from 70 to 75 dB.

Given the proximity of most parks to residential uses, the potential for exceedance of the City of Wheatland noise standards exists, depending on the orientation and proximity of the play areas to those nearest residences, the number of children using the play areas at a given time, and the types of activities the children are engaged in.

Conclusion

The project includes commercial, park, and school uses that could generate significant noise levels that could impact nearby sensitive receptors. Therefore, without implementation of noise reduction measures a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.5-4 *Implement Mitigation Measure 4.5-1.*

The noise mitigation plan shall include, but not be limited to, the following additional mitigation measures:

- *Loading docks and truck delivery areas shall maintain a minimum distance of 30 feet from residential property lines;*
- *Property line noise barriers shall be six to eight feet in height. Circulation routes for trucks should be located a minimum of 30 feet from residential property lines;*
- *All heating, cooling and ventilation equipment shall be located within mechanical rooms where possible;*

- *All heating, cooling and ventilation equipment shall be shielded from view with solid barriers;*
- *Emergency generators shall comply with the local noise criteria at the nearest noise-sensitive receivers;*
- *In cases where loading docks or truck delivery circulation routes are located less than 100 feet from residential property lines, an acoustical evaluation shall be submitted to verify compliance with the City of Wheatland General Plan Noise Element standards; and*
- *Six-foot-tall sound walls shall be constructed where neighborhood parks or school playgrounds abut rear yards of residential uses.*

The noise mitigation plan shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the review of each tentative map. The developer shall implement and comply with the approved plan.

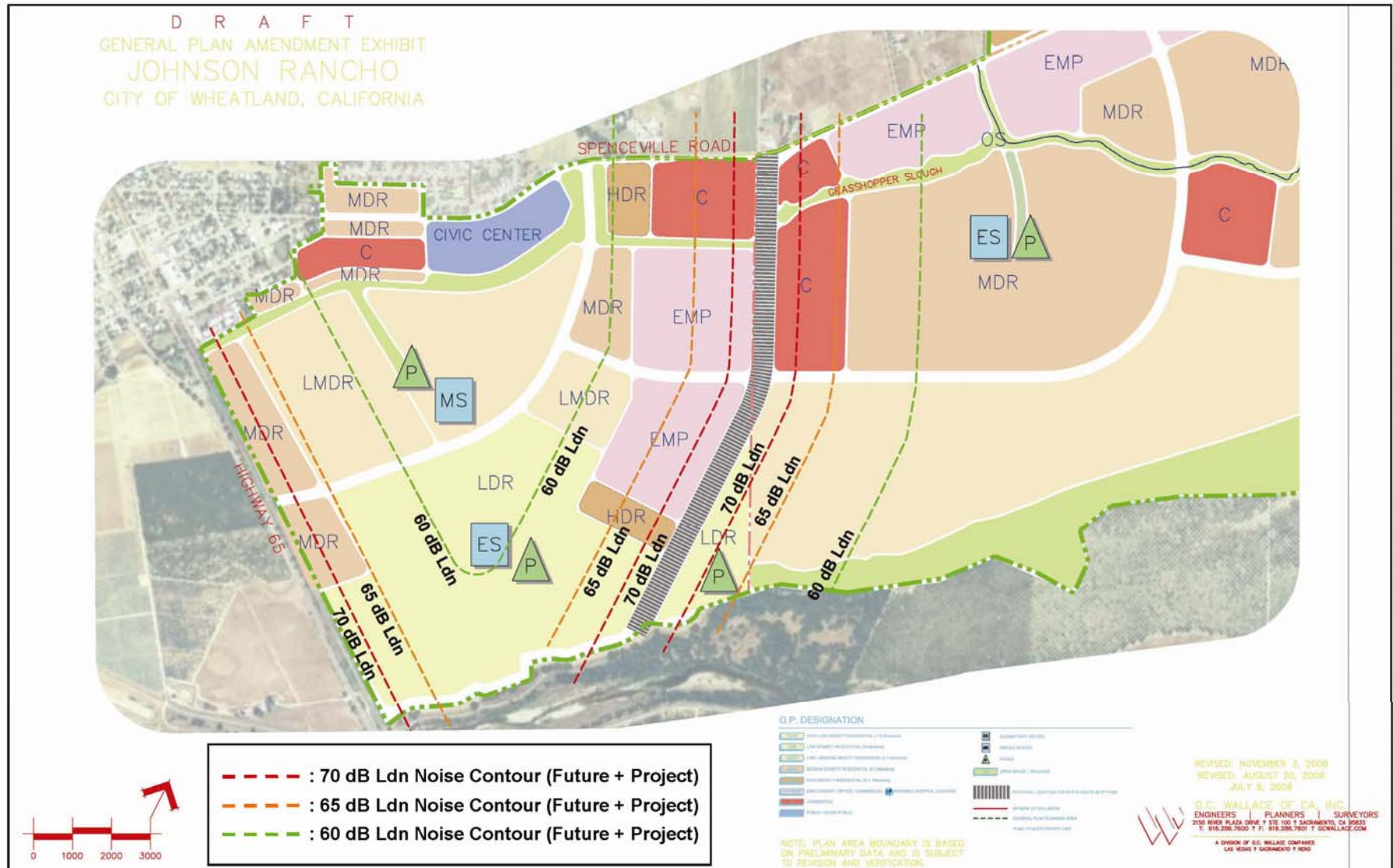
4.5-5 Impacts related to exposure of new noise-sensitive uses to transportation noise levels that exceed the City of Wheatland exterior and interior noise level standards.

Future noise-sensitive uses near the project transportation corridors could be affected by traffic or railroad noise levels exceeding the City of Wheatland 60 dB Ldn and exterior and 45 dB Ldn interior noise level standards. The FHWA traffic noise prediction model was utilized to predict the Plus Project traffic noise levels on adjacent roadways. Table 4.5-12 shows the distances to the 60, 65, and 70 dB Ldn noise contours for the affected roadways. Figure 4.5-3 shows the predicted traffic noise contours for SR 65 and the SR 65 Wheatland Expressway, and Figure 4.5-4 shows the predicted noise contours for the project-area surface roadways and the UPRR.

Based upon the 60 dB Ldn traffic noise contours from the FHWA model, areas around the primary project-area circulation routes would be exposed to exterior noise levels that exceed the City's 60 dB Ldn exterior noise level standard. Specifically, the highest levels of noise would occur near the Wheatland Expressway, Old SR 65, and Spenceville Road. Additionally, railroad operations on the adjacent UPRR line would generate noise levels that exceed the 60 dB Ldn at proposed residential areas of the project.

Based upon the noise contour distances presented in Table 4.5-12 and shown on Figures 4.5-3 and 4.5-4, exterior noise mitigation would be required for future residential developments constructed adjacent to the major project-area circulation routes. Typically sound walls and/or earthen berms can be used to mitigate exterior noise levels to a state of compliance with the City of Wheatland 60 dB Ldn exterior noise level standard. In addition, interior noise reduction measures may be required to achieve compliance with the City's 45 dB Ldn interior noise standard.

Figure 4.5-3
SR 65 and Wheatland Expressway Contours



Because the project would place new residential uses in areas exposed to exterior noise levels that exceed 60 dB Ldn, specific exterior and interior mitigation measures would require an acoustical analysis to determine compliance with the City's 60 dB Ldn exterior and interior 45 dB Ldn interior noise level standards. However, development of the project would be required to comply with all noise standards and regulations to ensure that any potential noise sources would not impact noise sensitive receptors. Standard residential construction practices conducted in accordance with local building codes provide approximately 25 dB exterior to interior noise level reduction with windows closed, and approximately 15 dB reduction with windows open. However, the project is a program-level analysis and does not include site-specific plans. Therefore, without site specific noise reduction measures, the impact is considered ***potentially significant***.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.5-5(a) *Implement Mitigation Measure 4.5-1.*

4.5-5(b) *In conjunction with the submittal of **each** zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, a site-specific noise analysis shall be performed. The site-specific noise analysis shall address interior and exterior traffic noise levels and recommend mitigation measures to reduce the noise to acceptable levels. The applicant shall be required to implement all mitigation measures recommend in the noise analysis, pursuant to review and approval by the Planning Commission and/or City Council in conjunction with the review of the development project.*

4.5-6 Impacts related to exposure of sensitive receptors to aviation noise from the Beale AFB that exceeds the acceptable noise standards.

The Beale AFB Airport Land Use Compatibility Plan (ALUCP) is associated with several jurisdictions and their associated plans and regulations, including the City of Marysville, the City of Wheatland, Yuba County, and Sutter County. The ALUCP utilized the "current mission" CNEL contours to represent the long-range (20+ years) noise impacts of Beale AFB. The contours are identified by the following four CNEL ranges: 75+ dB CNEL, 70-75 dB CNEL, 65-70 dB CNEL, and 60-65 dB CNEL (as presented in the 2005 Air Installation Compatibility Zone [AICUZ] that was prepared for Beale AFB).

As discussed above, the Beale AFB safety zones and noise contours depicted on Figure 4.5-2 indicate that the entire proposed project site would be located well outside the 60 dB CNEL noise contour, and the project site would not be exposed to exterior noise levels exceeding 60 dB CNEL. Therefore, impacts related to exposure of sensitive receptors to aviation noise from Beale AFB that exceeds the acceptable noise standards would be ***less-than-significant***.

Mitigation Measure(s)

None required.

4.5-7 Impacts related to exposure of sensitive receptors to aviation noise from the Beale AFB that would cause sleep disturbance.

The noise analysis conducted three days of noise monitoring aircraft operations and determined that the average measured SEL was 79-89 dB. Table 4.5-5 shows the summary of aircraft flyovers at each noise level measurement site, as recorded during site observations.

In 1997, the Federal Interagency Committee on Aviation Noise (FICAN) published a recommended dose-response curve predicting awakening. The 1997 FICAN curve represents the upper limit of the observed field data and should be interpreted as predicting the maximum percent of the exposed population expected to be behaviorally awakened. For the purposes of evaluating the potential for sleep disturbance due to interior noise from aircraft operations over the project area, Figure 4.5-5 was used and is based upon the FICAN curve.

Using the worst-case scenario average exterior SEL of 89 dB, and applying the typical construction practices exterior to interior noise level reduction of 25 dB with the windows in the closed position, the interior SEL would be approximately 64 dB. Based upon the FICAN study, the percent of awakened individuals would be approximately 5 percent. FICAN stated, “[...] because the adopted curve represents the upper limit of the data presented, it should be interpreted as predicting the maximum percent of the exposed population expected to be behaviorally awakened, or the maximum percent awakened.”

The complete inputs and results on the ANSI sleep disturbance calculations are provided in Appendix D of Appendix F of the Draft EIR.

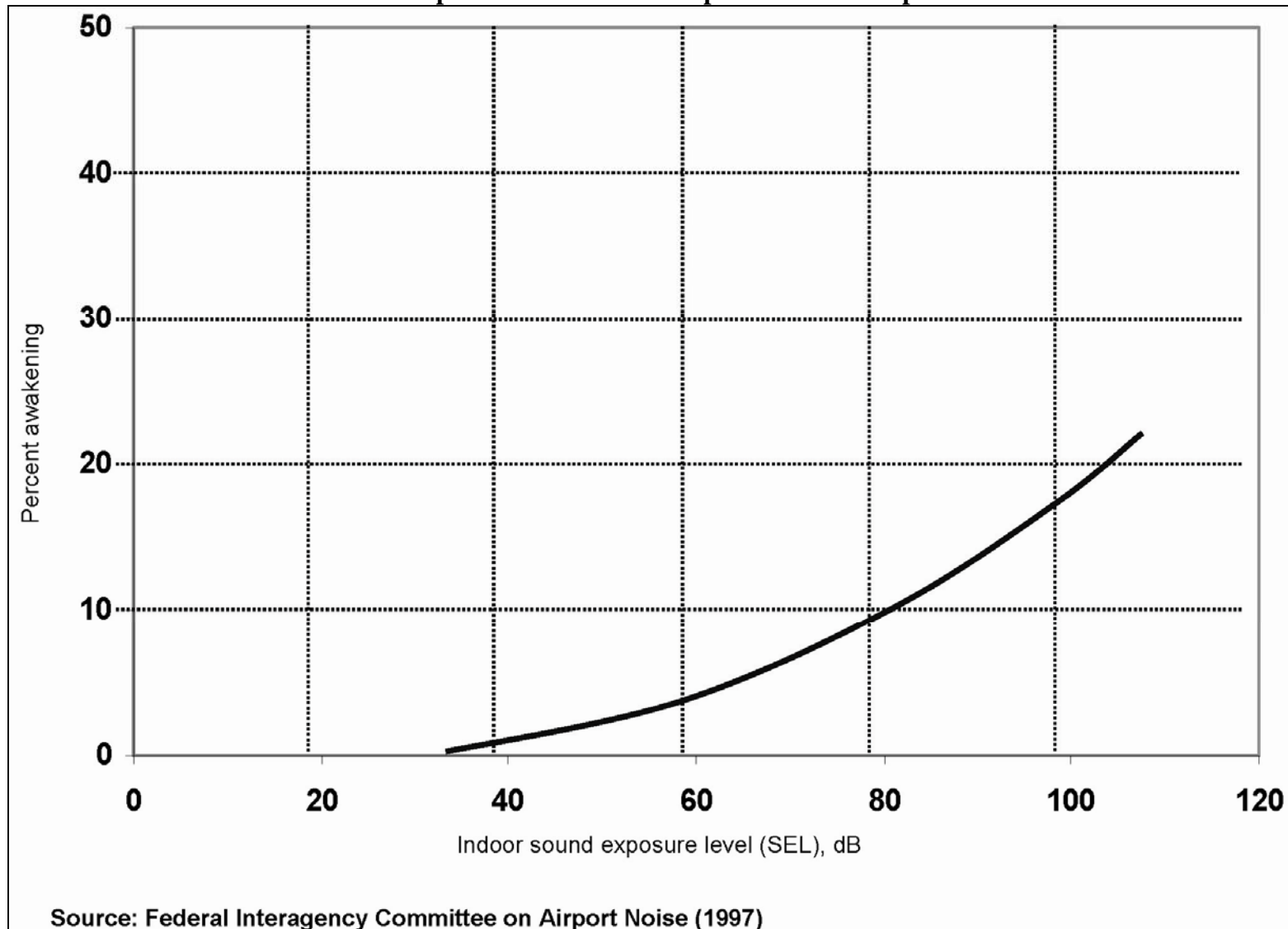
Therefore, sensitive receptors in the project area could be exposed to frequent overflights from aircraft operating out of Beale Air Force Base, and the impact would be considered ***potentially significant***.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.5-7 *The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

Figure 4.5-5
Sleep Disturbance Dose Response Relationship



“The applicant shall inform and notify prospective buyers, prior to purchase, about existing and on-going noise generating aviation activities in the immediate area. The notice shall be in the form of a note recorded with the Deed for each property. The notifications shall disclose that the project area is south of the Beale Air Force Base and is subject to aircraft overflights, which may cause sleep disturbance. The language and format of such notification shall be reviewed and approved by the City Attorney prior to recording final map.”

Compliance with this condition shall be ensured by the Community Development Department prior to the recording of any Final Map.

Cumulative Impacts and Mitigation Measures

4.5-8 Impacts related to cumulative noise levels in the project vicinity.

Buildout of a majority of the Johnson Rancho and Hop Farm Annexation project was anticipated under the General Plan Buildout cumulative scenario. In addition, Yuba County is currently evaluating the Feather Creek Specific Plan and the Woodbury Specific Plan, both located north of Wheatland along the SR 65-70 corridor.

Traffic

As shown in Table 4.5-11, development of the proposed project would result in a substantial increase in the ambient traffic noise level beyond 3 dB or more at sensitive receptors that would be exposed to noise levels greater than 60 dB without the proposed project. Future traffic noise levels are based on the “2025 General Plan Buildout Plus Johnson Rancho and Hop Farm Annexation traffic volumes.” As shown in Table 4.5-11, traffic noise levels are predicted to range from approximately 48.2 to 78.7 dB Ldn. Specifically, predicted noise levels range from approximately 75.6 dB Ldn to 78.7 dB Ldn along the segments of Spenceville Road and the Wheatland Expressway. As a result, residential outdoor activity areas along Spenceville Road and the Wheatland Expressway could be located inside of the 60 dB Ldn traffic noise contour and traffic noise levels would, therefore, conflict with the City’s 60 dB Ldn exterior noise level standard.

Non-Traffic Noise

Development of the project is anticipated to generate operational noise due from various on-site uses. Although pedestrian and recreation activities would generate additional noise near sensitive receptors, a substantial increase to interior and exterior noise levels is not anticipated.

In addition, mechanical equipment, including heating cooling, ventilation, and power supplies would be placed indoors or shielded by mechanical barriers and/or rooftop parapets. On-site parking, truck deliveries, and loading dock circulation noise impacts would be mitigated through noise barriers and restricted hours of operation.

Conclusion

As discussed above, with implementation of mitigation measures, development of the project would not create non-transportation or stationary noise levels that exceed local ordinances. However, implementation of the proposed project in combination with the cumulative development of the Wheatland General Plan, as well as any additional growth, could expose future residents and employees of the Johnson Rancho and Hop Farm Annexation project to traffic noise level increases greater than 3 dB and noise levels that exceed the City of Wheatland 60 dB Ldn criteria. As a result, this impact is considered *significant*.

Mitigation Measure(s)

Implementation of the above mitigation measures would reduce noise impacts related to construction, aviation, and internal land uses. However, mitigation measures to reduce the impact from traffic noise along Spenceville Road and the Wheatland Expressway to 60 dB Ldn or less are not feasible. Therefore, development of the project would result in a *significant and unavoidable* cumulative impact related to noise.

Endnotes

¹j.c. brennan & associates, Inc. *Environmental Noise Analysis*. August 31, 2010.

²City of Wheatland. *City of Wheatland General Plan Policy Document*. July 2006.

³Raney Planning & Management, Inc. *City of Wheatland General Plan EIR*. July 11, 2006.

⁴ESA. *Draft Beale Air Force Base Airport Land Use Compatibility Plan Initial Study*. January 2011.

4.6

BIOLOGICAL RESOURCES

INTRODUCTION

The Biological Resources chapter of the EIR evaluates the potential impacts to biological resources associated with implementation of the Johnson Rancho and Hop Farm Annexation project (proposed project) and includes a discussion of the mitigation measures necessary to reduce impacts to a less-than-significant level. The information contained in this analysis is primarily based upon the *Biological Baseline Information Report, Johnson Rancho and Hop Farm* prepared by Gibson & Skordal, LLC (See Appendix G).¹ This report describes the existing biological resources within the City of Wheatland's Johnson Rancho and Hop Farm Proposed Annexation Area (Annexation Area) based on the results of rare plant surveys, wetland delineations, biological assessments, preliminary site assessments, and/or information derived from the interpretation of aerial photography.

In addition, the information contained in this analysis is partially based on the following sources: *Biological Resources Assessment, ± 1,191-Acre Wheatland Ranch* prepared by Foothill Associates (See Appendix H),² the *Special-Status Species Assessment for Johnson's Crossing* (See Appendix I),³ the *Special-Status Species Assessment for Browne Cattle Company* (See Appendix J),⁴ the *Special-Status Plant Survey for Browne Cattle* (See Appendix K),⁵ the *Special-Status Plant Survey for Johnson's Crossing* (See Appendix L),⁶ and the *Wetland Delineation for Browne Cattle Company* (See Appendix M),⁷ (all prepared by ECORP Consulting, Inc.), the *Wetland Delineation for Wilson Ranch* (available at Wheatland City Hall upon request),⁸ the *City of Wheatland General Plan*,⁹ and the *City of Wheatland General Plan EIR*.¹⁰

EXISTING ENVIRONMENTAL SETTING

The following sections describe the regional and local setting of the site, as well as the biological resources that exist in the vicinity of the proposed project.

Regional Setting

The project site is located in the southwestern portion of Yuba County in the northern Sacramento Valley, adjacent to the City of Wheatland city limits. The topography of the City is characterized by the relatively flat terrain of the Central Valley, with a few gently sloping hills. Elevations in the City of Wheatland range from 85 feet above mean sea level (msl) in the southwest to 95 feet above MSL in the northeast. Most of the soils within the City are formed from alluvial sediment and are moderately to well-drained with slow runoff. The mountain range nearest the project site is the Sutter Buttes (approximately 25 miles northwest).

Approximately 12.5 miles northwest of the City of Wheatland is the Feather River, with the Oroville Dam creating Lake Oroville approximately 20 miles upstream. The Feather River

continues south where the river is joined with tributaries, which are the Yuba River in Yuba City and Bear River near Wilson. Approximately 14 miles northwest of the City of Sacramento the Feather River, as a tributary, joins the Sacramento River.

Proposed Project Site

The proposed project site is located east of the City of Wheatland, outside of the City limits, and within the Wheatland Sphere of Influence (SOI). The proposed project is located on approximately 4,149 acres of agricultural land, which contains scattered residences. The project site is bordered by the Yuba County/Placer County line to the south; Wheatland city limits, State Route 65 and the Union Pacific Railroad (UPRR) tracks to the west; Spenceville Road and Dry Creek to the north; and the eastern boundary of the Wheatland SOI to the east (See Figure 4.6-1, Project Vicinity Map).

The project site is currently made up of the following ownerships: Johnson's Crossing, AKT Wheatland Ranch, Dave Browne, and Browne Cattle Company; Bear River Hop Farm and Wheatland Hop Farm; and the five "Wheatland Parcels." For ease of discussion throughout the remainder of this Draft EIR, the project area east of the potential Wheatland Expressway, outside of the General Plan Study Area, and currently designated as Urban Reserve, will be referred to as the "Johnson Rancho" portion of the project site. The area west of the potential Wheatland Expressway, within the General Plan Study Area, will be referred to as the "Hop Farm" portion of the project site.

The proposed project is situated in an area that historically has been dominated by agricultural land use. Each of the following properties that are referenced throughout this chapter are part of the proposed project site.

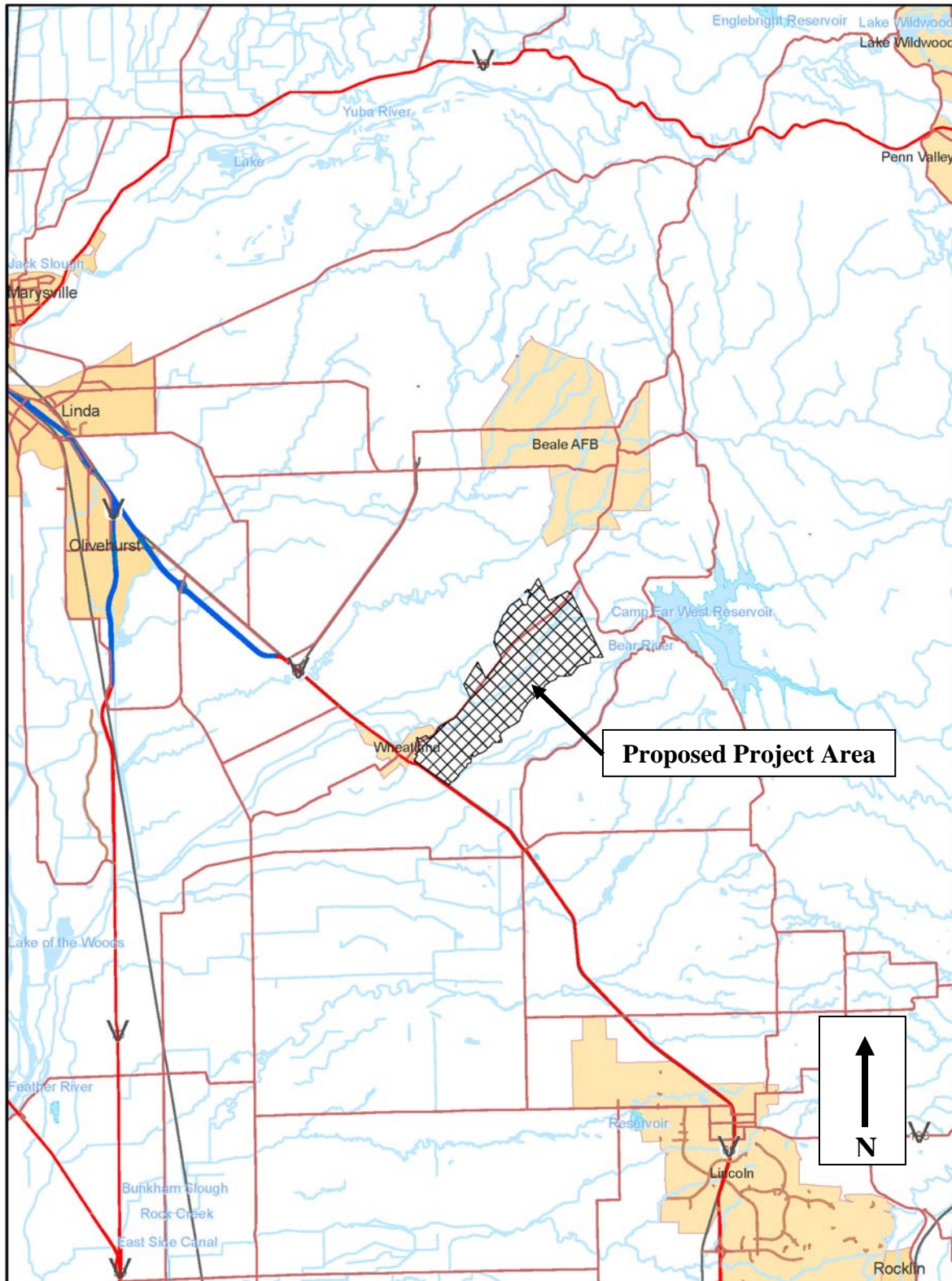
Hop Farm Properties

Wheatland Hop Farm

The site is approximately 138 acres in size and composed of leveled to gently rolling terrain and is situated at an elevational range of approximately 79 feet to 92 feet above msl. The southern and eastern portions of the site are comprised of actively farmed wheat fields. The western portion of the site is occupied by a walnut orchard, and the northern portion of the site is a pasture. A total of 3.02 acres of waters/wetlands were delineated on the property consisting of 2.20 acres of seasonal wetland swale, 0.17 acre of seasonal wetland, and 0.65 acre of ditch (ECORP Consulting, Inc., 2006). The delineation was verified by the United States Army Corps of Engineers (USACE) in February 2007.

Habitat types present: non-native annual grasslands, agricultural (walnut orchard and hay), seasonal wetland, seasonal wetland swale, and ditch.

**Figure 4.6-1
Project Vicinity Map**



Bear River Hop Farm

The majority of the 456-acre property is actively farmed in hay/alfalfa and ranges in elevation from approximately 80 feet to 90 feet above msl. The northern portion of the property is non-native grassland and irrigated pasture with several residences/outbuildings. Grasshopper Slough flows through the northeast corner of the property. Based on aerial photography and a cursory field review of the site by Gibson & Skordal, LLC, there are 3.97 acres of waters/wetlands on the site consisting of 0.56 acre of vernal pool, 0.79 acre of seasonal wetland swale, 0.80 acre of seasonal wetland, 1.30 acre of ephemeral channel, and 1.24 acre of ditch.

Habitat types present: non-native annual grassland, agricultural (hay/alfalfa), vernal pool, seasonal wetland swale, seasonal wetland, channel, ditch, riparian wetland/habitat, and urban.

Johnson Rancho Properties

Wilson Ranch/Johnson's Crossing

The 1,473 acre property is comprised of relatively hilly terrain at elevations ranging from 100 to 155 feet above msl. The site's dominant habitat type is non-native annual grassland with scattered wetland features and one rural residence. Grasshopper Slough crosses the property from east to west. A total of 52.16 acres of waters/wetlands were delineated on the property consisting of 15.81 acres of vernal pools, 5.52 acres of seasonal wetlands, 1.99 acres of seasonal wetland swales, 7.78 acres of riparian wetlands, 8.30 acres of ponds, and 12.76 acres of ephemeral channels (Foothill Associates 2005). The delineation was verified by the Corps of Engineers in April 2005.

Habitat types present: non-native annual grassland, vernal pool, seasonal wetland swale, seasonal wetland, riparian wetlands, pond, channel, and urban.

Wheatland Ranch

The approximately 1,249-acre property consists primarily of walnut orchards and non-native annual grasslands. Grasshopper Slough traverses the property from east to west, with the western portion containing riparian forest habitat. A few structures exist on-site, including an office in the central portion of the site. Elevations on the site range from approximately 90 to 125 feet above msl. Based on a preliminary site assessment by Foothill Associates, there are 21.22 acres of waters/wetlands on the site consisting of 4.81 acres of vernal pools, 6.69 acres of seasonal wetlands, 2.25 acres of seasonal wetland swales, 0.06 acre of ponds, 3.26 acre of ephemeral channels, 0.12 acre of intermittent channels, and 4.03 acre of ditches (Foothill Associates 2007).

Habitat types present: non-native annual grassland, agricultural (walnuts), vernal pool, seasonal wetland swale, seasonal wetland, pond, channel, ditch, and urban.

Browne Cattle Company

The 613-acre site is composed of gently rolling terrain ranging in elevation from approximately 100 feet to 130 feet above msl. The dominant habitat type is non-native annual grassland. A mixed riparian woodland occurs along Dry Creek which traverses the northern edge of the property from east to west. A total of 41.07 acres of jurisdictional waters/wetlands were delineated on the property consisting of 13.86 acres of vernal pools, 2.45 acres of seasonal wetlands, 11.04 acres of seasonal wetland swales, 1.75 acres of ponds, 1.42 acres of ephemeral channels, and 10.55 acres of perennial channels (ECORP Consulting, Inc., 2006B).

Habitat types present: non-native annual grassland, vernal pool, seasonal wetland swale, seasonal wetland, pond, channel, and riparian wetland habitat.

Browne Cattle Company (East Parcel)

The approximately 23-acre property is composed of gently rolling terrain and ranges in elevation from approximately 150 feet to 175 feet above msl. The dominant habitat type is non-native annual grassland with scattered wetlands. Based on aerial photography and a field review of the site by Gibson & Skordal, LLC, there are 2.26 acres of waters/wetlands on the site consisting of 1.77 acres of vernal pool and 0.49 acre of seasonal wetland swale.

Habitat types present: non-native annual grassland, vernal pool, and seasonal wetland swale.

Dave Browne Property

The approximately 104-acre property is composed of gently rolling terrain and ranges in elevation from approximately 90 feet to 135 feet above msl. The dominant habitat type is non-native annual grassland with scattered wetlands. Based on aerial photography and a field review of the site by Gibson & Skordal, LLC, there are 3.61 acres of jurisdictional waters/wetlands on the site consisting of 0.57 acre of vernal pool, 2.37 acre of seasonal wetland swale, 0.54 acre of pond, and 0.13 acre of channel.

Habitat types present: non-native annual grassland, vernal pool, seasonal wetland swale, pond, and channel.

Wheatland Parcels

Parcel A

The approximately two-acre property is relatively flat and at an elevation approximately 80 feet above msl. The dominant habitat type is non-native annual grassland with scattered trees. Based on review of aerial photography, wetlands do not exist on-site.

Habitat types present: non-native annual grassland.

Parcel B

The approximately one-acre property is relatively flat and at an elevation approximately 85 feet above msl. Based on review of aerial photography, wetlands do not exist on-site.

Habitat types present: non-native annual grassland.

Parcel C

The approximately 11-acre property is relatively flat and ranges in elevation between 85 feet and 95 feet above msl. The dominant habitat type is non-native annual grassland. Several houses and associated outbuildings exist on-site. Based on review of aerial photography, there is a 0.05 acre seasonal wetland on the site.

Habitat types present: non-native annual grassland, seasonal wetland, and urban.

Johnson Rancho and Hop Farm Annexation Area Habitat Types

The parcels within the proposed project area contain several habitat types including non-native annual grasslands, agricultural lands, vernal pools, seasonal wetlands, seasonal wetland swales, riparian wetlands habitat, emergent marshes, ponds, channels, ditches, and urban areas. A general description of each habitat type follows.

Non-Native Annual Grasslands

Non-native annual grasslands associated with the various properties support plant communities typical of historically farmed/ranched areas. Usually these areas are dominated by exotic grasses and forbs such as soft chess (*Bromus mollis*), perennial rye (*Lotium perenne*), medusa head (*Taeniatherum caput-medusae*), rip-gut brome (*Bromus diandrus*), Mediterranean barley (*Hordeum hystrix*), and tarweed (*Holocarpha virgata*). Other common species include filaree (*Erodium botrys*), curly dock (*Rumex crispus*), prickly lettuce (*Lactuca serriola*), wild radish (*Raphanus sativus*), yellow star-thistle (*Centaurea solstitialis*), cat's ear (*Hypochaeris glabra*), and wild oats (*Avena fatua*). Most of these areas are currently being used for grazing purposes.

Agricultural Lands

Agricultural lands include habitats actively and currently cultivated for the production of crops such as alfalfa, irrigated and non-irrigated pastures, and walnuts. These agricultural lands have been altered by earth moving activities, which have changed topography, soil profiles, and drainage patterns.

Vernal Pools

Vernal pools are wetlands that sustain long-term ponding and/or saturated soil conditions during and following periods of heavy precipitation in the winter and early spring. Additional water is provided by surface sheet flow and subsurface discharge onto the perched water-tables or

impermeable surfaces which underlie vernal pools. Plants commonly observed within vernal pools include coyote thistle (*Eryngium vaseyi*), slender popcorn flower (*Plagiobothrys stipitatus*), mannagrass (*Glyeeria declanata*), Carter's buttercup (*Ranuneulus bonariensis*), and purple hairgrass (*Deschampsia danthonioides*).

Seasonal Wetlands

Seasonal wetlands, including depressional seasonal wetlands, sloped seeps, sloped seasonal wetlands, and depressional seasonal marshes are ponded or saturated during the winter and spring. Seasonal wetland plant communities are commonly dominated by annual rabbit-foot grass (*Polypogon monspeliensis*), common tarweed (*Hemizonia pungens*), bermuda grass (*Cynadon daetylon*), coyote thistle, mannagrass, perennial ryegrass and Mediterranean barley. Seasonal depressional marshes are ponded or saturated for longer periods, extending into the summer. Plants adapted to longer wetness, such as cattail (*Typha* spp.) and Pacific rush (*Juncus effusus*), are common in these marsh areas.

Seasonal Wetland Swales

Seasonal wetland swales occur in linear sloping drainages that lack a defined bed and bank, and support a wetland plant community. Perennial rye, Mediterranean barley, curly dock, coyote-thistle, purple hair grass, rabbit-foot grass, toad rush (*Juncus bufonius*), white-headed navarretia (*Navarretia leucocephala*) and spiny-fruited buttercup (*Ranuneulus murieatus*), are some species typically found in swales.

Ponds

The Annexation Area contains a number of constructed ponds. These ponds are normally constructed for stock watering purposes; however, some could be used for irrigation purposes. Ponds generally support a mix of open water habitat, emergent marsh along the edges, and seasonal wetlands during period of water draw-down.

Channels

For the purposes of this EIR, channels have been separated into the following three categories: ephemeral, intermittent, and perennial. Ephemeral channels are typically described as small channels that flow during and immediately after storm events, and receive their base flows from overland flow, rather than from subsurface discharge. Intermittent channels flow seasonally, and receive their base flows from subsurface discharge and surface runoff. Perennial channels generally flow year-round, and receive their base flow primarily from subsurface discharge. Channels usually display a bed, bank, and an ordinary high water mark. The bed is often composed of bedrock, gravel, sand, or cobble.

Riparian Wetlands

Riparian habitat consists of trees and shrubs associated with a watercourse. Lower terrace areas are sufficiently wet to be classified as a wetland. Overstory growth includes Oregon ash

(*Fraxinus latifolia*), willows (*Salix* spp.), cottonwood (*Populus fremontii*), elderberry (*Sambucus mexicana*), black walnut (*Juglans californica*), valley oak (*Quercus lobata*), and blackberry (*Rubus discolor*).

Ditches

Ditches are manmade water conveyance features constructed primarily for the purpose of irrigating agricultural crops. The ditches have banks either lined with concrete or soil. Most of the ditches are well maintained and have little or no vegetative growth.

Urban Areas

For the purpose of this report, urban areas include residential locations with manipulated plant communities such as maintained lawns and decorative landscaping. The trees in urban areas include a variety of ornamental/fruit species. Often, leveling or grading has occurred to accommodate building foundations, roads, utility lines, and other infrastructure.

Johnson Rancho and Hop Farm Annexation Area Special-Status Species

The special-status species evaluations that were prepared for the proposed project area include those species identified as having relative scarcity and/or declining populations by the United States Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG). Special-status species include those formally listed as Threatened or Endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by USFWS or Species of Special Concern by CDFG. In addition, species considered “special animals” or “fully protected” by the CDFG, and plant species considered to be rare, threatened, or endangered in California by the CNPS, are included.

For the special-status species evaluations, searches of the California Natural Diversity Database (CNDDDB) were conducted to determine special-status species or sensitive natural communities that potentially occur or were observed in the project area. The record searches were conducted for the Wheatland 7.5-minute USGS quadrangle and the eight surrounding quadrangles. It was determined that several State and/or federal special-status species have potential to occur within the proposed project site.

Table 4.6-1 shows potentially occurring special-status species and associated habitats within the project area. Table 4.6-2 shows potentially occurring special-status species and biological survey results. Thirteen of the special-status species included in the tables are listed as federal and/or State Threatened and/or Endangered. The absence of suitable habitat including seasonal wetlands, vernal pools, freshwater marsh, wet meadow, playas, or other aquatic habitats in the project site eliminates the potential for many of the special-status species to occur on-site.

The species included in Table 4.6-2 have been determined to have the potential to occur on-site. The remaining species are not discussed further due to the lack of habitat in the project area to support these species.

**Table 4.6-1
Potentially Occurring Special-Status Species and Associated Habitats**

Species	State Status	Federal Status	CNPS Listing*	Habitat Association	Potentially Present?
<i>Mammals</i>					
Pallid bat <i>Antrozous pallidus</i>	Species of Special Concern	None	N/A	Prefers mines, man-made structures, rock outcrops, and woodland near open grasslands for foraging.	Yes
Townsend's big-eared bat <i>Corynorhinus townsendii townsendii</i>	Species of Special Concern	Species of Concern	N/A	Prefers mines, buildings, rock crevices, and trees.	Yes
Greater western mastiff-bat <i>Eumops perotis californicus</i>	None	Species of Concern	N/A	Primarily a cliff-dwelling species. Also roosts in caves, buildings, bridges, cliff faces, and rock crevices.	Yes
Long-eared myotis bat <i>Myotis evotis</i>	None	Species of Concern	N/A	Found throughout California, most common in coniferous forests. Roosts in buildings, snags, caves, rock crevices, hollow trees, and under tree bark and bridges.	Yes
Fringed myotis bat <i>Myotis thysanodes</i>	None	Species of Concern	N/A	Found in a variety of habitats in California. Roosts in caves, buildings, bridges, cliff faces, and rock crevices.	Yes
Yuma myotis bat <i>Myotis yumanensis</i>	None	Species of Concern	N/A	Found in riparian woodland, caves, mines, buildings, bridges, rock crevices, and trees.	Yes
<i>Birds</i>					
Cooper's hawk <i>Accipiter cooperii</i>	Species of Special Concern	None	N/A	Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes

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Table 4.6-1 (continued) Potentially Occurring Special-Status Species and Associated Habitats					
Species	State Status	Federal Status	CNPS Listing*	Habitat Association	Potentially Present?
Tricolored blackbird <i>Agelaius tricolor</i>	Species of Special Concern	Species of Concern	N/A	Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	Yes
Grasshopper sparrow <i>Ammodramus savannarum</i>	Species of Special Concern	None	N/A	Favors native grasslands. Feeds on insects, particularly grasshoppers, which it forages from open ground.	Yes
Great egret <i>Ardea alba</i>	None	None	N/A	Colonial nester in riparian habitat.	Yes
Great blue heron <i>Ardea herodias</i>	None	None	N/A	Colonial nester in riparian habitat.	Yes
Long-eared owl <i>Asio otus</i>	Species of Special Concern	None	N/A	Nests in riparian habitat.	Yes
Burrowing owl <i>Athene cunicularia</i>	Species of Special Concern	Species of Concern	N/A	Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes
Oak titmouse <i>Baeolophus inornatus</i>	Species of Special Concern	Species of Concern	N/A	Occurs in low to mid-elevation habitats, closely tied to warm, dry oak or oak-pine woodland habitats.	Yes
Ferruginous hawk <i>Buteo regalis</i>	Species of Special Concern	Species of Concern	N/A	Occurs in open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats.	Yes
Swainson's hawk <i>Buteo swainsoni</i>	Threatened	None	N/A	Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	Yes

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Table 4.6-1 (continued)
Potentially Occurring Special-Status Species and Associated Habitats

Species	State Status	Federal Status	CNPS Listing*	Habitat Association	Potentially Present?
Lawrence's goldfinch <i>Carduelis lawrencei</i>	None	Species of Concern	N/A	Nests in open oak or other arid woodland and chaparral habitats near water.	Yes
Mountain plover <i>Charadrius montanus</i>	Species of Special Concern	Species of Concern	N/A	Inhabits short grasslands and plowed fields of the Central Valley from Sutter and Yuba Counties south.	Yes
Northern harrier <i>Circus cyaneus</i>	Species of Special Concern	None	N/A	Forages in open grasslands and nests on ground in shrubby vegetation.	Yes
Yellow warbler <i>Dendroica petechia brewsteri</i>	Species of Special Concern	None	N/A	Associated with stream courses where it forages for a variety of insects. Nests in riparian trees.	Yes
Snowy egret <i>Egretta thula</i>	None	None	N/A	Colonial nester in riparian habitat.	Yes
White-tailed kite <i>Elanus leucurus</i>	Fully Protected	None	N/A	Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes
California horned lark <i>Eromophila alpestris actia</i>	Species of Special Concern	None	N/A	Forages and breeds in open grasslands and fields.	Yes
Greater sandhill crane <i>Grus Canadensis tabida</i>	Threatened	Species of Concern	N/A	Nests in wet meadows interspersed with emergent marsh habitat. Winters in agricultural croplands and irrigated pastures.	Yes
Loggerhead shrike <i>Lanius ludovicianus</i>	Species of Special Concern	None	N/A	Forages in open habitats such as central oak woodland and creosote bush scrub. Nests in mid-canopy.	Yes
California black rail <i>Laterallus jamaicensis coturniculus</i>	Species of Special Concern	None	N/A	Inhabits marsh areas.	Yes

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Table 4.6-1 (continued)
Potentially Occurring Special-Status Species and Associated Habitats

Species	State Status	Federal Status	CNPS Listing*	Habitat Association	Potentially Present?
Black-crowned night heron <i>Nycticorax nycticorax</i>	None	None	N/A	Colonial nester in riparian habitat.	Yes
Long-billed curlew <i>Numenius americanus</i>	Species of Special Concern	Species of Concern	N/A	Frequents wet meadow habitats, large coastal estuaries, and upland herbaceous areas including croplands. Nests in built-in grass-lined depressions on open ground.	Yes
Nuttall's woodpecker <i>Picoides nuttallii</i>	Species of Special Concern	Species of Concern	N/A	Permanent resident of low elevation riparian, deciduous and oak woodland habitats.	Yes
Bank swallow <i>Riparia riparia</i>	Threatened	Species of Concern	N/A	Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	Yes
<i>Amphibians and Reptiles</i>					
Northwestern pond turtle <i>Actinemys marmorata marmorata</i>	Species of Special Concern	Species of Concern	N/A	Occurs in permanent or nearly permanent water in a wide variety of habitat types.	Yes
California red-legged frog <i>Rana aurora draytonii</i>	Species of Special Concern	Threatened	N/A	Typically found along quiet slow moving streams, ponds, or marsh communities with emergent vegetation.	Yes
Western spadefoot toad <i>Spea hammondi</i>	Species of Special Concern	Species of Concern	N/A	Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes

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Table 4.6-1 (continued) Potentially Occurring Special-Status Species and Associated Habitats					
Species	State Status	Federal Status	CNPS Listing*	Habitat Association	Potentially Present?
Giant garter snake <i>Thamnophis gigas</i>	Threatened	Threatened	N/A	Found in rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow-moving water and heavy emergent vegetation.	Yes
<i>Fish</i>					
Spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	Threatened	Threatened	N/A	Anadromous species requiring freshwater watercourses with gravelly substrates for breeding. The young remain in freshwater areas before migrating to estuarine and marine environments.	Yes
Fall-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	Species of Special Concern	Species of Concern	N/A	Anadromous species requiring freshwater watercourses with gravelly substrates for breeding. The young remain in freshwater areas before migrating to estuarine and marine environments.	Yes
Central Valley steelhead <i>Oncorhynchus mykiss</i>	Threatened	None	N/A	Occurs in Sacramento and San Joaquin Rivers and their tributaries.	
<i>Invertebrates</i>					
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	None	Threatened	N/A	Found in vernal pools.	Yes
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	None	Threatened	N/A	Dependent upon elderberry plant (<i>Sambucus mexicana</i>) as primary host species.	Yes
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	None	Endangered	N/A	Found in vernal pools.	Yes

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Table 4.6-1 (continued) Potentially Occurring Special-Status Species and Associated Habitats					
Species	State Status	Federal Status	CNPS Listing*	Habitat Association	Potentially Present?
California linderiella <i>Linderiella occidentalis</i>	None	None	N/A	Found in vernal pools.	Yes
<i>Plants</i>					
Henderson's bent grass <i>Agrostis hendersonii</i>	None	None	CNPS-3	Found in valley and foothill grassland.	Yes
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>aharti</i>	None	None	CNPS-1B	Found in valley and foothill grassland.	Yes
Dwarf downingia <i>Downingia pusilla</i>	None	None	CNPS-2	Found in vernal pools.	Yes
Bogg's Lake hedge-hyssop <i>Gratiola heterosepala</i>	Endangered	None	CNPS-1B	Occurs in marshes and swamps along lake margins and vernal pools.	Yes
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	None	Species of Concern	CNPS-1B	Found in vernal pools.	Yes
Legenere <i>Legenere limosa</i>	None	Species of Concern	CNPS-1B	Found in vernal pools.	Yes
Veiny monardella <i>Monardella douglasii</i>	None	None	CNPS-1B	Found in valley and foothill grassland.	Yes
Pincushion navarretia <i>Navarretia myersii</i>	None	None	CNPS-1B	Found in vernal pools.	Yes
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	Endangered	Endangered	CNPS-1B	Found in valley and foothill grassland.	Yes
Slender orcutt grass <i>Orcuttia tenuis</i>	Endangered	Threatened	CNPS-1B	Found in vernal pools.	Yes
Sacramento orcutt grass <i>Orcuttia viscida</i>	Endangered	Threatened	CNPS-1B	Found in vernal pools.	Yes

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Table 4.6-1 (continued) Potentially Occurring Special-Status Species and Associated Habitats					
Species	State Status	Federal Status	CNPS Listing*	Habitat Association	Potentially Present?
Sanford's arrowhead <i>Sagittaria sanfordii</i>	None	Species of Concern	CNPS-1B	Found in emergent marsh habitat typically associated with drainages, canals, or irrigation ditches.	Yes
<p>* CNPS List Categories: 1A – plants presumed extinct in California 1B – plants rare, threatened, or endangered in California and elsewhere 2 – plants rare, threatened, or endangered in California but common elsewhere 3 – plants about which we need more information 4 – plants of limited distribution</p> <p>Source: Gibson & Skordal, LLC. Biological Baseline Information Report. August 2009.</p>					

Table 4.6-2 Potentially Occurring Special-Status Species and Survey Results							
Portion of Project Site	APN	Mammals	Birds	Reptiles/Amphibians	Fish	Invertebrates	Plants
Hop Farm Properties							
Wheatland Hop Farm		Pallid bat, townsend's big-eared bat, Yuma myotis bat. Based on information from wetland delineation report prepared by ECORP Consulting, Inc.	Cooper's hawk, tricolored blackbird, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, California horned lark, snowy egret, California black rail, long-eared owl, bank swallow. Based on information from wetland delineation report prepared by ECORP Consulting, Inc.	Western spadefoot toad. Based on information from wetland delineation report prepared by ECORP Consulting, Inc.	None. Based on information from wetland delineation report prepared by ECORP Consulting, Inc.	Vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella, valley elderberry longhorn beetle. Based on elderberry survey by Berryman Ecological and wetland information derived delineation prepared by ECORP Consulting, Inc.	Big-scale balsamroot, Henderson's bent grass, dwarf downingia, veiny Monardella, pincushion navarretia, Hartweg's golden sunburst, Bogg's Lake hedge-hyssop, Ahart's dwarf rush, legenere, slender orcutt grass, Sacramento orcutt grass, Sanford's arrowhead. Based on information from wetland delineation report prepared by ECORP Consulting, Inc.
Bear River Hop Farm		Pallid bat, Townsend's big-eared bat, Yuma myotis bat. Based on habitat observed during field review by Gibson & Skordal LLC.	Cooper's hawk, tricolored blackbird, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, yellow warbler, California horned lark, snowy egret, California black rail, long-eared owl, bank swallow. Based on habitat observed during field review by Gibson & Skordal, LLC.	Western spadefoot toad. Based on habitat observed during field review by Gibson & Skordal, LLC.	None. Based on habitat observed during field review by Gibson & Skordal, LLC.	Vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella, valley elderberry longhorn beetle. Based on habitat observed during field review by Gibson & Skordal, LLC.	Big-scale balsamroot, Henderson's bent grass, dwarf downingia, veiny Monardella, pincushion navarretia, Hartweg's golden sunburst, Bogg's Lake hedge-hyssop, Ahart's dwarf rush, legenere, slender orcutt grass, Sacramento orcutt grass, Sanford's arrowhead. Based on habitat observed during field review by Gibson & Skordal, LLC.
Johnson Rancho Properties							
Wheatland (AKT) Ranch		Fringed myotis bat, greater western mastiff bat, long-eared myotis bat, Pacific western big-eared bat. Based on habitat assessment by Foothill Associates.	Cooper's hawk, ferruginous hawk, greater sandhill crane, Lawrence's goldfinch, loggerhead shrike, long-billed curlew, mountain plover, Nuttall's woodpecker, oak titmouse, Swainson's hawk, western burrowing owl, white-tailed kite. Based on habitat assessment by Foothill Associates.	Giant garter snake, northwestern pond turtle, western spadefoot toad. Based on habitat assessment by Foothill Associates.	None. Based on habitat assessment by Foothill Associates.	Vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella, Valley elderberry longhorn beetle. Based on habitat assessment by Foothill Associates.	Ahart's dwarf rush, dwarf downingia, legenere. Based on habitat assessment by Foothill Associates.
Wilson Ranch/Johnson's Crossing		Pallid bat, townsend's big-eared bat, Yuma myotis bat. Based on habitat assessment by ECORP Consulting, Inc.	Cooper's hawk, tricolored blackbird, burrowing owl, Swainson's hawk, northern harrier, grasshopper	Northwestern pond turtle, western spadefoot toad. Based on habitat assessment by ECORP Consulting, Inc.	None. Based on habitat assessment by ECORP Consulting, Inc.	Vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella, Valley elderberry longhorn	Big-scale balsamroot, Henderson's bent grass, dwarf downingia, veiny Monardella, pincushion

Table 4.6-2
Potentially Occurring Special-Status Species and Survey Results

Portion of Project Site	APN	Mammals	Birds	Reptiles/Amphibians	Fish	Invertebrates	Plants
			sparrow yellow warbler, white-tailed kite, loggerhead shrike, California horned lark, snowy egret, California black rail, long-eared owl, bank swallow. Based on habitat assessment by ECORP Consulting, Inc.			beetle. Based on habitat assessment by ECORP Consulting, Inc.	navarretia, Hartweg's golden sunburst, Bogg's Lake hedge-hyssop, Ahart's dwarf rush, legenere, slender orcutt grass, Sacramento orcutt grass, Sanford's arrowhead. Special-status plants were not observed in determinate surveys by ECORP Consulting, Inc. in 2006 and 2007.
Browne Cattle Company		Pallid bat. Based on habitat assessment by ECORP Consulting, Inc.	Cooper's hawk, tricolored blackbird, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, yellow warbler, California horned lark, snowy egret, California black rail, long-eared owl, bank swallow. Based on habitat assessment by ECORP Consulting, Inc.	Northwestern pond turtle, western spadefoot toad. Based on habitat assessment by ECORP Consulting, Inc.	None. Based on habitat assessment by ECORP Consulting, Inc.	Vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella, Valley elderberry longhorn beetle. Based on habitat assessment by ECORP Consulting, Inc.	Big-scale balsamroot, Henderson's bent grass, dwarf downingia, veiny Monardella, pincushion navarretia, Hartweg's golden sunburst, Bogg's Lake hedge-hyssop, Ahart's dwarf rush, legenere, slender orcutt grass, Sacramento orcutt grass, Sanford's arrowhead. Special-status plants were not observed in determinate surveys by ECORP Consulting, Inc. in 2006 and 2007.
Browne Cattle Company (East Parcel)		Pallid bat. Based on habitat observed during field review by Gibson & Skordal, LLC.	Tricolored blackbird, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, California horned lark, long-eared owl. Based on habitat observed during field review by Gibson & Skordal, LLC.	Western spadefoot toad. Based on habitat observed during field review by Gibson & Skordal, LLC.	None. Based on habitat observed during field review by Gibson & Skordal, LLC.	Vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella. Based on habitat observed during field review by Gibson & Skordal, LLC.	Big-scale balsamroot, dwarf downingia, veiny monardella, pincushion navarretia, Hartweg's golden sunburst, Bogg's Lake hedge-hyssop, Ahart's dwarf rush, legenere, slender orcutt grass, Sacramento orcutt grass. Based on habitat observed during field review by Gibson & Skordal, LLC.
Dave Browne Property		Pallid bat. Based on habitat observed during field review by Gibson & Skordal, LLC.	Tricolored blackbird, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, California homed lark,	Western spadefoot toad. Based on habitat observed during field review by Gibson & Skordal, LLC.	None. Based on habitat observed during field review by Gibson & Skordal, LLC.	Vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella, Valley elderberry longhorn beetle. Based on habitat observed during field review by Gibson &	Big-scale balsamroot, dwarf downingia, veiny monardella, pincushion navarretia, Hartweg's golden sunburst, Bogg's Lake hedge-hyssop, Ahart's dwarf rush, legenere,

Table 4.6-2 Potentially Occurring Special-Status Species and Survey Results							
Portion of Project Site	APN	Mammals	Birds	Reptiles/Amphibians	Fish	Invertebrates	Plants
			snowy egret, California black rail, long-eared owl. Based on habitat observed during field review by Gibson & Skordal, LLC.			Skordal, LLC.	slender orcutt grass, Sacramento orcutt grass, Sanford's arrowhead. Based on habitat observed during field review by Gibson & Skordal, LLC.
Wheatland Parcels							
Parcel A	015-360-001, 015-191-006 and -014	Pallid bat. Based on information derived from aerial photo.	Tricolored blackbird, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, California horned lark. Based on information derived from aerial photo.	None. Based on information derived from aerial photo.	None. Based on information derived from aerial photo.	None. Based on information derived from aerial photo.	Big-scale balsamroot, Henderson's bent grass, veiny monardella, Hartweg's golden sunburst. Based on information derived from aerial photo.
Parcel B	015-360-007	Pallid bat. Based on information derived from aerial photo.	Tricolored blackbird, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, California horned lark. Based on information derived from aerial photo.	None. Based on information derived from aerial photo.	None. Based on information derived from aerial photo.	None. Based on information derived from aerial photo.	Big-scale balsamroot, Henderson's bent grass, veiny monardella, Hartweg's golden sunburst. Based on information derived from aerial photo.
Parcel C	015-213-009	Pallid bat. Based on information derived from aerial photo.	Tricolored blackbird, burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, California horned lark. Based on information derived from aerial photo.	None. Based on information derived from aerial photo.	None. Based on information derived from aerial photo.	None. Based on information derived from aerial photo.	Big-scale balsamroot, Henderson's bent grass, veiny monardella, Hartweg's golden sunburst. Based on information derived from aerial photo.
Source: Gibson & Skordal, LLC. Biological Baseline Information Report. August 2009.							

Johnson Rancho and Hop Farm Annexation Area

According to the Biological Baseline Information Report prepared by Gibson & Skordal, LLC, the following special-status plants and wildlife species have the potential to exist in the proposed project area.

Special-Status Plant Species

Vernal Pool Plants

Special status plant species identified on the CNDDDB as occurring close proximity of the Annexation Area include dwarf downingia (*Downingia pusila*), Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), pincushion navarretia (*Navarretia myersii*) and legenere (*Legenere limosa*). All are strongly associated with vernal pools and other seasonally ponded wetlands.

Henderson's Bent Grass

Henderson's bent grass (*Agrostis hendersonii*) is a CNPS-3 plant. Little is known about this species. Henderson's bent grass is found in moist places in grasslands and vernal pools.

Big-Scale Balsamroot

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *aharti*) is a CNPS-1B plant. Big-scale balsamroot is found in valley or foothill grasslands or cismontane woodland habitats, and is sometimes found on serpentine soils.

Bogg's Lake Hedge-Hyssop

Bogg's Lake hedge-hyssop (*Gratiola heterosepala*) is a state-listed endangered species and a CNPS 1B plant. Though Bogg's Lake hedge-hyssop is found in vernal pools, it also favors other shallow water habitats such as lake margins and marshes.

Veiny Monardella

Veiny monardella (*Monardella douglasii*) is a CNPS-1B plant. Veiny monardella is found in valley or foothill grasslands or cismontane woodland habitats, and it prefers heavy clay soils.

Hartweg's Golden Sunburst

Hartweg's golden sunburst (*Pseudobahia bahifolia*) is a state and federally listed endangered and a CNPS-1B plant. Hartweg's golden sunburst is found in valley and

foothill grasslands, and it prefers clay soils on the north slopes of knolls and shady creeks, or near vernal pools.

Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is listed as a 1B plant by the CNPS. Sanford's arrowhead favors deeper aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer.

Special-Status Wildlife Species

Mammals

Pallid Bat

The pallid bat (*Antrozous pallidus*) is a CDFG species of special concern. The pallid bat favors roosting sites in crevices in rock outcrops, caves, abandoned mines, and human-made structures such as barns, attics, hollow trees, and sheds. Though pallid bats are gregarious, they tend to group in smaller colonies of 10 to 100 individuals. The pallid bat is a nocturnal hunter and captures prey in flight, but unlike most American bats, the species has been observed foraging for flightless insects, which it seizes after landing.

Townsend's Big-Eared Bat

Townsend's big-eared bat (*Corynorhinus townsendii townsendii*) is a USFWS species of concern. Townsend's big-eared bat roosts in a wide variety of habitats (riparian, scrub, woodland), primarily in caves. The bat also roosts in abandoned buildings, hollow trees, and under bridges.

Greater Western Mastiff-Bat

The greater western mastiff-bat (*Eumops perotis californicus*) is a CDFG species of special concern and a USFWS species of concern. The greater western mastiff-bat is primarily a cliff-dwelling species, but also roosts in crevices in rock outcrops and buildings. The greater western mastiff-bat forages in a variety of habitats.

Long-Eared Myotis Bat

The long-eared myotis bat is a USFWS species of concern. The long-eared myotis bat is found throughout California, most common in coniferous forests. The long-eared myotis bat roosts in buildings, snags, caves, rock crevices, hollow trees, and under bark and bridges.

Fringed Myotis Bat

The fringed myotis bat (*Myotis thysanodes*) is a USFWS species of concern. The fringed myotis bat is found in a variety of habitats in California, most common in drier woodlands between 3,900 to 6,900 feet above MSL. The fringed myotis bat roosts in caves, buildings, bridges, cliff faces, and rock crevices.

Yuma Myotis Bat

The Yuma myotis bat (*Myotis yumanensis*) is a USFWS species of concern. The Yuma myotis bat is a common and widespread bat species in California. The bat is found in a wide variety of habitats ranging from sea level to 11,000 feet in elevation. The bat is known to roost in buildings, mines, caves, and crevices. The bats' optimal foraging habitats are open woodlands and forests with water sources of water to forage. Breeding takes place in the fall and birthing usually occurs from May to Mid-June. The Yuma myotis bat could utilize crevices of tree snags and bark of larger mature trees in riparian areas within the proposed project site for roosting.

Birds

Cooper's Hawk

The Cooper's hawk (*Accipiter cooperii*), which is also known as the blue darter or chicken hawk, is listed by CDFG as a species of special concern. This raptor is an ambush predator that prefers to forage in or near wooded locations for birds, domestic poultry, and small mammals. Unlike falcons which use their beaks to kill, Cooper's hawks subdue prey by continuously squeezing with talon-equipped feet. The species nests in trees in wooded areas typically 10 to 60 feet above ground level.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is afforded protection by CDFG as a species of special concern due to declining populations in the region. The tricolored blackbird is a colonial nester favoring dense stands of cattails, bullrush, or blackberry thickets associated with drainages, ditches, and canals. The tricolored blackbird commonly forages in areas adjacent to the central colony for a variety of insects.

Grasshopper Sparrow

The grasshopper sparrow (*Ammodramus savannarum*) is listed as a species of special concern by CDFG. They are commonly found in dense grasslands on rolling hills, lowland plains in valleys, and on hillsides on lower mountain slopes. They favor native grasslands with a mix of grasses, forbs, and scattered shrubs. They are loosely colonial when nesting.

Great Egret

The great egret (*Ardea alba*) is listed by CDFG as a special-status species. This bird usually forages alone in shallow open water and wetlands for fish, amphibians, and aquatic invertebrates. Great egrets favor breeding habitat in or near open waters and wetlands.

Great Blue Heron

The great blue heron (*Ardea herodias*) is listed by CDFG as a special-status species. This wading bird forages in wetlands and shallow open waters for fish, aquatic invertebrates, small mammals, and amphibians. The great blue heron usually nests in rookeries that are situated in wetlands or near open waters.

Long-Eared Owl

The long-eared owl (*Asia otus*) is listed by CDFG as a special-status species. The long-eared owl is typically found in riparian habitat and could be found in live oak thickets and other dense stands of trees. The species typically hunts in open areas, occasionally in woodland and forested habitats, searching for prey in low gliding flight. The species nests in abandoned crow, magpie, hawk, heron, or squirrel nest in dense canopied trees. Breeding occurs from early March to late July.

Western Burrowing Owl

The western burrowing owl (*Athene cunicularia*) is a ground nesting raptor species that is classified by CDFG as a species of special concern and USFWS as a species of concern due to potentially declining populations in the Central Valley of California. Western burrowing owls typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and cavities associated with raised mounds, levees, or soft berm features.

Oak Titmouse

The oak titmouse (*Baeolophus inornatus*) is listed by CDFG as a species of special concern and by USFWS as a species of concern. The oak titmouse is a year round resident in oak and pine-oak woodland, chaparral and oak-riparian communities. Oak titmouse nests are constructed in naturally occurring tree cavities as well as old woodpecker holes or man-made bird boxes.

Ferruginous Hawk

The ferruginous hawk (*Buteo regalis*) is listed by CDFG as a species of special concern and by USFWS as a species of concern. The ferruginous hawk is a solitary tree nester that prefers to forage in grasslands or other open areas for small mammals, birds, reptiles, and large insects. This large hawk often winters in California.

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as Threatened in California by the CDFG. The hawk typically nests in tall cottonwoods, valley oaks, or willows associated with riparian corridors, grassland, irrigated pasture, and other cropland with a high density of rodents. The Central Valley population of Swainson's hawk breeds and nests in late spring through early summer before migrating for the winter. Conservation efforts are focused on preserving existing nesting and foraging habitat and on re-vegetating levees to establish suitable nesting habitat.

Alfalfa, row crops, grain fields, and irrigated pastures are the Swainson's hawk's preferred foraging habitats, where they take advantage of the opportunities that harvesting and irrigating practices provide for the easy capture of small rodents. Swainson's hawks do not typically forage in vineyards, orchards, or flooded rice fields.

Lawrence's Goldfinch

The Lawrence's goldfinch (*Carduelis lawrencei*) is a USFWS species of concern. The Lawrence's goldfinch inhabits open oak woodland and chaparral communities. In general, they are late nesters, waiting until plants have grown, bloomed and seeded so that soft fresh seeds may be fed to the young. The Lawrence's goldfinch feeds primarily on seeds, but also feeds on insects. The nests are generally found in a low tree or bush within oak trees along riparian thickets near open water and are in the shape of a tightly woven cup.

Mountain Plover

The mountain plover (*Charadrius montanus*) is listed by CDFG as a species of special concern. The mountain plover is considered a shorebird, but this ground nester prefers to live in drier areas away from water. The mountain plover breeds in the Great Basin and migrates to California in the winter where its life cycle is poorly understood. The mountain plover forages in California grasslands, pastures, and farmlands for insects which make up the majority of its diet.

Northern Harrier

The northern harrier (*Circus cyaneus*), which is also known as the marsh hawk, is listed by CDFG as a special-status species. Northern harriers are commonly found near wetlands and open grasslands perched on or flying close to the ground. The harriers' nests are constructed on the ground typically on dense, low vegetation that provides a visual barrier and cover. Nesting activity begins in April and concludes in September, with peak activity in June-July.

Yellow Warbler

The yellow warbler (*Dendroica petechia brewsteri*) is listed by CDFG as a special-status species. This small bird is found throughout North America, Central America, the

Caribbean, and northern South America. In California, the yellow warbler is usually associated with streams where the warbler forages for a variety of insects. The yellow warbler typically nests in willows, sycamores, or other riparian trees. The greatest threat to the species in the western U.S. is the destruction of habitat.

Snowy Egret

The snowy egret (*Egretta thula*) is listed by CDFG as a special-status species. This species is migratory and prefers to winter from September to March in Central and South America, Mexico, the West Indies, and Bermuda. The initiation of breeding season is indicated by the presence of long distinct plumes on the breast and a relatively rapid yellow to reddish orange color change on the feet. These birds are social nesters and build on the ground or in trees usually in close proximity to other egrets or herons. This species will forage in fresh or salt marshes, lakes, ponds, channels, or other water features.

White-Tailed Kite

The white-tailed kite (*Elanus leucurus*), also known as black-shouldered kite, is a CDFG fully protected species. This non-migrating bird attains a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which are foraged from open grasslands. The white-tailed kite builds a platform-like nest of sticks in trees or shrubs and lays three to five eggs, but may brood a second clutch if prey is abundant. The white-tailed kite's distinct style of hunting includes hovering before diving onto its target.

California Horned Lark

The California horned lark (*Eremophila alpestris actia*) is a CDFG species of special concern. This bird prefers to forage and nest in areas with sparse vegetation and exposed soil, such as agricultural fields, desert brushlands, grasslands, and similar open habitats. The California horned lark, which feeds on seeds and insects, seems to avoid all habitats dominated by dense vegetation.

Greater Sandhill Crane

The greater sandhill crane (*Grus canadensis tabida*) is listed by CDFG as threatened and by USFWS as a species of concern. The greater sandhill crane nests in wetland habitats in northeastern California and winters in the Central Valley. The greater sandhill crane roosts communally and eats a variety of plants and animals.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is listed by CDFG as a species of special concern. The loggerhead shrike is also known as the butcher bird, is a solitary hunter that feeds on small mammals, insects, reptiles, and birds. The loggerhead shrike favors open

habitats such as central oak woodland and creosote bush scrub and mostly nests in mid-canopy.

California Black Rail

The California black rail (*Laterallus jamaicensis coturniculus*) is a CDFG species of special concern. The California black rail lives in freshwater marshes and wet meadows or in shallow margins of saltwater marshes. The California black rail is sometimes found in grain fields and dry hay fields, and eats seeds of aquatic plants, insects, grasses and grains.

Black-Crowned Night Heron

The black-crowned night heron (*Nycticorax nycticorax*) is listed by CDFG as a special-status species. Most colonies are associated with large wetlands, streams, rivers, marshes, mud flats, and the edges of lakes that have become overgrown with cattails and/or rushes. The black-crowned night heron's diet consists mainly of fish, though earthworms, insects, crayfish, mussels, squid, amphibians, lizards, snakes, rodents, birds, eggs, trash, carrion, and plant materials are also commonly consumed. The black-crowned night heron defends its foraging territory and hunts usually alone at night. This species is also a colonial tree nester.

Long-Billed Curlew

The long-billed curlew is a CDFG species of special concern and USFWS species of concern. The long-billed curlew usually nests in dry uplands often near streams but sometimes in rangelands or farmlands. The long-billed curlew eats adult insects, fly larvae, aquatic insects, mollusks, crustaceans, and small amphibians, and feeds by probing mud with its bill or dunking its head under water. The long-billed curlew often flies in wedge-shaped flocks, especially in migration.

Nuttall's Woodpecker

The Nuttall's woodpecker (*Picoides nuttallii*) is a CDFG species of special concern and USFWS species of concern. The Nuttall's woodpecker is a permanent resident of low elevation riparian, deciduous and oak woodland habitats and requires standing snag or hollow tree for nest cavity. The Nuttall's woodpecker forages for insects off trunks and branches, probing into cavities, and also eats wild berries, acorns, sap, and some grain.

Bank Swallow

The bank swallow (*Riparia riparia*) is a federal species of concern and a California threatened species. The bank swallow nests in colonies of two or three pairs to a few thousand in vertical cliffs and banks associated with riparian zones, lakes, and streams. This species is known to colonize human-made vertical banks or building structures.

Amphibians and Reptiles

Northwestern Pond Turtle

The northwestern pond turtle (*Actinemys marmorata marmorata*) is a California species of special concern and a federal species of concern. The northwestern pond turtle's preferred habitat includes streams, large rivers and canals with slow-moving water, and marshes. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also eat small fish, frogs, mammals, and some plants. Northwestern pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring and may live up to 50 years.

Northwestern pond turtles regularly utilize upland terrestrial habitats, most often during the summer and winter, especially for oviposition (females), overwintering, seasonal terrestrial habitat use, and overland dispersal. Females have traveled as far as 500 meters (1,640 ft) from a watercourse to find suitable nesting habitat. Nest sites are most often situated on south or west-facing slopes, are sparsely vegetated with short grasses or forbs, and are scraped in sands or hard-packed, dry, silt or clay soils. Western pond turtles exhibit high site fidelity, returning in sequential years to the same terrestrial site to nest or overwinter.

Females lay their clutch as early as late April in southern and Central California to late July, although they predominantly lay in June and July. In the early morning or late afternoon, gravid females leave the water and move upland to nest. Natural incubation times vary, ranging from 80 to 100+ days in California. In northern California and Oregon, hatchlings remain in the nest after hatching and overwinter, emerging in the spring. In southern and central California, those that do not overwinter emerge from the nest in the early fall.

California Red-Legged Frog

The California red-legged frog (*Rana draytonii*) is a CDFG species of concern and a USFWS threatened species. This species is the largest indigenous frog west of the Continental divide. Once harvested for food with an annual take of approximately 80,000 animals per year in the late 1800s and early 1900s, the number of red-legged frogs declined. To bolster diminishing populations, the larger and much more aggressive bull frog (*Rana catesbiana*) was introduced from the eastern United States in 1886. Bull frogs, which are voracious feeders, extirpated the native frogs from much of the frog's historic range. Habitat destruction associated with placer mining, drought, ranching, farming, and urbanization further reduced populations, and in June 1996, the frog was officially assigned protection under the Endangered Species Act. The red-legged frog requires deeper, slow moving or still aquatic habitats with abundant emergent vegetation, but the species is known also to forage and disperse in nearby uplands.

Western Spadefoot Toad

The western spadefoot toad (*Spea hamondii*) is a California species of special concern and a federal species of concern. The western spadefoot toad is a nocturnally active animal that prefers to forage in grassland, scrub, and chaparral for a variety of insects, worms, and other invertebrates. This species breeds from January to May in vernal pools, pools in ephemeral stream courses, and other fish-free water features. Females commonly lay more than 500 eggs in one season. The tadpoles develop in three to 11 weeks, and must complete their metamorphosis before the temporary pools dry.

Giant Garter Snake

The giant garter snake (*Thamnophis gigas*) is designated as a federal threatened and state threatened species. The giant garter snake is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation.

Fish

Central Valley Spring-Run Chinook Salmon

The spring run Chinook salmon (*Oncorhynchus tshawytscha*) is a state and federal threatened species. The spring run Chinook salmon is an anadromous species requiring freshwater streams with gravelly substrates for breeding. The young remain in freshwater areas before migrating to estuarine and marine environments. The spring run Chinook salmon occurs in the Sacramento River and its tributaries.

Central Valley Fall-Run Chinook Salmon

The Fall-run Chinook salmon (*Oncorhynchus tshawytscha*) is a CDFG species of special concern and federal candidate species. The Fall-run Chinook salmon is an anadromous species requiring freshwater streams with gravelly substrates for breeding. The young remain in freshwater areas before migrating to estuarine and marine environments. The Fall-run Chinook salmon occurs in the Sacramento River and its tributaries.

Historically, Fall-run Chinook salmon were the most abundant run of Central Valley Chinook salmon, and occupied the entire Sacramento and San Joaquin River drainages, but the numbers were reduced beginning in the mid 1900s, as a result of commercial fishing, blockage from historical spawning and rearing habitat, water-flow fluctuations, unsuitable water temperatures, and reduction of habitat quality. The fish currently inhabit river reaches downstream of major dams on Central Valley rivers, including the Sacramento, Feather, Yuba, American, Mokelumne, Stanislaus, Tuolumne, and Merced, as well as smaller tributaries of the Sacramento River and the Delta.

After two to four years of maturation in the ocean, adult Chinook salmon return to their natal freshwater streams to spawn. Adult Fall-run Chinook salmon migrate upstream into

the Sacramento River between mid-September and December, with peak migrations occurring between October and November. Newly emerged fry remain in shallow, lower velocity edge waters, particularly where debris congregates and makes the fish less visible to predators (CDFG, 1998). Juvenile Fall-run Chinook salmon rear from January to June. Cover, space, and food are necessary components of Fall-run Chinook salmon rearing habitat. Suitable habitat includes areas with instream and overhead cover comprised of undercut banks, downed trees, and large, overhanging tree branches. These instream structures also provide habitat for aquatic and terrestrial insects utilized as prey items by juvenile salmonids. Once fry emerge from gravel redds, they typically spend time rearing in the river. Juvenile outmigration typically occurs December through June with the peak sometime between January and March (DWR unpublished data). A small number of Fall/late Fall-run salmon (5,000-15,000) may continue to rear in larger stream and riverine areas if temperatures are suitable throughout the summer. Chinook salmon are expected to occur in Dry Creek only during winter and spring periods when water quality is suitable.

Central Valley Steelhead

The Central Valley steelhead (*Oncorhynchus mykiss*) is a federally listed threatened species. The Central Valley steelhead requires cold freshwater streams with gravelly substrates for breeding. The young remain in freshwater habitats foraging for a variety of terrestrial and aquatic vertebrates before migrating to estuarine and marine environments. The Central Valley steelhead occurs in the Sacramento River and its tributaries.

The Central Valley steelhead is federally listed as Threatened (63 FR 13347, March 19, 1998). Most adult Central Valley Evolutionarily Significant Unit (ESU) steelhead ascend the Sacramento River watershed from August through January, with peak migrations occurring in late September – October. Spawning occurs in riffles at higher reaches of the River where water temperature, suitable gravel size, and stream depth are suitable. Soon after spawning those adults that survive the journey return to the ocean. It is currently unknown how long adult steelhead stay in the Sacramento River watershed after spawning and what their post-spawning mortality is. Soon after emerging from the gravel, a small percentage of the fry appear to emigrate. The remainder of the population appears to remain in the river for at least six months to one year. Little data exists on the residence time of juvenile steelhead in the Sacramento River watershed and studies are currently underway to gather more information on juvenile rearing and emigration behavior.

Invertebrates

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Although elderberry shrubs are a common component of riparian areas

throughout the Sacramento Valley region, they are also found considerable distances from drainages.

The Valley elderberry longhorn beetle is completely dependent on the host plant, and destruction of shrubs would require consultation with the USFWS. The USFWS must provide approval of any encroachment within the 100-foot buffer, and if complete avoidance of all shrubs is not possible, consultation with the USFWS is required. Elderberry stands within the project site were located in the riparian areas and are generally in good health. It should be noted that elderberry surveys are valid for two years from the date performed.

Vernal Pool Brachiopods

The federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardii*) as well as the non-listed California linderiella (*Linderiella occidentalis*) have been documented by the CNDDDB as occurring within the vicinity of the Annexation Area. These brachiopod species exclusively inhabit vernal pools or other seasonally ponded wetlands that sustain inundation during the winter before drying in the late spring.

REGULATORY CONTEXT

The following is a description of federal, state, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process.

Federal Regulations

The following are the federal environmental laws and policies relevant to the CEQA review process as they pertain to biological resources.

Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

The FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3). Taking can result in civil or criminal penalties.

The FESA and NEPA Section 404 guidelines prohibit the issuance of wetland permits for projects that would jeopardize the existence of threatened or endangered wildlife or plant species. The U.S. Army Corps of Engineers must consult with the U.S. Fish and Wildlife Service

(USFWS) and National Oceanic Atmospheric Administration (NOAA) when threatened or endangered species may be affected by a proposed project to determine whether issuance of a Section 404 permit would jeopardize the species.

Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”

Clean Water Act

The U.S. Army Corps of Engineers regulates discharge of dredged or fill material into Waters of the United States under Section 404 of the Clean Water Act (CWA). “Discharge of fill material” is defined as the addition of fill material into waters of the U.S., including but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 C.F.R. Section 328.2[f]). In addition, Section 401 of the CWA (33 U.S.C. 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.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 C.F.R. Section 328.3[b]).

Furthermore, jurisdictional waters of the U.S. can be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 C.F.R. Section 328.3[e]).

State Regulations

The following are State environmental laws and policies relevant to the CEQA review process as they pertain to biological resources.

California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. The CESA is similar to the FESA but pertains to state-listed endangered and threatened species. CESA requires state agencies to consult with the CDFG when preparing California Environmental Quality Act (CEQA) documents to ensure that the state lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFG on projects or actions that could affect listed species, directs CDFG to determine whether jeopardy would occur, and allows CDFG to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that “overriding considerations” exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

The CESA prohibits the taking of state-listed endangered or threatened plant and wildlife species. CDFG exercises authority over mitigation projects involving state-listed species, including those resulting from CEQA mitigation requirements. CDFG may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFG requires preparation of mitigation plans in accordance with published guidelines.

CDFG Species of Special Concern

In addition to formal listing under FESA and CESA, plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern” developed by the CDFG. CDFG tracks species in California whose numbers, reproductive success, or habitat may be threatened.

CDFG Birds of Prey Protection

Birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5, (1992), which states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the CDFG.

Waters of the State

Waters of the State, including wetlands, are considered sensitive biological resources and fall under the jurisdiction of CDFG and the California Regional Water Quality Control Board (RWQCB).

The CDFG exercises jurisdiction over wetland and riparian resources associated with rivers, streams, and lakes under California Fish and Game Code Sections 1600 to 1616. The CDFG has

the authority to regulate work that will substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. CDFG jurisdictional area along a river, stream or creek is usually bounded by the top-of-bank or the outermost edges of riparian vegetation. Typical activities regulated by CDFG under Sections 1600-1616 authority include installing outfalls, stabilizing banks, implementing flood control projects, constructing river and stream crossings, diverting water, damming streams, gravel mining, and logging.

Regional Water Quality Control Board

Pursuant to Section 401 of the Clean Water Act and EPA 404(b)(1) Guidelines, an applicant for a federal permit to conduct any activity that may result in discharge into navigable waters must provide a certification from the RWQCB that such discharge will comply with the state water quality standards (Cal. Code Regs. tit. 23, Section 3830 *et seq.*). The RWQCB has a policy of no-net-loss of wetlands in effect and typically requires mitigation for all impacts to wetlands before the RWQCB will issue a water quality certification or waiver thereof.

Under the Porter-Cologne Water Quality Control Act (Cal. Water Code Sections 13000-14920), the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the State's waters. "Waste" is broadly defined by the Porter-Cologne Act to include "[...] sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature [...]" (Cal. Water Code Section 13050). Concentrated silt or sediment associated with human habitation and harmful to the aquatic environment is "waste" under this section. In addition, the California Attorney General has interpreted this definition to include extraction of sand, gravel or other minerals from a streambed, because it may cause an increase in turbidity and silt in the waters of the stream downstream from the operations. Therefore, even if a project does not require a federal permit (i.e., a Nationwide Permit from the USACE), review and approval of the RWQCB may be required.

Streambed Alteration

The CDFG is a trustee agency that has jurisdiction under the California Fish and Game Code (S Sections 1600 *et seq.*). The California Fish and Game Code (Section 1601), requires that a private party must notify CDFG if a proposed project will "[...] substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds [...] except when the department has been notified pursuant to Section 1601." If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFG may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFG identifying the approved activities and associated mitigation measures.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation Act (MSA) as amended (U.S.C 180 et seq.) requires that essential fish habitat be identified and described in Federal fishery management plans (FMPs). Federal action agencies must consult with NMFS on activities they fund, permit, or carry out that may adversely affect essential fish habitat. NMFS is required to provide essential fish habitat conservation and enhancement recommendations to the Federal action agencies. The geographic extent of freshwater essential fish habitat for Pacific salmon in the Sacramento River includes waters currently or historically accessible to salmon within the Sacramento River watershed.

Natural Community Conservation Planning Act

The Natural Communities Conservation Planning Act (NCCP) program is an unprecedented effort by the State of California, as well as numerous private and public partners that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The program, which began in 1991 under the California Natural Community Conservation Planning Act, is broader in its orientation and objectives than CESA and ESA; these laws are designed to identify and protect individual species that are already listed as threatened or endangered. The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land use (CDFG, 2003).

Local Regulations

City of Wheatland General Plan

The City of Wheatland established the following General Plan goals and policies regarding biological resources.

Goal 8.B To protect, restore, and enhance habitats that support fish and wildlife species so as to maintain populations at viable levels.

Policy 8.B.1. The City shall support preservation of the habitats of federally or state-listed rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.

Policy 8.B.2. The City shall support and cooperate with efforts of other local, State, and federal agencies and private entities engaged in the preservation and protection of significant biological resources. Significant biological resources include endangered, threatened, or rare species and their habitats, wetland habitats, wildlife migration corridors, and locally-important species / communities.

Policy 8.B.3. The City shall support preservation, restoration, and enhancement of the designated habitats of State or Federally listed rare,

threatened, endangered and/or other sensitive and special status species.

Policy 8.B.4. The City shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitat. Where possible and appropriate, such communities shall be restored or expanded.

Policy 8.B.5. The City shall require careful planning of new development in areas that are known to have particular value for biological resources to maintain sensitive vegetation and wildlife habitat.

Policy 8.B.6. The City shall review development proposals in accordance with applicable Federal, State, and local statutes protecting special status species and jurisdictional wetlands.

Policy 8.B.7. The City shall impose appropriate mitigation measures using protocols defined by the applicable statute (e.g., USFWS, CDFG, etc.).

Policy 8.B.8. On sites that have the potential to contain critical or sensitive habitats or special species are within 100 feet of such areas, the City shall require the project applicant to have the site surveyed by a qualified biologist. A report on the findings of this survey shall be submitted to the City as part of the application process.

Goal 8.C To preserve and protect the valuable vegetation resources of the Wheatland area.

Policy 8.C.1. The City shall require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in fulfilling landscaping requirements imposed as conditions of permits or for project mitigation.

Policy 8.C.2. The City shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands and riparian areas.

Policy 8.C.3. The City shall require that new development preserve natural woodlands to the maximum extent possible.

Policy 8.C.4. The City shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

Goal 8.D To preserve and enhance open space lands to maintain the natural resources of the Wheatland area.

Policy 8.D.1. The City shall support the preservation and enhancement of natural land forms, natural vegetation, and natural resources as open space to the maximum extent feasible.

Policy 8.D.2. The City shall, where appropriate, permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains.

Policy 8.D.3. The City shall require that new development be designed and constructed to preserve significant stands of vegetation and any areas of special ecological significance as open space to the maximum extent feasible.

Yuba-Sutter Regional Natural Community Conservation Plan and Habitat Conservation Plan

Yuba County and Sutter County have declared the intent to participate in the development of a Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) for both Yuba and Sutter counties. The counties are working as joint lead agencies in drafting the NCCP/HCP for submittal to the governing boards and councils of member agencies, oversight of compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), and would also serve as joint lead agencies under CEQA for developing the NCCP/HCP. The City of Wheatland is participating in the development of the NCCP/HCP. Currently, the NCCP/HCP is in the early planning phases.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

For the purposes of this EIR, impacts are considered significant if implementation of the proposed project would do any one or more of the following:

- Adversely affect, either directly or through habitat modification, any endangered, threatened or rare species, as listed in Title 14 of the California Code of Regulations (Sections 670.5) or in Title 50, Code of Regulations (Sections 17.11 or 17.12) or their habitats (including but not limited to plants, fish, insects, animals, and birds);
- Have a substantial adverse impact, either directly or through habitat modification, on any species identified as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations or by the CDFG or USFWS, including CNPS plants listed as 1B;
- Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulation or by the CDFG or USFWS;

- Adversely affect federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means;
- Have a substantial adverse effect on significant ecological resources including:
 - Wetland areas including vernal pools;
 - Large areas of non-fragmented natural communities that support endangered, threatened or rare species;
 - Wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian routes, and known concentration areas of waterfowl within the Pacific Flyway;
- Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites;
- Conflict with any local or regional policies or ordinances designed to protect or enhance biological resources, such as a tree preservation policy or ordinance;
- Substantially fragment, eliminate or otherwise disrupt foraging areas, access to food sources, range and/or movement;
- Disrupt critical time periods (i.e., nesting and breeding) for fish and other wildlife species; or
- Conflict with local, State, or federal resource conservation plans, goals, or regulations that would result in a physical impact on the environment.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish or result in the loss of an important biological resource, or those that would conflict with local, State, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important, but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of a defined important resource on a population-wide or region-wide basis.

As discussed in the Introduction to the Analysis chapter of this Draft EIR, impacts identified in the Initial Study as less-than-significant or having no impact, which do not require mitigation, have already been addressed in the Initial Study. As stated in the Initial Study, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. All other impacts identified as potentially significant within the Initial Study are addressed below.

Method of Analysis

Sources of information used for this section include the results from the *Biological Baseline Information Report, Johnson Rancho and Hop Farm* prepared by Gibson & Skordal, LLC, the *Biological Resources Assessment, ± 1,191-Acre Wheatland Ranch* prepared by Foothill

Associates, the *Special-Status Species Assessment for Johnson's Crossing*, the *Special-Status Species Assessment for Browne Cattle Company*, the *Special-Status Plant Survey for Browne Cattle*, the *Special-Status Plant Survey for Johnson's Crossing*, and the *Wetland Delineation for Browne Cattle Company* (all prepared by ECORP Consulting, Inc.), the *Wetland Delineation for Wilson Ranch*, and local, State, and federal resource agencies.

Gibson & Skordal, LLC

The Gibson & Skordal, LLC biological baseline information report describes the existing biological resources within the Johnson Rancho and Hop Farm Annexation area based on the results of rare plant surveys, wetland delineations, biological assessments, preliminary site assessments, and/or information derived from the interpretation of aerial photography.

Foothill Associates

For their biological resources assessment, Foothill Associates reviewed all available information pertaining to the natural resources of the region. Foothill Associates reviewed the following site-specific information:

- CDFG. 2006. *California Natural Diversity Data Base (CNDDB)*. Sacramento, CA;
- Natural Resource Conservation Service. 1998. *Soil Survey of Yuba County, California*;
- USFWS. 2007. Federal Endangered and Threatened Species that may be affected by Projects in the Wheatland and Camp Far West 7.5-minute Series Quadrangles Sacramento, CA;
- United States Department of Interior, U.S. Geological Survey. 1995. *Camp Far West, California 7.5-minute Series Topographic Quadrangle*; and
- United States Department of Interior, U.S. Geological Survey. 1947 (Photorevised 1973). *Wheatland, California. 7.5-minute Series Topographic Quadrangle*.

Foothill Associates' biologists conducted field surveys in the project area on November 9 and 14, 2006. The site was systematically surveyed with binoculars, both on foot and by vehicle, to ensure total search coverage, with special attention given to identifying those portions of the site with the potential for supporting special-status species and sensitive habitats. During the field surveys, biologists recorded plant and animal species found on-site and characterized biological communities occurring on-site.

ECORP Consulting, Inc.

Special-Status Wildlife

The ECORP Consulting, Inc. special-status wildlife survey was conducted by a biologist on April 4 and 5, 2006. The biologist surveyed the project area for special-status species or their habitats. Other unique biological features (e.g., native oak trees, riparian habitat) were noted. A color aerial photograph (1" = 250' scale, flown April 2004, AirPhoto USA) was used for orientation during the surveys and to assist with mapping.

Special-Status Plants

The ECORP Consulting, Inc. special-status plant survey included a review of resource agency species lists, literature review, online database query, voucher specimen and reference population review, and field surveys. Background information was collected on the potential existence of special-status plants within or near the site from a variety of sources including the following:

- CDFG's Natural Diversity Database (CNDDDB) record search for the "Camp Far West, California," and "Wheatland, California" 7.5-minute quadrangles and their respective eight surrounding quadrangles (CDFG 2003);
- CNPS's Inventory of Rare and Endangered Plants record search for the "Camp Far West, California," and "Wheatland, California" 7.5-minute quadrangles and their respective eight surrounding quadrangles (CNPS 2007);
- Species List for the "Camp Far West, California," and "Wheatland, California" 7.5-minute quadrangles and their respective eight surrounding quadrangles created by the U.S. Fish and Wildlife Service (USFWS) (USFWS 2007);
- *Status of Rare, Threatened, and Endangered Animal and Plants of California 2000-2004* (CDFG 2005);
- *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001);
- *Soil Survey of Yuba County, California* (USDA, SCS 1998);
- Color aerial photograph (AirPhoto USA 2005, scale: 1" = 200'); and
- Wilson Ranch Wetland Delineation (Foothill Associates 2005).

The ECORP Consulting, Inc. field surveys were conducted in accordance with guidelines promulgated by the USFWS, the CDFG, and the CNPS. Determinate field surveys were conducted on the following dates: May 18, 2006; June 13, 14, 15, and 16, 2006; April 11, 12, 13, and 16, 2007; and June 20, 2007. These dates coincided with the optimum blooming period for each of the potentially occurring special-status plants. ECORP Consulting, Inc. botanists walked meandering transects throughout the site to ensure complete coverage of all potential habitat, including all aquatic features on-site.

Reference populations for the target species were visited throughout the floristic season to assess bloom phenology and to observe species morphology. When reference populations were not available, mounted herbarium specimens were observed at the U.C. Davis Herbarium.

Plant species identification, nomenclature, and taxonomy followed *The Jepson Manual; Higher Plants of California* (Hickman 1993). Vegetation community classification was based on the classification systems presented in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), and *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer Jr. 1988).

Wetlands

The ECORP Consulting, Inc. wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). The waters of the

U.S. boundaries were delineated through aerial photograph interpretation and standard field methodologies (i.e., paired data set analyses), and all wetland data were recorded on Routine Wetland Determination Forms. A color aerial photograph (1"=250' scale, Airphoto USA April 2004) was used to assist with mapping and ground-truthing. *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990) and the *Soil Survey of Yuba County, California* (US. Department of Agriculture, Soil Conservation Service 1998) were used to aid in identifying hydric soils in the field. *The Jepson Manual* (Hickman, ed. 1993) was used for plant nomenclature and identification.

Field wetland surveys were conducted during the months of May and June in 2005 by an ECORP Consulting, Inc. biologist. The biologist walked the project area to determine the location of potentially jurisdictional boundaries within the property. Thirteen paired data point locations were sampled to evaluate vegetation, hydrology, and soils to determine wetland or non-wetland status. At each paired location, one point was located within the estimated wetland area, and the other point was situated outside the limits of the estimated wetland area. The total area of wetlands within the property was recorded in the field using a post-processing capable global positioning satellite (GPS) unit with sub-meter accuracy (Trimble Pro XR-TSCE Data Collector).

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Johnson Rancho and Hop Farm) unless otherwise noted.

4.6-1 Impacts to special-status plants.

As shown in Table 4.6-2, the following 12 special-status plant species have the potential to exist within the project area: Big-scale balsamroot, Henderson's bent grass, dwarf downingia, veiny Monardella, pincushion navarretia, Hartweg's golden sunburst, Bogg's Lake hedge-hyssop, Ahart's dwarf rush, legenere, slender orcutt grass, Sacramento orcutt grass, Sanford's arrowhead. If any of the special-status plant species are present in the project area, on- and off-site construction activities could result in the removal of the plants, resulting in a *potentially significant* impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

- 4.6-1(a) *In conjunction with the submittal of the **first** zoning or tentative map application for development within the Johnson Rancho and Hop Farm Annexation area, a Resource Corridor Conservation Plan shall be prepared for the Johnson Rancho and Hop Farm Annexation area. The Resource Corridor Conservation Plan shall demonstrate the preservation of open space corridors within the portions of the Johnson Rancho and Hop Farm Annexation area that are considered to have high-value habitat for special-status plant and wildlife species (i.e., Grasshopper Slough, Dry*

Creek, other waters of the U.S. or jurisdictional wetlands). In addition, the Resource Corridor Conservation Plan shall outline a long-term maintenance/funding strategy for biological resources within the Johnson Rancho and Hop Farm Annexation area. The Resource Corridor Conservation Plan shall be prepared by a qualified biologist and shall be submitted for the review and approval of the Planning Commission and/or City Council in conjunction with their review of the development application. The zoning or tentative map approval shall be conditioned to require implementation of the Resource Corridor Conservation Plan.

4.6-1(b) *In conjunction with the submittal of **each** future zoning or tentative map applications (after submittal of the first zoning or tentative map), should the pending Yuba-Sutter Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) be adopted by the City of Wheatland, the project applicant(s) shall participate and incorporate all applicable mitigation measures set forth in the NCCP/HCP. If the Yuba-Sutter NCCP/HCP has not yet been adopted, Mitigation Measures 4.6-1(c) and 4.6-1(d) shall be implemented.*

4.6-1(c) *In conjunction with the submittal of **each** future zoning or tentative map applications (after submittal of the first zoning or tentative map) for development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall demonstrate compliance with the Resource Corridor Conservation Plan for the Johnson Rancho and Hop Farm Annexation area, subject to review and approval by the City Community Development Department.*

4.6-1(d) *In conjunction with the submittal of **each** future zoning or tentative map applications (after submittal of the first zoning or tentative map) for development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall have a site-specific biological resources evaluation prepared by a qualified biologist, and shall comply with all mitigation measures included in the biological resources evaluation, including, but not limited to, preconstruction surveys for any special-status plant or wildlife species that the biological resources evaluation determined to have the potential to exist on-site. The biological resources evaluation shall be subject to review and approval by the Planning Commission and/or City Council in conjunction with their review of the development application.*

4.6-2 Impacts to pallid bat, townsend's big-eared bat, Yuma myotis bat, fringed myotis bat, greater western mastiff-bat, long-eared myotis bat, and Pacific western big-eared bat.

Bats are known to roost in buildings, mines, caves, and crevices. Optimal habitats include open woodlands and forests with sources of water over which to feed. These bats could

utilize crevices of tree snags and bark of larger mature trees in the proposed project's riparian areas for roosting. Furthermore, Grasshopper Slough and Dry Creek could be utilized for over water foraging.

Hop Farm Property

As shown in Table 4.6-2, the pallid bat, the townsend's big-eared bat, and the Yuma myotis bat could potentially exist within the Hop Farm Property portion of the project area.

Johnson Rancho Property

As shown in Table 4.6-2, the pallid bat, the townsend's big-eared bat, the Yuma myotis bat, the fringed myotis bat, the greater western mastiff-bat, the long-eared myotis bat, and the Pacific western big-eared bat could potentially exist within the Johnson Rancho Property portion of the project area.

Conclusion

Although colonial roosting and large groups of bats occurring within the site is highly unlikely, the potential exists that individuals and small groups of special-status bats may utilize the site. Because special-status bats could possibly utilize the site, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.6-2 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-3 Impacts to Swainson's hawk.

The Hop Farm and Johnson Rancho Properties include grasslands and open farmland, with some riparian areas. As discussed above, grasslands and open farmland are considered to be Swainson's hawk foraging habitat. As shown in Table 4.6-2, Swainson's hawk has the potential to exist on both the Hop Farm Property and the Johnson Rancho Property portions of the project site. Therefore, development of the Hop Farm and Johnson Rancho Properties could result in adverse impacts to Swainson's hawk.

Conclusion

Due to the presence of Swainson's hawk foraging habitat, development of the proposed project would have a ***potentially significant*** impact to Swainson's hawk.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.6-3 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-4 Impacts to western burrowing owl.

As discussed previously, portions of the site contain open pasture areas and open grasslands, which are considered to be potential western burrowing owl nesting habitat. As shown in Table 4.6-2, western burrowing owl has the potential to exist on both the Hop Farm Property and the Johnson Rancho Property portions of the project site. Although habitat within the proposed project area is not optimum, a moderate potential exists that the species could utilize the proposed project site for foraging and/or nesting. Because the project site has the potential to support burrowing owls, a *potentially significant* impact would result.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.6-4 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-5 Impacts to other raptors.

Construction within the project area during the nesting season (February-August) could result in the disturbance of a nest or disrupt nesting behavior. Raptors in the orders Falconiformes (hawks, eagles, and falcons) and Strigiformes (owls) are protected in varying degrees under California Fish and Game Code, Section 3503.5, the Migratory Bird Treaty Act, CESA and the federal ESA.

Hop Farm Property

According to the biological resources assessment prepared for the Hop Farm Property, Cooper's hawks and long-eared owls have the potential to exist within the Hop Farm Property portion of the project site.

Johnson Rancho Property

According to the biological resources assessments prepared for the Johnson Rancho Property, Cooper's hawks, ferruginous hawks, and long-eared owls have the potential to exist within the Hop Farm Property portion of the project site.

Conclusion

Because the Hop Farm and Johnson Rancho Properties could provide suitable nesting habitat for the abovementioned raptor species, and future development of the proposed project could disturb nesting raptors during the nesting season (March 1 – July 15), a *potentially significant* impact would result.

Mitigation Measure(s)

The implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.6-5 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-6 Impacts to passerines/migratory songbirds.

Hop Farm Property

Oak woodland, riparian vegetation, and open agricultural habitats at the project site provide foraging and nesting habitat for the following passerines/migratory songbirds: tricolored blackbird, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, California horned lark, snowy egret, California black rail, bank swallow, and yellow warbler. These species are protected under the Migratory Bird Treaty Act. Direct removal of trees, as well as noise and visual disturbances associated with construction activities occurring during the birds' nesting seasons, could potentially disrupt nesting individuals. Activities associated with construction could lead to nest abandonment and nest failure, which would be considered an adverse impact.

Johnson Rancho Property

Oak woodland, riparian vegetation, and open agricultural habitats at the project site provide foraging and nesting habitat for the following passerines/migratory songbirds: tricolored blackbird, northern harrier, white-tailed kite, loggerhead shrike, grasshopper sparrow, California horned lark, snowy egret, California black rail, bank swallow, yellow warbler, greater sandhill crane, Lawrence's goldfinch, long-billed curlew, mountain plover, Nuttall's woodpecker, and oak titmouse. These species are protected under the Migratory Bird Treaty Act. Direct removal of trees, as well as noise and visual disturbances associated with construction activities occurring during the birds' nesting seasons, could potentially disrupt nesting individuals. Activities associated with construction could lead to nest abandonment and nest failure, which would be considered an adverse impact.

Conclusion

The proposed project area contains a variety of habitats that provide foraging and nesting habitat for migratory songbirds and passerines. Construction activities associated with development of any of the subject properties could result in nest abandonment and/or nest

failure. Because the proposed project could lead to nest abandonment and/or nest failure, a *potentially significant* impact would occur.

Mitigation Measure(s)

The implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.6-6 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-7 Impacts to western spadefoot toad.

Western spadefoot toads, a Federal Species of Concern and a California Species of Special Concern, are medium-sized native toads once found from Redding south to Northwestern Baja, California and from San Francisco Bay south to Mexico in the Coast Ranges and coastal lowlands. The toad prefers habitats with short grasses and open vegetation in sandy or gravelly soils. The species is normally found in lowland habitats including alluvial fans, floodplains, playas, and alluvial flats, but are also found in foothill and mountain valleys below 3,000 feet. As shown in Table 4.6-2, the western spadefoot toad has the potential to exist within both the Hop Farm and Johnson Rancho Properties.

Conclusion

Temporary construction impacts that could affect the western spadefoot toad include the presence of heavy equipment and earthmoving activities as part of residential and commercial construction. In addition, the proposed project could result in impacts to wetland habitat for these species. Loss of habitat and potential loss of individuals if this species is present within construction areas would result in a *potentially significant* impact.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the impact to a *less-than-significant* level.

4.6-7 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-8 Impacts to giant garter snake.

The giant garter snake, which is designated as a federal threatened and state threatened species, is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation. Suitable habitat for the giant garter snake exists within a portion of the Johnson Rancho and Hop Farm Annexation area.

Hop Farm Property

As shown in Table 4.6-2, the giant garter snake does not have the potential to exist on the Hop Farm Property portion of the proposed project site.

Johnson Rancho Property

As shown in Table 4.6-2, the giant garter snake has the potential to exist on the Johnson Rancho Property portion of the proposed project site.

Conclusion

Temporary construction impacts that could affect the giant garter snake include the presence of heavy equipment and earthmoving activities as part of residential and commercial construction. In addition, the proposed project could result in impacts to wetland habitat for these species. Loss of habitat and potential loss of individuals if this species is present within construction areas would result in a *potentially significant* impact.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the impact to a *less-than-significant* level.

Johnson Rancho Property

4.6-8 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-9 Impacts to northwestern pond turtle.

Due to Grasshopper Slough being in the vicinity of the proposed project area, the northwestern pond turtle, a California Species of Special Concern, has the moderate potential to occur. In addition, this species has potential to nest and over-winter within the project site in upland habitats such as the grasslands/ruderal habitats adjacent to aquatic habitats on the property. Construction within upland habitats, as well as bridge and stormwater outfall construction within Grasshopper Slough, would have the potential to adversely affect the northwestern pond turtle.

Hop Farm Property

As shown in Table 4.6-2, the northwestern pond turtle does not have the potential to exist on the Hop Farm Property portion of the proposed project site.

Johnson Rancho Property

As shown in Table 4.6-2, the northwestern pond turtle has the potential to exist on the Johnson Rancho Property portion of the proposed project site.

Conclusion

Temporary construction impacts that could affect the northwestern pond turtle include the presence of heavy equipment and earthmoving activities as part of residential and commercial construction. In addition, the proposed project could result in impacts to wetland habitat for these species. Loss of habitat and potential loss of individuals if this species is present within construction areas would result in a *potentially significant* impact.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the impact to a *less-than-significant* level.

Johnson Rancho Property

4.6-9 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-10 Impacts to essential fish habitat.

Essential fish habitat is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. For the purpose of interpreting the above definition of essential fish habitat, “waters” includes aquatic areas and their associated physical, chemical, and biological properties that are used by fish, and may include areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means habitat required to support a sustainable fishery and a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers all habitat types used by a species throughout its life cycle. Dry Creek borders a portion of the proposed project site’s northern boundary. Dry Creek is considered essential fish habitat, as defined by the Magnuson-Stevens Fishery Conservation.

Additionally, the Central Valley steelhead, which is federally listed as Threatened, and the Fall-run Chinook salmon, which is listed as a Species of Concern, have the potential of being supported by Dry Creek. However, reaches of Dry Creek near the project site would not be used for spawning due to substrate being comprised of finer sediments, but could serve as foraging, non-natal rearing, and a migratory corridor for the species. Steelhead are expected to occur in Dry Creek only during winter and spring periods when water quality is suitable, and Chinook salmon are expected to occur in Dry Creek only during winter and spring periods when water quality is suitable.

Conclusion

As shown in Table 4.6-2, development of the Hop Farm Property portion of the proposed project site would not result in impacts to any special-status fish species. Therefore, impacts to essential fish habitat would be *less-than-significant*.

Mitigation Measure(s)

None required.

4.6-11 Impacts to valley elderberry longhorn beetles.

Hop Farm Property

An elderberry shrub survey was performed for the Hop Farm Property and six elderberry shrub clusters were found along the eastern boundary of the Hop Farm Properties (See Figure 4.6-2, Elderberry Shrub Occurrences on the Hop Farm Property). As shown on Figure 4.6-2 and in Table 4.6-2, portions of the Hop Farm Property contain elderberry shrubs that, in turn, could support valley elderberry longhorn beetles. Future development of the uses proposed for the project area could result in impacts to elderberry shrubs.

Johnson Rancho Property

Site-specific studies have not been conducted to date for the Johnson Rancho Property portion of the project site to identify the existence of elderberry shrubs. However, the Johnson Rancho Property could contain elderberry shrubs, which could support the valley elderberry longhorn beetle. Potential occurrences of elderberry shrubs are anticipated in areas along Grasshopper Slough. Future development of the uses proposed for the project area could result in impacts to elderberry shrubs.

Conclusion

Elderberry bushes that are directly affected (i.e., destroyed or transplanted) as a result of the proposed project would require mitigation consistent with the 1999 USFWS Conservation Guidelines for Valley Elderberry Longhorn Beetle (Guidelines). According to the Guidelines, complete avoidance (i.e., no adverse effects) shall be assumed when a 100-foot buffer is established and maintained around elderberry plants containing stems measuring one inch or greater in diameter at ground level. The USFWS must provide approval of any encroachment within the 100-foot buffer, and if complete avoidance of all bushes on-site is not possible, consultation with the USFWS is necessary. Because the proposed project could have adverse impacts to elderberry bushes, a ***potentially significant*** impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.6-11 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

Figure 4.6-2
Elderberry Shrub Occurrences on the Hop Farm Property



4.6-12 Impacts to special-status brachiopods.

As discussed above, the federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardii*), as well as the non-listed California linderiella (*Linderiella occidentalis*) have been documented by the CNDDDB as occurring within the vicinity of the proposed project area. These brachiopod species exclusively inhabit vernal pools or other seasonally ponded wetlands that sustain inundation during the winter before drying in the late spring. As shown in Table 4.6-2, the Hop Farm and Johnson Rancho Properties have the potential to support the vernal pool fairy shrimp, the vernal pool tadpole shrimp, and the California linderiella.

Conclusion

Because future development within the proposed project area could disturb the vernal pool fairy shrimp, the vernal pool tadpole shrimp, and the California linderiella, impacts to special-status invertebrate species would be *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.6-12 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-13 Impacts to wetlands and other waters of the U.S.

Figure 4.6-3, Wetland Delineation Exhibit, shows the existing wetlands and jurisdictional waters on the Hop Farm and Johnson Rancho Properties. In addition, Table 4.6-3 shows the wetland acreage totals by feature type for the proposed project area.

According to the wetland delineation prepared by ECORP Consulting, Inc. for the Browne Cattle Company portion of the Johnson Rancho Property, a total of 41.070 acres of potential waters of the U.S. has been mapped on the Browne Cattle Company portion of the Johnson Rancho Property. Table 4.6-4 shows the on-site acreage of each type of jurisdictional water.

According to the wetland delineation prepared by USACE for the Johnson's Crossing/Wilson Ranch portion of the Johnson Rancho Property, approximately 53.85 acres of waters of the United States, including wetlands, are present within the area. These waters are regulated under Section 404 of the Clean Water Act because they are adjacent or tributary to Grasshopper Slough and the Bear River.

Figure 4.6-3
Wetland Delineation Exhibit – Hop Farm and Johnson Rancho Properties

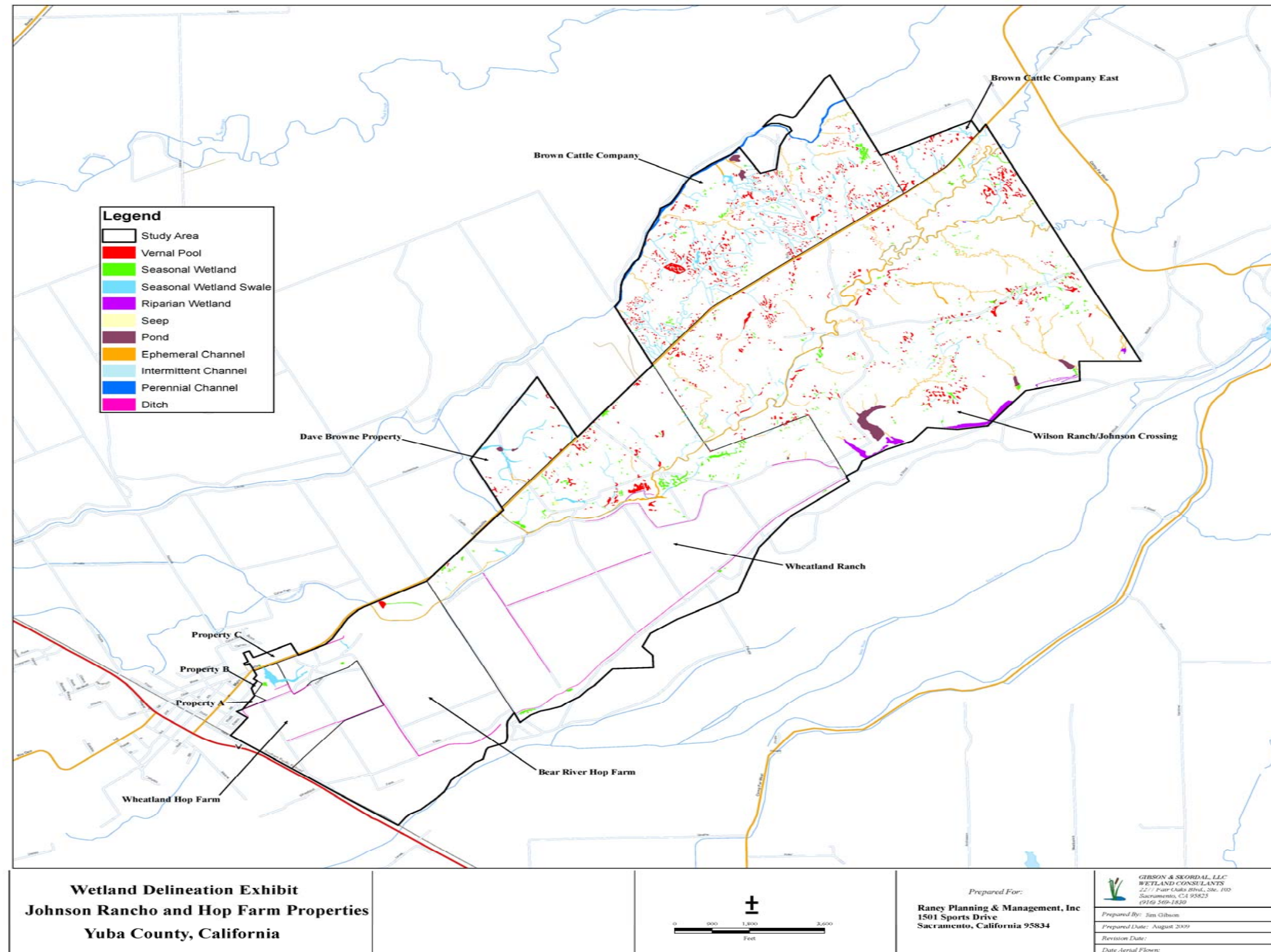


Table 4.6-3 Wetland Acreage Totals by Feature Type												
Portion of Project Site	Delineation Status	APNs	Ephemeral Channel	Intermittent Channel	Perennial Channel	Ditch	Riparian Wetland	Pond	Seasonal Wetland	Seasonal Wetland Swale	Vernal Pool	Total
Hop Farm Properties												
Wheatland Hop Farm	Delineation Verified by USACE		0.00	0.00	0.00	0.65	0.00	0.00	0.17	2.20	0.00	3.02
Bear River Hop Farm	Aerial Photo Interpretation	015-360-033, -043, and 015-480-009	1.300	0.000	0.000	1.240	0.000	0.000	0.080	0.790	0.560	3.97
Johnson Rancho Properties												
Wheatland (AKT) Ranch	Preliminary Site Assessment	015-360-026, -028, -029, -030, -031, -032, and -038	3.26	0.12	0.00	4.03	0.00	0.06	6.69	2.25	4.81	21.22
Johnson's Crossing	Delineation Verified by USACE	015-160-029, 015-370-001, 015-360-024, and -025	12.76	0.00	0.00	0.00	7.78	8.30	5.52	1.99	15.81	52.16
Browne Cattle Company	Detailed Field Delineation	015-080-020	1.42	0.00	10.55	0.00	0.00	1.75	2.45	11.04	13.86	41.07
Browne Cattle Company (East Parcel)	Aerial Photo Interpretation	015-160-095	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	1.77	2.26
Dave Browne Property	Aerial Photo Interpretation		0.13	0.00	0.00	0.00	0.00	0.54	0.00	2.37	0.57	3.61
Wheatland Parcels												
Parcel A	Aerial Photo Interpretation	015-213-009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parcel B	Aerial Photo Interpretation	015-360-007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parcel C	Aerial Photo Interpretation	015-360-001, 015-191-014, and -006	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Total Area			18.87	0.12	10.55	5.92	7.78	10.65	14.96	21.13	37.38	127.36
Source: Gibson & Skordal, LLC. Biological Baseline Information Report. August 2009.												

Table 4.6-4 Waters of the U.S.	
Wetland Type	Acreage
<i>Wetlands</i>	
Vernal Pool	13.862
Seasonal Wetland	2.450
Seasonal Wetland Swale	11.035
<i>Other Waters</i>	
Ephemeral Drainage	1.418
Dry Creek	10.554
Stock Pond	1.751
Total	41.070
<i>Source: ECORP Consulting, Inc., Wetland Delineation for Brown Cattle Company, May 11, 2006.</i>	

In addition, it should be noted that implementation of the proposed project would include the deepening and widening of portions of the Grasshopper Slough Tributary to Dry Creek in order to accommodate 100-year peak stormwater flows (See Chapter 4.10, Hydrology and Water Quality, of this EIR for further information). As such, the proposed project requires procurement of a Streambed Alteration Agreement from the CDFG.

Conclusion

Wetlands and other waters of the U.S. have been identified within the proposed project area. As a result, development of the proposed project would result in a ***potentially significant*** impact to wetlands and other waters of the U.S.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the impact to a *less-than-significant* level.

- 4.6-13(a) *The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

“The project applicant(s) shall consult with the USACE with respect to potential impacts to any on-site wetlands. If the USACE determines that jurisdictional waters on or off the project site would not be impacted by the proposed project, no further mitigation is necessary. If the USACE determines that jurisdictional waters that may be impacted by the project are present on- or off-site, the appropriate CWA Section 404 permit shall be acquired by the applicant for the construction of the proposed project and the filling of the existing ditches, if applicable. CWA Section 401 water quality certification or waiver will also be required. An individual permit under Section 404 of the Clean Water Act is required for impacts to waters of the U.S., including wetlands greater than 0.5 acres. As part of the individual permit, National Environmental Protection Act (NEPA)

compliance and a Section 404(b) (1) Alternatives Analysis must be completed. In addition, Regional Water Quality Control Board certification is required pursuant to Section 401 of the Clean Water Act to obtain an individual permit. A copy of the approved Section 404 permit shall be provided to the Planning Director prior to the issuance of grading permits.”

Compliance with this condition shall be ensured by the City Engineer prior to the approval of each tentative map.

- 4.6-13(b) *The City shall include the following as a condition of approval on **each** tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

“The project applicant(s) shall prepare and submit to the California Department of Fish and Game (CDFG) a formal wetland delineation based on current regulations of the USACE. If the CDFG determines that jurisdictional waters on or off the project site would not be impacted by the proposed project, no further mitigation is necessary. If the CDFG determines that jurisdictional waters are present on- or off-site, which may be impacted by the project, a Streambed Alteration Agreement shall be obtained from CDFG, pursuant to Section 1600 of the California Fish and Game Code, for any activities affecting the bed, bank, or associated riparian vegetation. If required, the project applicant shall coordinate with CDFG in developing agreements or appropriate mitigation, and shall abide by the conditions of any executed agreements or permits for any work related to the development.”

Compliance with this condition shall be ensured by the City Engineer prior to the approval of each tentative map.

- 4.6-13(c) *If the project would result in impacts to any jurisdictional wetlands identified within either the Hop Farm Property or the Johnson Rancho Property, the acreage of jurisdictional habitat removed shall be replaced on a “no-net-loss” basis in accordance with USACE and CDFG regulations. A conceptual on-site wetlands mitigation plan shall be submitted, including a wetlands replacement ratio, agreed upon with the USACE. The mitigation plan shall quantify the total jurisdictional acreage lost, describe creation/replacement ratio for acres filled, annual success criteria, potential mitigation-sites, and monitoring and maintenance requirements. The plan shall be prepared by a qualified biologist pursuant to, and through consultation with, USACE. The plan may include funding mechanisms for future maintenance of the wetland and riparian habitat, which may include an endowment or other funding from the project applicant.*

- 4.6-13(d) *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

4.6-14 Impacts to woodland resources.

Policy 8.C.2 of the Wheatland General Plan states that the “City shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands and riparian areas.” Aerial photographs of the approximately 4,149-acre project site indicate that the site contains a number of existing trees, some of which could be identified as sensitive natural resources by the City of Wheatland. Because the environmental analysis for the proposed project is program-level, an arborists’ assessment has not been performed for the project site, and the potential exists that future development within the site would require the removal of native trees, some of which may be classified as sensitive natural resources. Therefore, a *potentially significant* impact would result.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the impact to a *less-than-significant* level.

4.6-14 *In conjunction with the submittal of **each** zoning or tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area, the project applicant(s) shall prepare and submit an arborist report, at the discretion of the Planning Director. The report shall evaluate the structure and vigor of each tree six inches or greater in dbh, as well as include recommendations for preservation of trees and removal of trees, which may be hazardous due to nature and extent of defects, compromised health, and/or structural instability and proximity to planned development activities. The applicant(s) shall comply with and implement the approved arborist report.*

Cumulative Impacts and Mitigation Measures

4.6-15 Cumulative loss of biological resources in the City of Wheatland and the effects of ongoing urbanization in the region.

As defined in Section 15355 of the State CEQA Guidelines, “cumulative impacts” refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects (CEQA Guidelines 15355).

An assessment of cumulative impacts should consider both impacts identified as significant as well as those impacts identified as less than significant for individual projects that may become significant in a collective sense when considering the co-occurrence of multiple projects.

The Wheatland area is experiencing urban growth. Several housing developments are already approved or planned in the surrounding areas. Cumulatively, these projects would reduce common wildlife habitat and the numbers of special-status plant and animal species. The majority of the proposed project area is already highly disturbed as a result of current and historical on-site farming activities. However, disturbed lands provide habitat for many common species and may provide habitat for several special-status species.

As discussed above, Yuba County and Sutter County have declared the intent to participate in the development of an NCCP/HCP for both Yuba and Sutter counties. The City of Wheatland has elected to participate in the development of the NCCP/HCP. Currently, the NCCP/HCP is in the early planning phases and adoption of the NCCP/HCP is anticipated to occur in 2011. The NCP/HCCP would provide Yuba County and the City of Wheatland with a mechanism to mitigate for cumulative biological impacts in the region.

Conclusion

Upon development, the Johnson Rancho and Hop Farm Annexation project, in combination with future planned developments, would contribute to the cumulative loss of biological resources within the General Plan Study Area. It should be noted that, pursuant to General Plan Policy 8.B.5, the City will require careful planning of new development in areas that are known to have particular value for biological resources to maintain sensitive vegetation and wildlife habitat. In addition, pursuant to General Plan Policy 8.B.6, the City shall review development proposals in accordance with applicable Federal, State, and local statutes protecting special status species and jurisdictional wetlands. Furthermore, according to General Plan Policy 8.B.7, the City shall impose appropriate mitigation measures using protocols defined by the applicable statute (e.g., USFWS, CDFG, etc.). Therefore, all individual development projects are required to mitigate for impacts to special-status species and the loss of habitat within the region. However, due to the expansive scope of the proposed project, which would include the eventual development of approximately 4,149 acres, implementation of the project would be expected to result in a cumulatively considerable incremental contribution to the cumulative loss of biological resources in the Wheatland area. Therefore, the project's cumulative impact would be *significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure, along with implementation of the project-level mitigation measures included in this chapter of the Draft EIR, would reduce the project's cumulative impact to biological resources. However, the impact would not be reduced to a less-than-significant level; therefore, the impact would remain *significant and unavoidable*.

4.6-15 *Implement Mitigation Measures 4.6-1(a) through 4.6-1(d).*

Endnotes

- ¹ Gibson & Skordal, LLC. *Biological Baseline Information Report, Johnson Rancho and Hop Farm*. August 2009.
- ² Foothill Associates. *Biological Resources Assessment, ± 1,191-Acre Wheatland Ranch*. February 7, 2007.
- ³ ECORP Consulting, Inc. *Special-Status Species Assessment for Johnson's Crossing*. May 11, 2006.
- ⁴ ECORP Consulting, Inc. *Special-Status Species Assessment for Brown Cattle Company*. May 11, 2006.
- ⁵ ECORP Consulting, Inc. *Special-Status Plant Survey for Brown Cattle*. September 24, 2007.
- ⁶ ECORP Consulting, Inc. *Special-Status Plant Survey for Johnson's Crossing*. September 24, 2007.
- ⁷ ECORP Consulting, Inc. *Wetland Delineation for Brown Cattle Company*. May 11, 2006.
- ⁸ United States Army Corps of Engineers. *Wetland Delineation for Wilson Ranch*. April 20, 2005.
- ⁹ City of Wheatland. *City of Wheatland General Plan Policy Document*. July 2006.
- ¹⁰ Raney Planning & Management, Inc. *City of Wheatland General Plan EIR*. July 11, 2006.

4.7

ARCHAEOLOGICAL AND HISTORICAL RESOURCES

INTRODUCTION

The Archaeological and Historical Resources chapter of the EIR describes cultural (prehistoric and historic) resources known to be located on the project site. Prehistoric resources are those sites and artifacts associated with indigenous, non-Euroamerican populations, generally prior to contact with people of European descent. Historical resources include structures, features, artifacts and sites that date from Euroamerican settlement of the region. The extent to which development of the proposed project could remove, damage, or destroy existing historic or prehistoric resources is evaluated.

Information presented in the chapter is taken from the *Cultural Resources Sensitivity Report for the Annexation of the Johnson Rancho, Bear River Hop Farm, and Dave Browne Properties Development* prepared by Tremaine & Associates, Inc. (See Appendix N),¹ the *City of Wheatland General Plan*,² and the *City of Wheatland General Plan EIR*.³ The Cultural Resources Sensitivity Report includes an analysis of the existing setting and describes the potential effects to prehistoric or historic period cultural resources.

EXISTING ENVIRONMENTAL SETTING

The following environmental setting discussion for the Johnson Rancho, Bear River Hop Farm, and Dave Browne Properties consists of the project area ethnology, historical background, existing historical resources, and existing cultural resources.

Ethnology

Valley Nisenan communities consisted of permanent settlements located on low natural rises along streams and rivers, or on gentle, south-facing slopes. Each community was composed of a central village and several outlying satellite villages, having access to a territory generally encompassing 100 square miles (10 miles along each boundary). Village populations ranged from small extended families of 15 to 25 people to large villages with over 500 persons, composed of several families. Houses were dome-shaped, 10 to 15 feet across, and covered with earth, tule mats, or thatch. Brush shelters were occupied during summer, and on food-gathering rounds. Major villages had large semi-subterranean, earth covered structures that functioned as ceremonial lodges or dance houses to host community events. Other settlement elements included task camps, resource procurement locations, cemeteries, and ceremonial grounds.

Nisenan economic life was focused upon collecting plant foods, hunting, and fishing. The major vegetal food source was the acorn, usually gathered in the fall by extended families or whole villages. Pine nuts, buckeye nuts, a variety of grass seeds, manzanita berries, other fruits and berries, hazelnuts, geophytes, greens, and fungus were also gathered. Deer, tule elk, pronghorn,

rabbits, and fish (especially salmon, with important contributions by native inland fishes) were important animal foods. Deer, elk, and pronghorn often were taken during communal drives. Fishing gear included weirs, nets, harpoons, hooks, traps, gorges and watercraft. Waterfowl and terrestrial birds were captured utilizing nets, snares, and hunting blinds. A variety of other foods were gathered, including freshwater shellfish, rodents, grubs, earthworms, larvae, grasshoppers, and lampreys.

Fresh greens, grass seeds, bulbs/roots, acorns, and fruits/berries were gathered and processed during different times of the year. Acorn-processing sites often were located near bedrock outcrops that provided milling sites. Acorns and other stored foods provided winter sustenance. Hunting and fishing, occurring year-round, were focused upon deer, elk, and salmon. Each family had granaries for the purpose of storing acorns as well as dried meat. Other foods, pine nuts, hazelnuts, root cakes, dried fish, seeds, and grasshoppers were stored in baskets or sacks. Communities controlled their territory, including hunting and fishing grounds.

A variety of stone tools were used, including knives, arrow and spear points, club heads, arrow shaft straighteners, scrapers, pestles, and mortars. Tool stone included basalt, steatite, cryptocrystalline, and obsidian. Many artifacts were made from wood (e.g., bows, digging sticks, and mortars), tule (e.g., mats), and plant fibers (e.g., cordage, netting, and baskets). Bedrock mortars, and portable ones, were important components of acorn processing technology. Nisenan informants claim that neither they, nor their ancestors, manufactured the highly valued bowl mortars. Bead necklaces of steatite, clamshell, and whole Olivella shells, in addition to abalone pendants were traded from the Maidu and Patwin. Other items such as salt, feathers, fish and roots were traded with other Nisenan groups.

The tribelet was the primary political group, represented by a headman whose office usually was hereditary and assisted by extended families. The headman's role was primarily as advisor, and as director of group activities and ceremonies. The headman was supported by the community, and often possessed great wealth. Each community or group of communities controlled nearby territories, including hunting and fishing localities. Families often controlled particular fishing sites, oak and pine groves, quail fences, gathering areas, hunting grounds, and some seed tracts.

Historical Background

The Historical Background section includes a discussion of early explorations and settlement of the proposed project site. This section provides background on the Donner Party and the Party's connection to an area formerly known as Johnson's Ranch, located south of the proposed project site in the Wheatland General Plan Study Area.

Early Explorations

Between 1772 and 1840, a number of Spanish and Mexican expeditions into the Sacramento-San Joaquin Delta and Sacramento Valley occurred. After the late 1820's, parties of fur trapper and Euro-American settlers began filtering into the region. The most significant, with respect to potential impacts to Native Americans living in the project area and vicinity, were the trips by

Gabriel Moraga in 1808, Luis Arguello in 1821, Jedediah Smith in 1828, and John Work in 1833.

Early Settlement

In 1844, Don Pablo Gutiérrez was granted five leagues on the north side of Bear River and built an adobe house at the place later called Johnson's Crossing, located about three miles east of Wheatland (within the project area). Gutiérrez was killed shortly thereafter in the Micheltorena campaign and the grant was sold at auction by Sutter, the magistrate of the region. William Johnson and Sebastian Keyser purchased Johnson's Rancho for \$150 and settled there the same year, 1844. After the purchase, the grant was divided, with Johnson taking the east half and Keyser the west. In 1846, they built a two-room log and adobe house a short distance below the Gutierrez adobe. Wheatland was the American settlement closest to the mountains and became a much-welcome destination for overland emigrants. They allowed several families of 1846 overlanders to stay at the ranch for the winter. In addition, a member of the stranded Donner Party staggered out of the foothills to seek help at the Wheatland settlement.

California Emigrant Trail

The California Emigrant Trail was the principal overland route to California. The trail began in 1841 as a single tenuous strand along the Humboldt River and over the Sierras but subsequently branched into numerous cutoffs. The trail was described in thousands of diaries, letters, narratives, and journals before and during the gold rush. The Truckee Route led to Johnson's Ranch. According to Lieutenant George Horatio Derby, U.S. Army Topographical Engineer, an average of one hundred wagons and two hundred emigrants were arriving at the Ranch each day in the fall of 1849.

By 1850, Johnson's Crossing had become a busy waypoint along the stage route between Sacramento and Nevada City (by way of Watson's and the Empire Ranch near Smartsville). However, a year later the route changed to go over the hills. In 1854, traffic at Johnson's Crossing declined to a point that the crossing was rarely used.

The Johnson's grant fell into the hands of Henry Robinson and Eugene Gillespie in 1849. Real estate speculators, they laid out a town at the Crossing and named the town Kearney in honor of General Kearney. A caretaker named Hoyt lived at Johnson's house to look after their property. Later that year, J.L. Burtis settled there and opened a hotel. Burtis grew barley just below Camp Far West (in the eastern portion of project area), and in 1852, planted fruit trees just below Johnson's Crossing. The trees were later buried in mining debris. After 1852, the country along the Bear River and Dry Creek began to be rapidly taken up by settlers trying their luck growing wheat, barley, potatoes and hay crops.

Camp Far West

Military Reserve

The federal government established a temporary military post, Camp Far West, a mile above the Johnsons Crossing in September 1849. The camp's intent, according to a report of the Secretary of War in 1849, was to aid the Native American agents in preventing the oppression of peaceable natives by lawless white men as well check those tribes that manifested hostility toward the settlers. The camp was first occupied by a detachment of the Second U.S. Infantry, under the command of Captain Hannibal Day. Several months after arriving, Captain Day concluded that any aggression was on the part of the whites towards the natives. The Native American Agent, Adam Johnston, reported to the Commissioner of Native American Affairs, in July of 1850, that those living in the vicinity of the fort were "not warlike."

Soldier desertion rate was high given the insufficient diet and substandard housing, as well as irresistible draw to the gold fields. The camp was abandoned on May 4, 1852. Today, the Camp Far West is marked by a graveyard surrounded by a low stone fence. The Native Sons of the Gold West have commemorated the camp with a plaque.

Native American Reservation

The sole use and occupancy of Camp Far West and surrounding lands "commencing at Bear River, at the western line or boundaries of Camp Far West; from thence up said stream twelve miles in due line; from thence on a line due north to the Yuba River; thence down said stream twelve miles on a due line of the River; from thence south to the place of beginning" was promised to the local Native American groups (the *Das-pia*, *Ya-ma-do*, *Yol-la-mer*, *Wai-de-pa-can*, *On-n-po-ma*, *Mon-e-da*, *Wan-muck*, *Nim-shaw*, *Bem-pi*, and *Ya-cum-na*) on 18 July 1851. The reservation was understood that the above-named boundary, would include Pen Valley, but exclude Rough and Ready. The treaty, negotiated by Dr. O.M. Wozencraft, was signed by tribal representatives in exchange for their promise to recognize the sovereignty of the United States.

Mining

Hydraulic Gold Mining & Downstream Effects

Hydraulic gold mining began in the upper reaches of the Bear River basin in 1853. The technique employed water at high pressure in conjunction with blasting and sluicing to extract gold from upland alluvial gravels. Mining debris known as slickens began washing downstream in great quantities in 1862, bringing ruin and devastation to the lower valley. After a flood event in January 11, 1862, a thick deposit of sand was left on the bottomlands when the waters retreated, varying in depth from one to six feet, causing an immense amount of damage. Another flood, in January 23, 1875, left the lands south of Johnson's Crossing covered in non-productive mining sediments. Severe river channel aggradation also began. In February 1878, a flood filled the channel near Johnson's Crossing with 20 to 25 feet of mining debris. As a result, Bear River has changed its course considerably and now runs about half a mile south of its old channel.

James Haskell Keyes filed a lawsuit against the Little York Gold Washing and Water Company and 19 other mining companies in 1878 seeking an injunction to restrain the defendants from continuing to engage in hydraulic mining on the Bear River. Testimony during a mining debris trial held in the District Court of Sutter County provides an idea regarding how the project area bottomlands were affected.

Mr. Keyes testified that the land, 1,000 acres, approximately six miles up the Bear River (west of Wheatland), had suffered from damaging overflows four times in the past three years. In that time, an estimated 20,000,000 cubic yards of tailing were deposited into the Bear River and tributaries. Approximately 300 acres were covered in heavy mining sediments ranging in depth from ten inches to three feet, destroying its productive agricultural quality. Some of Mr. Keyes's land was filled above the fences, and they had to be raised and reset.

Witnesses testifying on Mr. Keyes behalf, living in the project area at the time, included Dr. D.P. Durst and S.D. Woods. In March of 1879, two years after initiating the lawsuit, Keyes was awarded the costs of the suit and a permanent injunction to prevent the miners from discharging their debris into the Bear River or any of the tributaries. The mining interests immediately appealed the verdict and by November, that same year, had the decision reversed.

Meanwhile, State Engineer William Hammond Hall submitted an assessment on the issues of irrigation and mining debris to the State Legislature in 1880. Hall's report provided a "sobering picture of devastation and ruin." Hall estimated that 254,000,000 cubic yards of gravel had been mined on the Bear River and warned that the consequences of further inaction were appalling. William H. Parks, a Sutter County farmer who had pioneered in reclamation, proposed "An Act to Promote Drainage" which would construct a system of debris dams and levees as well as enable swamp lands to be reclaimed and used as settling basins for mining debris. With the passage of the act, a dam was built across the Bear River near the foothills, "at a point some 200 feet above the end of the level at Johnsons' Crossing" beginning in August 1880, constructed of brush, wire, and logs.

Several months later, an Assembly Committee on Water Rights and Drainage was created to hold hearings to consider repealing the Drainage Act. Accusations were made that a similar brush dam across the Yuba River had already broken. Consequently, the entire Assembly visited the Bear River dam in January 1881. The trip convinced the legislators that the dam was secure and was already immobilizing a great deal of debris. Beyond the dam, rooftops of houses could be seen poking out of the debris. In February, however, the Act was repealed, and torrential rains fell that month. The drainage system proved powerless to contain the floods and many levees gave way.

In July 1881, Colonel Mendell, accompanied by Commissioner Knox, conducted inspections of both the Yuba and Bear River dams. They discovered two breaks in the Bear River dam (one near the north end from 300 to 400 feet long and another about 100 feet long near the south end), along with settling in three or four places where the crest was two or three feet below the original alignment.

The Debris Committee from the San Francisco Board of Trade and the Anti-Debris Association met in Sacramento in October 1881 and made a trip to view the Yuba and Bear River dams. Upon arrival at the Yuba River dam, the Board of Trade found the dam had been set ablaze. En route to the Bear River Dam, they stopped at the former Keyes residence. The two-story house had been raised twice, once four feet, and then again six feet, before being abandoned. The brick cellar had been filled with eight feet of debris.

Gold Dredging

Gold dredging along Bear River commenced in California around 1898. At one time, approximately seventy gold dredges were operating in the state, each a massive mobile production unit with a self-contained recovery plant. The Yuba Consolidated Gold Fields, founded by Wendell Hammon around 1908, became probably the largest, most efficient, and most profitable placer dredge operation in the world. Fifty years later, when the industry began winding down, the company had dredged over one billion cubic yards.

In 1905, the Bear River Gold Mining Company, subsequently called Bear River Exploration Company, was operating four miles east of Wheatland on holdings of 1,000 acres. Four Risdon dredges were in operation, two beginning in July 1900, and the other two in 1902, with bucket sizes ranging between three-and-one-quarter and four cubic feet for a maximum capacity of 50,000 cubic yards per month.

Levee Building

The levee on the north bank of the Bear River was initially built in 1874 by private individuals owning land along the banks, beginning at the foothills near the site of the old Bear River dam and running southwestward with the river for a distance of about six miles. The primary reason for the effort was to hold back the hydraulic mining debris that was carried downriver during flood events, the first being in 1862.

Keyes and Thomas Brewer Sr. built their levees seven feet high to keep the water and debris off their lands, and had to raise them two feet each year. In 1874, just four years prior to Keyes's lawsuit against the mining companies, the Bear River Levee District No. 1 was formed. The first Commissioners were D.P. Durst, George W. Hall, and James W. Sowell. In 1881, following the passage of the Drainage Act, contracts were awarded to build the Bear River Dam and improve the levees. The north side of the river, from Johnson's Crossing to the railroad was awarded to Wood and Jasper for \$22,968.

By 1891, when Major Heuer reported to the Secretary of War on the status of the river levee, the State had assumed responsibility for the Levee District. Heuer reported that the levee was initially eight feet high with a base of 25 feet and a crown of six feet. The State added subsequently to increase the height to 12 feet. In 1891, the levee had an average cross-section of the following dimensions: height – 18 feet, crown – six feet, slopes – approximately 3:1 and 2:1. According to Dr. Durst, the total levee cost as of 1891 was \$145,000.

The Hop Industry

Wheatland became the center of hop culture in the Sacramento Valley in the late 1880's soon producing the largest and best crops of any locality in the state. The crop's principal buyers were British beer brewers. Many of the primary growers were established along the Bear River, among them, Daniel P. Durst, Hugh Roddan, Samuel D. Wood, Joseph M.C. Jasper, and Emil Clemens Horst (all established in the project area).

Daniel P. Durst

Dr. Durst was a physician and one of Wheatland's founders in 1867. Durst graduated from Jefferson Medical College in Philadelphia before immigrating to California fourteen years earlier. In 1883, Durst planted the first hops on the Bear River. An entrepreneur and innovator, Durst used the most up-to-date trellising systems and used a new "Bear River Hop Press" developed by his son Murray H. Durst. One decade later, Durst had become known as the "Hop King". In 1895, Durst and his neighbor, E.C. Horst were experimenting with artificial drafts in their kilns. Two of Durst's sons, Ralph and Jonathan, continued their father's practice on the family ranch. Murray Durst had a large ranch and became one of California's leading hop growers. Dr. Durst died in 1911, as noted earlier, Dr. Durst was a commissioner for the Bear River Levee District.

Samuel D. Wood

Samuel Wood was born in 1833, and migrated to California from Williamson County, Tennessee. Wood owned shares in the Farmers' Bank of Wheatland, which first incorporated in 1874. As noted earlier, he was awarded a portion of a contract to build the levee along the south border of the project area.

Hugh Roddan

Hugh Roddan was born in Dumfriesshire, Scotland, in 1822. Roddan was leader of a wagon train that brought his family and others from Iowa to Wheatland. The Yuba County Business Directory suggests that Roddan first came to California in 1850, but did not settle in the county until 1862. Roddan was listed with his family living in Louisa County, Iowa in the 1860 census. Hugh Roddan and his sons, John Wesley and William Browning, were enterprising and prosperous in the hop business. The products of their farm were grain and hops, but annually produced immense quantities of hop. Later, Emil Clemens Horst acquired their farm, expanding his empire.

Joseph M.C. Jasper

Joseph M.C. Jasper settled on the Bear River in 1853 at age 20. Jasper was a farmer from Virginia and known to have raised hops. In 1879, Jasper is listed having 3,500 acres. Later, Jasper advertised to sell 2,900 acres of undulating terrain, eight miles northeast of the town of Wheatland. The entire tract was fenced and subdivided, and had houses, barns, stock-sheds, corrals, etc., for cattle, sheep and horse husbandry. As noted earlier, Jasper was awarded a

portion of the contract to build the levee along the southern border of the project area. Jasper's hop farm was later acquired by Emil Clemens Horst.

Emil Clemens Horst

Emil Clemens Horst was a young San Francisco hop dealer that purchased a small plot of land just east of Durst in the mid 1880s and began his own hop farm. Horst soon bought out Roddan and Jasper, and eventually owned the largest number of acres of hops under cultivation in the world. Horst revolutionized the process of growing and processing hops with his mechanical separator that harvested the hops while discarding the vines and leaves. A perfected model of Horst's 1910 harvest picked 25 bales of hops in one day, while an experienced worker picked just two bales in a week. At Horst's Wheatland ranch, he demonstrated that one machine and a force of 100 men did the work of 2,000 harvesters, at one-third the cost and in half the time. Horst was a prolific inventor, obtaining at least fourteen patents over his lifetime (See Table 4.7-1).

Table 4.7-1 Emil Clemens Horst Patents		
Year	Patent No.	Invention
1884	513,789	Hop Trier
1907	857,461	Hop Picker (Machine)
1907	855,853	Drying Apparatus [Kiln]
1911	1,012,136	Guard for Hop Picker
1911	1,008,914	Hop Picker
1913	1,054,121	Hop Cluster Machine
1913	1,054,119	Hop Picker
1913	1,054,551	Method of Hop Picking
1913	1,054,120	Hop Separator Cylinder
1915	1,136,423	Hop Separator
1915	1,132,011	Hop Separator
1915	1,012,135	Hop Separator
1920	1,348,139	Stem Picker
1924	1,488,249	Hop Separator

Labor Shortages

Meeting the seasonal labor requirements at harvest time was a serious challenge. Despite high unemployment problems, white workers were unwilling to endure the excessive dust, oppressive heat, skin rashes, and pollen allergies, for the low wages offered. In 1886, hop growers, responding to threats of a strike, united to form the California Hop Growers' Association. The Association's solution was to hire Chinese laborers, albeit with misgivings. Wheatland's Anti-Chinese Club had already expressed their opinion on this matter. Just a week earlier, a group of thirty masked men from town raided the Chinese workers on Mr. Roddan's ranch, beat eleven hop pickers and then burned down the Chinese bunkhouse on S. D. Wood's ranch. Additional pressures were placed on the hop growers when the club instituted a labor and consumer boycott of all businesses hiring any form of Chinese labor, including the hop yards.

Rather than resort to the use of Chinese labor, Wood solicited the help of 500 white hop-pickers, advertising in the Marysville Appeal. Labor shortages continued to plague hop growers. The four hop yards in Yuba County operating at that time (John H. Durst, D.P. Durst, S.D. Wood, and the Roddan Brothers) employed, during the picking season, about 3,000 men, women, and children. Despite the strong view that hiring non-whites was morally corrupt, unjust, cowardly, and a breach of national faith, hop growers were forced, at times, to “fill the gap with the copper-skins and red-skins.”

In 1899, while the Dursts, Jasper & Sons, and S.D. Wood, were able to hold on to their hop-pickers, the Horst Brothers ranch had 300 whites and a number of Japanese quit, striking for more pay. In 1902, the Dursts had a similar problem when 75 Japanese and 200 white laborers on their ranch struck for more money (from 90 cents to \$1) and when refused, promptly quit, packed up and boarded a train for greener pastures.

Labor Recruitment & Camp Conditions

To recruit seasonal help, Horst launched advertising campaigns that painted idyllic work conditions. In 1906, Horst described conditions as an “enjoyable outing,” “healthful, pleasant, and very profitable” with “beautiful camp grounds” kept “perfectly clean, orderly, and well conducted.” Horst’s tents were rented cheap, his groceries were sold at the lowest prices, and train tickets were discontinued. In 1907, Horst offered further inducements, describing work as a “vacation at big wages” including “[...] a special train straight through without delay, free conveyance and baggage delivery to the ranch from the station [...] again, beautiful camping grounds, large cooking ranges, shower baths, tents, spring beds, swimming, hunting, and other amusements.”

In reality, camp conditions were unspeakably bad throughout the state and the pay was equally abysmal. To make matters worse, farmers commonly advertise for at least twice as many workers than they actually needed, ensuring replacements of anyone who dared demand higher wages or spread discontent. Horst testified before the U.S. Immigration Commission that the goal of the advertising campaign was to play one group off against another.

After spending two years and over \$250,000 developing a hop-picking machine to bypass the hassles associated with hiring seasonal labor, in August of 1909, Horst tested his equipment harvesting crops in Sacramento. As a precaution, however, should anything go awry, Horst had hop-pickers on standby, mislead by the promise of work. When Horst announced that there would be not be any work, the hop-pickers were incensed and demanded pay to compensate for their loss of time. Mass meetings were held, special committees appointed, and grievances drawn. These were presented to the superintendent in charge. When their demands for a settlement were refused, the strikers arrayed themselves against the teamsters who were engaged to haul hops to the kilns, bringing work to a complete standstill.

Riot & Reform

Hop production reached a peak between 1912 and 1916. In August 1913, with mass layoffs in the cities (San Francisco and Los Angeles), an estimated two to three thousand people arrived in

Wheatland expecting work. The Dursts, while unprepared to accommodate so large a group, did not turn anyone away. Workers laboring in 100-degree heat had to buy water at five cents per glass. Hostilities began when the workers rebelled and struck for higher wages, better sanitary conditions, and fresh ice water in the fields three times a day. Agitated by members of the Industrial Workers of the World (IWW), and angered by the refusal of Durst to fully meet their demands, a riot broke out. Shots were fired and in the heat of battle, District Attorney Manwell, Deputy Sheriff Riordan, and two workers were killed. Three others were wounded. The Durst Brothers ended up paying the hop-pickers a flat rate of \$1 per 100-pound sack and giving in to all their other demands. Two IWW leaders (Richard Ford and Herman Suhr) were arrested and convicted of murder.

The California State Legislature had, just two months earlier, created the Commission of Immigration and Housing. Their first undertaking was a formal investigation of the Wheatland Riot incident, focusing public opinion on the plight of California's migrant workers. Their second undertaking was to draft the Labor-Camp Sanitation Act to raise standards of both sanitation and housing. Soon after, they circulated an Advisory Pamphlet on the subject.

Hop production plummeted after 1916. With the advent of World War I, England shut down hop imports resulting in ruinous unmarketable hop surpluses in the United States. "At the war's end, both Durst and Horst anticipated European trade would boom again. Prohibition caught them completely by surprise. In the early 1920s, hop growers throughout northern California plowed up two-thirds of their acreage. Though Horst made a successful transition to the dry and canned fruit business, Durst never recovered. He died in 1938, bitter and deeply in debt."

Existing Cultural Resources

This section includes a discussion of the existing cultural resources within the proposed project site. Twenty-six cultural resource investigations were previously conducted within the Study Area. Of the 26 cultural resource investigations, six cover portions of the project area (S-455, 511, 929, 6695, 6683, and 8094) amounting to as much as forty percent of the entire acreage. Sean Jensen, of Genesis Society, conducted three of these investigations including the proposed Wilson Ranch Development Project (S-8094), Bear River Development Project (S-6695), and a culvert replacement project (S-6683). The Wilson Ranch cultural resource investigation involved survey coverage of 1,200 acres within the eastern project area. The Bear River cultural resource investigation involved survey coverage of 150 acres at the western end of the project area. The remaining cultural resource investigations included an archaeological reconnaissance of a small portion of the Johnson Ranch site conducted by Horn, an assessment for the Sunrise Wheatland Subdivision, and a survey along portions of former Bear River channel (along the southern boundary of the project area) and Grasshopper Slough/Spenceville Road (along the northern boundary of the project area) nearly 50 years ago.

Twenty-four previously recorded resources were identified during the records search.

Prehistoric Sites

Of the 24 previously recorded sites, five are prehistoric, including one burial/midden site (CA-YUB-751), three bedrock mortar sites, and a petroglyph site. One of the five prehistoric sites is located in the project area. The site contained at least several flexed burials with associated olivella shell beads, a Haliotis pendant, and large obsidian projectile points (salvaged by E. Wettstein of Yuba College sometime prior to 1977).

Historic Sites

Nineteen historic sites have been previously recorded within the cultural resources report search area. The sites outside the project area include three canal segments, a pre-WWII trash dump, a military maneuvers range associated with Beale Air Force Base (including features such as cement bunkers, earthen berms, firing ranges, foxholes, concussion craters), and a water tank/tower.

Two of the 12 historic sites within the project site are associated with the early settlements of Johnson and Webster. The remaining 10 historic sites relate to late 19th and early 20th century industrial activities of hop raising and gold dredging.

Johnsons' Adobe

Johnsons' Adobe (CA-YUB-1195-H) is the trinomial assigned to the remains of an adobe structure on Johnson's Rancho, five square leagues of land originally granted to Pablo Gutierrez in 1844. Whether this adobe is the one built by Gutierrez at the Bear River crossing later referred to as Johnson's Crossing is not known. The east half of this grant was acquired by William Johnson in 1845. The west half went to Sebastian Keyser. Johnson and Keyser are said to have built their own adobe house a short distance below the crossing. The site record details findings associated with remnants of two adobe walls and the "Burtis Hotel" area, along with mention of a stone-lined well and a square depression (10 x 12 feet in dimension).

The adobe walls consist of two low linear mounds, 12 feet wide and one foot high, forming an L or abbreviated T-shape (50 feet long east to west and 65 feet long north to south). Surface artifacts associated with the adobe, observed during recordation, included earthenware shards (plain white glazed, floral decorated polychrome, blue glazed, and brown and cream glazed) and glass bottle and jar fragments (e.g., clear, light green square paneled, olive green, an aqua hand-finished jar neck, a clear round base fragment, a light green hand-finished neck, an amber base, and a clear bottle stopper with ground sides and bottom). In addition, ceramic buttons, clay pipe stems, and pencil leads were found.

Shallow iron, brass, and lead artifacts, found during metal detection efforts between 1985 and 1987, included items such as square nails, a door hinge, tent grommets, mule, horse, and oxen shoes, harness buckles, rings and chain, hames iron, wagon parts, belt, overall and suspender buckles, an iron boot shank, gold plated jewelry, forks, knives, spoons, cast iron stove parts, cast iron pot handle, a meat hook, a coffee mill handle, a straight-razor blade, a pocket knife, keys, the wick raising mechanism for a kerosene or oil lamp, a compass direction plate, ramrod

brackets for a muzzle loading rifle, a double set trigger mechanism, rifle balls, a patch box cover for a Mississippi Rifle, and a percussion cap box with a drop of mercury inside.

Burtis Hotel

To the west of the adobe (250 feet) on an adjacent hilltop is a rectangular outline (30x40 feet) attributed to the Burtis Hotel, established in 1849 by J.L. Burtis. Mr. Burtis also ran a blacksmith shop, store, and post office on the premises. Surface artifacts, while sparse, included glass fragments (clear, olive green, dark bluish green), earthen ware shards (plain white glazed, gray on white decorated transfer print plate rim), zinc canning jar lid fragments, heavy gauge wire, square nails, a round flat washer, and a barrel hoop. Shallow iron, zinc, and brass items, found during metal detection included additional barrel hoop fragments, zinc canning jar lids, wagon parts, horse and mule shoes, harness chain, eating utensils, an iron hinge, a latch, and a large brass spike.

A trash disposal area southwest of the “Burtis Hotel” feature contained numerous artifacts including: glass bottle fragments (amber, purple, cobalt blue, yellow-tinted, and clear), clear screw-top canning jar fragments, clear square paneled medicine bottle fragments, an embossed clear screw-top Vaseline jar, a purple crown-top bottle neck made in an automatic bottling machine, purple vase fragments, an internally scalloped drinking glass with a crown embossed in the base, earthenware (relief molded white, white with a gilded line decoration, white polychrome floral decorated), stoneware (red, yellow and cream glazed, sewer drain tile), window glass, round nails, sheet metal, heavy gauge wire, white milkglass liners from “Boyd’s” and “White Crown” zinc canning jar lids, barrel hoops, a hand saw blade, a wire-spoked baby buggy wheel rim, chicken wire, burned bone, leather fragments, and cotton reinforced rubber. These items are noted dating from at least the 1890s to the 1920s. Artifacts dating to the hotel, between 1849 and 1889, are lacking. Suggestion is made that artifacts of more recent origin could be related to the later Muck family, who purportedly resided about 500 feet to the west.

Wilson’s Ranch

A.J. Webster, a farmer and stock-raiser, settled on 4,000 acres within the eastern portion of the project area in 1873, on what later became known as Wilson’s Ranch. Webster’s ranch consisted of houses, outbuildings, and three large commodious barns for raising livestock, including 6,000 sheep. Mr. Wilson is said to have purchased the property in 1946. A site record, CA-YUB-1653, was prepared for the ranch complex. At the time of recordation, the “original” residence had been destroyed by fire some twenty years prior. A modern single-story wood-framed and stucco-sided residence was built in its place. Other features on the premises included a livestock/hay barn and livestock/equipment barn constructed prior transfer of ownership. In addition, a small wood-framed and wood-sided bunk-house, was noted, built by Mr. Wilson in the late 1940s or early 1950s, along with several corrals situated adjacent to and interconnecting the two barns. None of the Wilson’s Ranch structures remain, all have been dismantled and removed.

Horst's Hop Ranch Complex

Eleven primary records have been prepared in association with Horst's Hop Ranch Complex, named on the 1947 USGS topographic map, Horstville, including five areas with concrete pads/foundations (two with associated palm trees), a bridge crossing Grasshopper Slough (still functional and in use), remnants of a concrete structure on the south bank of Grasshopper Slough, an eight-inch water pipe, an old concrete weir, a levee, and an "adit/tailing pile" on the north side of the Slough.

Gold Dredge Tailings

One site is identified, P-58-1654, referenced as Wilson Ranch #2, documenting tailings within the very southeast corner of the project area. The tailings are recorded 100 feet wide by 300 feet long, covering an area roughly 30,000 square feet, piled approximately ten to twelve feet high. Additional artifacts or features within the area were not noted.

REGULATORY CONTEXT

Federal, State, and local governments have developed laws and regulations designed to protect significant cultural resources that may be affected by actions that they undertake or regulate. The National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA) are the basic federal and state laws governing preservation of historic and archaeological resources of national, regional, State, and local significance.

Federal Regulations

The following are the federal environmental laws and policies relevant to the CEQA review process.

Section 106 for the National Historical Preservation Act (NHPA) of 1966

Federal regulations for cultural resources are governed primarily by Section 106 of the NHPA of 1966. Section 106 of NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties," are found in 36 Code of Federal Regulations (CFR) Part 800. The goal of the Section 106 review process is to offer a measure of protection to sites, which are determined eligible for listing on the National Register of Historic Places. The criteria for determining National Register eligibility are found in 36 CFR Part 60. Amendments to the Act (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations only come into play in the private sector if a project requires a federal permit or if it uses federal funding.

State Regulations

The following are the State environmental laws and policies relevant to the CEQA review process for cultural resources.

CEQA

State historic preservation regulations affecting this project include the statutes and guidelines contained in the California Environmental Quality Act (CEQA; Public Resources Code Sections 21083.2 and 21084.1 and Sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA requires lead agencies to carefully consider the potential effects of a project on historical resources. A “historical resource” includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant (Public Resources Code Section 5020.1). Section 15064.5 of the CEQA Guidelines specifies criteria for evaluating the importance of cultural resources, including:

- 1) The resource is associated with events that have made a significant contribution to the broad patterns of California history;
- 2) The resource is associated with the lives of important persons from our past;
- 3) The resource 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
- 4) The resource has yielded, or may be likely to yield, important information in prehistory or history.

Advice on procedures to identify such resources, evaluate their importance, and estimate potential effects is given in several agency publications such as the series produced by the Governor’s Office of Planning and Research (OPR).⁴ The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including, but not limited to, museums, historical commissions, associations and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains.⁵

California Historic Register

The State Historic Preservation Office (SHPO) also maintains the California State Register of Historic Resources (CRHR). Properties that are listed on the National Register of Historic Properties (NRHP) are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties designated under local ordinances or identified through local historical resource surveys.

Senate Bill 18

Senate Bill (SB) 18, effective September 2004, requires cities and counties to notify and consult with California Native American Tribes about proposed adoption of, or changes to, general plans and specific plans for the purpose of protecting Traditional Tribal Cultural Places (“cultural places”). The proposed project falls under the SB 18 requirements as defined by OPR, and the City therefore has contacted the tribes included on the list supplied by the Native American Heritage Commission. One tribe responded, Enterprise Rancheria of Maidu Indians. As a result, the City met with the tribe and conducted a site visit. The representative from the tribe requested that a monitor be present during ground disturbance activities.

Local Regulations

The following are the local government environmental goals and policies relevant to the CEQA review process.

City of Wheatland General Plan

The City of Wheatland established the following General Plan goals and policies regarding cultural resources.

Archeological Resources

Goal 7.D To protect Wheatland’s Native American heritage.

Policy 7.D.1. The City shall refer development proposals that may adversely affect archeological sites to the North Central Information Center at California State University, Sacramento, and the Northeast Information Center at California State University, Chico.

Policy 7.D.2. The City shall not knowingly approve any public or private project that may adversely affect an archeological site without first consulting the California Archeological Inventory, the North Central Information Center at California State University, Sacramento, the Northeast Information Center at California State University, Chico, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendations of a qualified archeologist.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

The standards of significance for a project’s impact on cultural resources include standards related to both archaeological resources and historical resources.

Archaeological Resources

A project could have a significant effect on the environment if ground disturbance activities cause a substantial adverse change in the significance of an archaeological resource or disturb any human remains. Pursuant to Section 15064.5 of the *CEQA Guidelines*, archaeological resources not otherwise determined to be historical resources may be significant if they are unique. Pursuant to Public Resources Code (PRC) Section 21083.2, a unique archaeological resource is defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, a high probability exists that it meets one of the following criteria:

- Contains information needed to answer important scientific questions and a demonstrable public interest exists 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; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

According to Section 15064.5 of the *CEQA Guidelines*, all human remains are significant.

A non-unique archaeological resource means an archaeological artifact, object, or site that does not meet the above criteria. Non-unique archaeological resources do not receive further consideration under CEQA.

Historical Resources

Section 15065 of the *CEQA Guidelines* mandates a finding of significance if a project would eliminate important examples of major periods of California history or pre-history.

In addition, pursuant to Section 15064.5 of the *CEQA Guidelines*, a historical resource (including both built environment and prehistoric archaeological resources) shall be considered by the lead agency to be historically significant if the project site is listed in the California Register of Historical Resources (CRHR) or has been determined to be eligible for listing by the State Historical Resources Commission. A historical resource may also be considered significant if the lead agency determines, based on substantial evidence, that the resource meets the criteria for inclusion in the CRHR. Any resource that is listed on or considered eligible for inclusion on the National Register of Historic Places is automatically considered eligible for the CRHR.

Under the National Historic Preservation Act (NHPA), the quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, handiwork, feeling and association and:

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

- That embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
- That have yielded or may be likely to yield, information important in prehistory or history.

The National Register of Historic Places requires consideration of significance of any structure over 45 years old.

Method of Analysis

Tremaine and Associates, Inc. prepared a Cultural Resources Sensitivity Report for the Johnson Rancho and Hop Farm project area. The report reviewed historic maps and previous cultural resource surveys to evaluate potential cultural and historic resources that could occur within the project area. The report recommends that site-specific and detailed archaeological or cultural studies be prepared for areas that were deemed culturally or historically sensitive. Further evaluation of areas and structures not deemed culturally or historically sensitive was not recommended.

Local Native Americans

On May 20, 2009, the Native American Heritage Commission (NAHC) was contacted with a request for a query of the Sacred Lands File and a list of Native American contacts (See Appendix B of Appendix N of this Draft EIR for complete Native American consultation documentation). Tremaine contacted all Native American individuals and organizations by letter on May 29, 2009. These include the Butte Tribal Council (Ren Reynolds), the Strawberry Valley Rancheria (Calvine Rose and Robert Kerfoot), and the Enterprise Rancheria of Maidu Indians (Art Angle, and Glenda Nelson).

Wheatland Historical Society

On 29 July 2009, Kim Tremaine and Dwight Simons met the members of the Wheatland Historical Society (WHS) to share information and learn of any concerns they might have regarding the project. Ron Jauch, Richard and Jane Paskowitz, Pat Camarena, Wes Freeman and others attended. The primary purpose of the Society is to discover, collect, preserve, and disseminate knowledge concerning the history of the Wheatland area, of the County of Yuba, and the State of California. Also consulted was a List of Historic Landmarks and Points of Interest (Buildings and Places and Sites) posted on the WHS website (taken from City of Wheatland Draft Design Guidelines, May 2006), *Wheatland 1874-1994*, and the *Images of America: Wheatland*.

California State University, Meriam Library, Special Collections

On 29 July 2009, Kim Tremaine and Dwight Simons reviewed the Durst Brothers Hop Ranch Records archived in Special Collections (MSS 004, 6 boxes, 2.5 linear feet). Of interest were inventories of the buildings and inventories of the contents of specific buildings (e.g., cookhouse, blacksmith shop and garage, tractor repair shop), as well as field equipment and tools.

Northeast Information Center

On May 26, 2009, Melissa Johnson conducted an in-house records search at the Northeast Information Center, California State University, Chico (See Appendix A of Appendix N of this Draft EIR) to research previous sites and studies present within a one-mile radius around the project area. Sources consulted included the following:

- National Register of Historic Resources;
- California Register of Historic Resources;
- California Inventory of Historic Resources;
- California State Historic Landmarks;
- Points of Historical Interest; and
- Historic Property Data File for Yuba County.

Other Sources

The Wheatland General Plan Update and Environmental Impact Report were consulted. Newspaper accounts published in the Sacramento Daily Union, San Francisco Call, and Pacific Rural Press in the years between 1860s through 1920s were consulted. The East Bear River Township Business Directory of 1879 was consulted. Searches were also made for historic maps and records at the Yuba County Recorder's Office and the Yuba County Assessor's Office. Historic maps consulted, included:

- 1849 Map of the Sacramento Valley, Lieutenant G.H. Derby;
- 1852 Diseño del Johnson's Rancho, Yuba Co., California, Land Case 397;
- 1856 Plat of the Johnson Rancho confirmed to William Johnson by the U.S. Surveyor General; 1861 Official Map of Yuba County;
- 1879 Map of East Bear River Township; and
- 1940 USGS Topographic Maps.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Johnson Rancho and Hop Farm), unless otherwise noted. In addition, The below discussions evaluate the impacts from the proposed project on the cultural resources that could occur within the project site by consulting available information in the *Yuba County General Plan EIR*, the *Wheatland General Plan EIR*, and the *Cultural Resources Sensitivity Report for the Johnson Rancho, Bear River Hop Farm, and Dave Browne Properties* prepared by Tremaine & Associates, Inc.

4.7-1 Disturbance or destruction of previously unknown archaeological resources within the proposed project site.

A majority of the proposed project site has previously been disturbed by agricultural activities; therefore, the site is unlikely to contain any undiscovered prehistoric or historic

sites of value. However, surface evidence of previous human activity is not always present, and construction activities may uncover undocumented cultural resources. Should areas containing evidence of prehistoric or historic period activity such as buried hearths, areas of discolored sediment containing shell, broken fragments of silicate rock, bone, or concentrations of historic period (greater than 45 years old) refuse or features be uncovered, a **potentially significant** impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.7-1(a) *At the time of submittal of the **first** tentative map application within the Johnson Rancho and Hop Farm Annexation area, a Cultural Resources Master Plan shall be prepared for the project site by a qualified archaeologist and submitted for the City's review and approval. The Cultural Resources Master Plan shall include, but not be limited to, all of the recommendations included in the Cultural Resources Sensitivity Report. The Cultural Resources Master Plan shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the tentative map application review. In addition, in conjunction with the submittal of **each** tentative map application within the Johnson Rancho and Hop Farm Annexation area, site-specific cultural resources reports shall be prepared by a qualified archaeologist and submitted for the City's review and approval. The required mitigation measures shall be implemented by the project applicant(s).*

4.7-1(b) *The City shall include the following as a condition of approval on **each** tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

"During ground disturbance activities, an archeological monitor shall be present to oversee operations both on- and off-site. If any earth-moving activities uncover any concentrations of stone, bone or shellfish, any artifacts of these materials, or any evidence of fire (ash, charcoal, fire altered rock, or earth), work shall be halted in the immediate area of the find and shall not be resumed until after a qualified archaeologist has inspected and evaluated the deposit and determined the appropriate means of curation. The appropriate mitigation measures may include as little as recording the resource with the California Archaeological Inventory database or as much as excavation, recordation, and preservation of the sites that have outstanding cultural or historic significance."

4.7-1(c) *The City shall include the following as a condition of approval on **each** tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

“In the event that any archaeological deposits are discovered during construction or grading, further grading or trenching within 50 feet of the discovery shall be halted until a plan has been submitted to the Planning Director for the evaluation of the resource as required under current CEQA Guidelines. If evaluation concludes the archaeological deposit is eligible for inclusion on the California Register of Historic Resources, a plan for the mitigation of impacts to the resource shall also be submitted to the Community Development Department for approval.”

- 4.7-1(d) *The City shall include the following as a condition of approval on each tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

“During construction, if bone is uncovered that may be human, the California Native American Heritage Commission, located in Sacramento, and the Yuba County Coroner shall be notified. Should human remains be found, all work shall be halted until final disposition by the Coroner. Should the remains be determined to be of Native American descent, the Native American Heritage Commission shall be consulted to determine the appropriate disposition of such remains.”

4.7-2 Impacts to prehistoric sites within the project area.

One known prehistoric site is located within the project area; however, other prehistoric sites may be present. Small villages or temporary campsites are often located near smaller perennial watercourses, while larger villages are more often situated in close proximity to major watercourses, such as the Bear River. Resource procurement activities (i.e., hunting, food gathering, trade, etc.) regularly took people from their residential localities into the surrounding area. Evidence for such activities would most likely be flaked and ground stone tools, waste materials resulting from stone tool production, and ecofacts (i.e., animal bone, charcoal, fire-affected rock, and so forth). Areas of highest sensitivity include the Grasshopper Slough corridor and lands along the old Bear River channel.

The one prehistoric site located within the project area was recorded over thirty years ago. As previously stated, this site is situated in the bottomlands, approximately 1.5 miles southwest west of Johnson’s Crossing. In 1977, E. Wettstein conducted a salvage excavation. The site record, prepared by D. Storm, indicates at least several flexed burials were encountered. Large obsidian projectile points, *olivella* shell beads, and a *Haliotis* pendant were recorded on the prehistoric site. Because implementation of the project could adversely affect a prehistoric site within the project area, a ***potentially significant*** impact would result.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

- 4.7-2 *In conjunction with the submittal of the **first** tentative map application within the Johnson Rancho and Hop Farm Annexation area, the prehistoric site that is indicated in the Cultural Resources Sensitivity Report shall be relocated and re-recorded. Efforts shall be made to avoid this resource and, if impacts cannot be avoided, the resource shall be evaluated for significance and integrity according to criteria set forth for the California Register of Historic Places. If the resource is eligible for the CRHP, mitigation including, but not limited to, the following shall be implemented: A qualified archaeologist shall conduct intensive surveys as project plans are refined and future environmental reviews are conducted. Special care shall be taken along Grasshopper Slough and the old Bear River channel. A program of augering shall be implemented in the bottomlands to estimate the thickness of mining debris layer, which will help refine expectations regarding the possibility of, and depth of, buried cultural deposits. Systematic sampling, by hand and or mechanical auger, shall be implemented according to a grid pattern across the bottomlands (roughly 4,800 meters long by 1,200 meters deep). The sampling data shall be supplemented by existing geotechnical borelogs taken as part of previous Bear River levee investigations.*

4.7-3 Impacts to Johnson's Crossing.

A focused survey of the Johnson's Crossing area was conducted in 1987. At that time, two main areas were documented, the remains of an adobe structure with associated artifacts and a locus believed to be that of the Burtis Hotel. Two smaller features, a rock lined well and a square depression were also recorded. This resource, CA-YUB-1195-H was, nominated for listing in the National Register of Historic Places in 1991 (See Appendix A of Appendix N of this Draft EIR).

Historical accounts of the area, the 1852 Yuba County Tax Table, and the Official Map of Yuba County (1861), suggest the likelihood of additional resources in the vicinity of the crossing. The Johnson/Keyser adobe was purportedly built "a short distance below the crossing" and may be the one depicted in the 1861 county map. The 1852 tax table lists James Burtis at the crossing with an adobe house, a miner's house and other improvements (blacksmith shop, store, and post office). Others with assessed taxes at Johnson's Ranch included Charles Hoyt (Gillespie & Robinson's caretaker), Col. Joe Lewis, and Anthony Turner. One mile below the crossing, Harry Murry and a squatter named George Howser, had also made improvements.

Because the site record is over twenty years old for the Johnson's Crossing site and updated and additional material remains are anticipated to be present (e.g., visitor encampments, early settler housing, privies, trash disposal pits and trash surface scatters), the Cultural Resources Sensitivity report recommends that the site record be updated. In addition, hydraulic mining debris could have obscured any surface evidence and would require geophysical methods to located potential cultural resources.

The Johnson's Crossing portion of the project area could include unknown archaeological resources on-site. Therefore, development of the project could result in a ***potentially significant*** impact related to cultural resources on the Johnson's Crossing portion of the project area.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.7-3 *Implement Mitigation Measures 4.7-1(a-d).*

4.7-4 Impacts to Camp Far West.

Camp Far West was directly adjacent, but outside of the project site, based on descriptions and location of the graveyard. However, soldiers inhabiting the vicinity were not restricted to the boundaries of Camp Far West and because there is doubt regarding the exact placement of the reserve, historical or archaeological resources associated with this important military post could be present on-site. From descriptions of the camp and drawings, there were seven structures built, including a log fort, a cabin, and barracks. Therefore, historical and archaeological resources related to Camp Far West may exist on-site and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.7-4(a) *Implement Mitigation Measure 4.7-1(a-d).*

4.7-4(b) *In conjunction with the submittal of the **first** tentative map application within the Johnson Rancho and Hop Farm Annexation area, historical documentation of Camp Far West by a qualified historian shall be prepared for review and approval of the Community Development Department. The historical documentation shall include, but not be limited to, for evidence of Camp Far West on-site and use of geophysical methods to research the absence of Camp Far West remains on-site. If resources are found and impacts anticipated, a research design/work plan, and formal evaluations should be completed to assess significance and integrity. The historical documentation, evaluations, and any preservation-related recommendations shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the tentative map review. The recommendations shall be implemented by the project applicant(s).*

4.7-5 Impacts to the California Emigrant Trail.

The California Emigrant Trail is noted on the current USGS topographic map crossing through the project area leading to Johnson's Crossing. Evidence of the trail was not

reported by Jensen during his survey of the eastern portion of the project area. In addition, modern aerials do not show any indication of the trail. Evidence is expected to be in the form of ruts or more compact portions of land and perhaps bits and scraps of items discarded by travelers en route. Therefore, without documentation of the California Emigrant Trail, a ***potentially significant*** impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.7-5(a) *Implement Mitigation Measures 4.7-1(a-d).*

4.7-5(b) *In conjunction with the submittal of the **first** tentative map application within the area of the California Emigrant Trail, historical documentation of the California Emigrant Trail shall be prepared by a qualified historian, for review and approval of the Community Development Department, Bureau of Land Management, and National Park Service. The historical documentation shall include, but not be limited to, review and documentation of the California Emigrant Trail. The historical documentation and any preservation-related recommendations shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the tentative map review. The recommendations shall be implemented by the project applicant(s).*

4.7-6 Impacts to Webster's Ranch.

Webster's Ranch was recorded in 2004 (CA-YUB-1459-H), documenting a modern ranch house and an historic barn associated with a Mr. Wilson. However, a field visit preformed by Tremaine determined that the structures have been destroyed. Although the structures have been destroyed, additional features associated with this early settlement may exist. Therefore, without proper documentation, a ***potentially significant*** historical impact related to Webster's could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.7-6(a) *Implement Mitigation Measures 4.7-1(a-d).*

4.7-6(b) *In conjunction with the submittal of the **first** tentative map application within the area including Webster's Ranch, an archaeological report shall be prepared by a qualified archaeologist, for review and approval of the Community Development Department. The report shall include, but not be limited to, a site record of Webster's Ranch, and archaeological subsurface testing. The archaeological report and recommended mitigation measures shall be reviewed and approved by the Planning*

Commission and/or City Council in conjunction with the tentative map review. The recommended mitigation measures shall be implemented by the project applicant(s).

4.7-7 Impacts to Hop Ranches.

The Horst and Durst hop yards were of historical importance to the City of Wheatland and contributed on state and national level in regards to labor issues resulting in laws protecting migrant workers. In addition, the project area encompasses the hop farms of Roddan, Jasper, and Wood. As such, the area may best be delineated as a hop ranch district.

An archaeological research design was commissioned and recently published by Caltrans, specifically addressing the topic of work camps. Consideration of the Wheatland Hop Riot and reforms of the Progressive Era resulting are specifically emphasized in the Caltrans report. Expected work-camp property types identified include: residences, support facilities, infrastructure, refuse disposal, and work facilities. Guidelines are provided on how to assess research potential and data requirements. Research themes include camp function and design, camp management policy, camp conditions, labor stratification, immigration and ethnicity, gender and family, daily life, and labor organization and legislation.

The Caltrans Work Camp research design outlines numerous research questions. To summarize, “[...] the approach allows investigations of how management approaches varied, how worker militancy varied between industries and through time, and the actual on-the-ground impacts of progressive legislation, unionization, and changing management approaches. The archaeology of work camps can fill significant gaps in the documentary record regarding the people who lived in work camps. Work camps and the workers who lived in them were, and continue to be, part of a hidden national and often transnational economy.”

Horst Hop Complex

Eight resources have been recorded within Horstville. However, only primary records for the resources and the information is not detailed enough to determine their historical significance.

Durst Hop Complex

The Durst labor camp and rest of the Durst Hop Complex has not yet been surveyed. Durst Property inventories discovered at CSU Chico’s Meriam Library, Special Collections, suggest there are likely to be remains of numerous other structures, including a blacksmith shop (68x48 feet), a garage (two-story), a storehouse, a small tenants dwelling, a foreman’s cottage, a two-story fourteen room brick house, an office building, a bunk house with shower (40x18 feet), another bunk house (18x43 feet), a horse barn, a shed (18x48 feet), a Japanese bunk house and cook house (40x56 feet), picking machine

shed, a pump house, additional kilns (five brick kilns (30x30 feet), two hopper-type kilns (32x33 feet), four cement kilns (32x33 feet), two wood kilns, a tramway, and a cooling shed/store house.

Farming equipment included, but was not limited to, four Horst Hop Picking Machines, three high wagons, twenty-one flat wagons, one iron-wheeled wagon, six four-horse Fresno scrapers, several ditchers, several trucks, over a dozen harrows, and over a dozen plows.

On August 3, 1913, 2,800 people were camped on a low unshaded hill of the Durst Ranch. Of these, 1,005 were women and children. Among the groups present, one hop inspector testified during the course of the trial, that in his gang of 235, there were 27 nationalities. A partial list of nationalities included: Syrians, Mexicans, Spanish, Japanese, Lithuanian, Italian, Greek, Polish, Hindu, Cuban, Puerto Rican, and Swedish. They lived in their own “native quarters” on the grounds.

Wood, Jasper, and Roddan Hop Ranches

According to the 1879 Map of East Bear River Township, Roddan’s ranch was north of Horst’s. Jasper’s and Wood’s were to the west, and east of Durst’s. As previously mentioned, Jasper’s and Roddan’s hop ranches were later acquired by Horst. Each ranch had its own kilns. In 1893, Roddan built a double 30-foot kiln built adjoining his old kiln and Jasper built his kiln. By 1898, Jasper had four kilns and Wood had eight kilns.

In addition to kilns, each hop growers had cooling sheds, packing houses, and labor camps. Although the hop related cooling sheds, pack hours or labor structures do not exist now, archaeological evidence of these once thriving hop farms are likely to be present.

Conclusion

The Wheatland Hop ranches are of historical significance to the City of Wheatland and hop growing. Although many of the hop-related structures and camps have been destroyed, archaeological and cultural may still exist. Therefore, without historical and archaeological documentation, a ***potentially significant*** impact would occur to Hop Ranches in Wheatland.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.7-7(a) *Implement Mitigation Measures 4.7-1(a-d).*

4.7-7(b) *In conjunction with the submittal of the **first** tentative map application within the Wheatland Hop Farm area, historical documentation and preservation of the Wheatland hop growers by a qualified historian shall*

be prepared for review and approval of the Community Development Department. The historical documentation shall include, but not be limited to, architectural structure recordation, historic photographs and other memorabilia including hop-specific machinery to be collected for preservation and displayed in a local museum exhibit. In addition, hop kilns shall be evaluated and considered for restoration and preservation. The historical documentation, evaluations, and any preservation-related recommendations shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the tentative map review. The recommendations shall be implemented by the project applicant(s).

4.7-8 Impacts to levees and dams.

The Bear River north levee runs along the southern border of the project area. The levee was originally built to protect valuable farmlands from flood and mining debris. The Bear River Levee District was formed in 1874 and was improved in subsequent years. The levee is considered an historic resource of the mining debris era.

In addition two small historic dams are located between Johnson's Crossing and Camp Far West, on the north side of the old Bear River channel (in the project area). These were observed on modern aerial photographs. The importance of the levee to this region might be emphasized as a point of historic interest in literature and/or interpretive signage. Therefore, without recordation of the levees and dam near the project area, a ***potentially significant*** impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.7-8(a) *Implement Mitigation Measures 4.7-1(a-d).*

4.7-8(b) *In conjunction with the submittal of the **first** tentative map application within the Johnson Rancho and Hop Farm Annexation area, proof of recordation of the levees and dams shall be prepared by a qualified archaeologist. The historical documentation and any preservation-related recommendations shall be reviewed and approved by the Planning Commission and/or City Council in conjunction with the tentative map review. The recommendations shall be implemented by the project applicant(s).*

4.7-9 Impacts to gold dredging tailings.

Gold dredging occurred on the Bear River near Camp Far West at the turn of the 20th century. Two Risdon dredges, operated by the Bear River Gold Mining Company, began in July 1900, and another two started up in 1902. Dredge tailings from their operations

are situated at the very southeast corner of the project area. These tailings are recorded as CA-YUB-1459-H. However, dredge tailings are common in the county and are not considered significant to listing in the National or State Register of Historic Places. Therefore, the project would have a *less-than-significant* impact related to Gold Dredging Tailings.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

4.7-10 Disturbance or destruction of previously unknown archaeological resources in combination with other development in the Wheatland area.

Native American occupation of Yuba County may have begun, as many as 10,000 to 12,000 years ago; however, little is known of the early archaeology of Yuba County. Future development in the City would occur mainly at the periphery of the City, in predominantly rural areas with little historical development. However, the possibility exists for cultural resources to be present under soils in some of these peripheral areas and cumulative development would create a significant impact to cultural resources. Each site is a unique contributor to the overall scientific understanding of a region's pre-history. Previous archaeological and cultural studies identified potential cultural and archaeological resources exist within the study area and the possibility exists for unknown resources to be discovered during project excavation construction activities. However, with implementation of mitigation measures the impact to potential unknown cultural resources would be reduced to a *less-than-significant* impact.

Conclusion

With implementation of the mitigation measures mitigating impacts to potential unknown cultural resources, the incremental contribution to cumulative impacts from the Johnson Rancho and Hop Farm Properties would be *less-than-significant*.

Mitigation Measure(s)

None required.

Endnotes

¹ Tremaine & Associates, Inc. *Cultural Resources Sensitivity Report for the Annexation of the Johnson Rancho, Bear River Hop Farm, and Dave Browne Properties*. April 22, 2010.

² City of Wheatland, *City of Wheatland General Plan Policy Document*. July 2006.

³ Raney Planning & Management, Inc. *City of Wheatland General Plan EIR*. July 11, 2006.

⁴ State of California, Governor's Office of Planning and Research. *CEQA and Archaeological Resources*. 1994.

⁵ California Health and Safety Code Section 7050.5, California Public Resources Code Sections 5097.94, *et seq.*

4.8

GEOLOGY AND SOILS

INTRODUCTION

The Geology and Soils chapter of the EIR describes the geologic and soil characteristics of the project site and evaluates the extent to which implementation of the proposed project could be affected by seismic hazards such as ground shaking, liquefaction, and expansive soil characteristics. The analysis also addresses potential effects of the proposed project on erosion. Information sources for this evaluation include the *Preliminary Geotechnical Engineering Report, Johnson's Crossing* prepared by Wallace-Kuhl & Associates, Inc. (WKA) (See Appendix O),¹ the *Preliminary Geotechnical Report, Bear River Hop Farm Residential Development* prepared by ENGEO, Inc. (See Appendix P),² the *City of Wheatland General Plan*,³ the *City of Wheatland General Plan EIR*,⁴ the *Yuba County General Plan*,⁵ and the *USDA Natural Resources Conservation Service Web Soil Survey*.⁶

EXISTING ENVIRONMENTAL SETTING

The Johnson Rancho and Hop Farm Annexation project (proposed project) is located east of the City of Wheatland, outside of the City limits, and within the Wheatland Sphere of Influence (SOI). This area is within the Sacramento Valley between the rolling foothills of the Coast Range and the Sierra Nevada. The Sacramento Valley is part of the Great Valley Geomorphic Province (Central Valley of California).

Regional Geology

Once a large inland sea, the Great Valley Province was filled mostly by sediments eroded from ancient mountains to the east. Basin infilling and lowering of sea level resulted in the retreat of the inland sea, which changed the geologic environment to one of continental deposition. The Great Valley is now dominated by recent deposits of alluvial sediments laid down on floodplains and within stream and riverbeds. Thus, the Great Valley Geomorphic Province is characterized by a great thickness of generally flat-lying sedimentary rocks overlain by alluvial soils. Near the Sacramento River, the alluvial soils can be more than 200 feet thick. Soils in Yuba County are comprised primarily of alluvium, flood basin deposits, and alluvial fan deposits. The low-lying alluvium deposits consist of sand, gravel, silt, and small amounts of clay. Flood basin deposits are primarily located in central-southern Yuba County, and are comprised of fine-grained material, principally silts and clays.

Regional Seismicity

A fault is defined as a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side. A fault zone is a zone of related faults that commonly are braided and subparallel, but may be branching or divergent. Movement

within a fault causes an earthquake. When movement occurs along a fault, the energy generated is released as waves that cause ground shaking. Ground shaking intensity varies with the magnitude of the earthquake, the distance from the epicenter, and the type of rock or sediment the seismic waves move through.

The Alquist-Priolo Special Studies Zone Act of December 1972 (AP Zone Act) regulates development near active faults so as to mitigate the hazard of surface fault rupture. The AP Zone Act requires that the State Geologist (Chief of the California Department of Mines and Geology [CDMG]) delineate “special study zones” along known active faults in California. Cities and counties affected by these zones must regulate certain development projects within these zones. The AP Zone Act prohibits the development of structures for human occupancy across the traces of active faults. According to the AP Zone Act, “active faults” have experienced surface displacement during the last 11,000 years. “Potentially” active faults are those that show evidence of surface displacement during the last 1.6 million years. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity sometimes is difficult to obtain and locally may not exist.

The Great Valley is generally considered less seismically active than other areas of California. The majority of significant, historic faulting (and ground shaking) within the City of Wheatland has been generated along distant faults, within a 100-mile radius of the project site. Minor seismicity has been noted along the Foothills Fault System east of the site that may align with that fault system to some degree. The nearest, significant earthquake was the Oroville earthquake of 1975. The epicenter for this earthquake (Richter magnitude of 5.7) was located approximately 27 miles north of the site and is generally associated with the Cleveland Hill fault, a portion of the Foothills Fault System.

Local Seismicity

The proposed project is not located within an Alquist-Priolo Special Study Zone (AP Zone) nor is any active fault near the City. The closest AP Zone is the Bangor Quadrangle, including the AP Zone for the Cleveland Hill Fault to which the 1975 Oroville earthquake is attributed. The Bangor Quadrangle is located approximately 27 miles north of the City. The next nearest active fault is the Dunnigan Hills fault, located 35 miles southwest of the City.

The closest branches of the seismically active San Andreas Fault system are the Green Valley and Rodgers Creek faults located approximately 60 to 70 miles southwest of the City. The San Andreas Fault is located approximately 100 miles to the west.

Faults typically considered inactive in the vicinity of the project area include the Willow fault zone, which traverses Yuba County from north to south and is located approximately 12 miles to the west of Wheatland, and the Spenceville fault in the Foothill Fault System (located in eastern Yuba County) approximately 10 miles east of Wheatland. Generally, ground shaking is the primary geologic hazard in the project area.

Soil Conditions – Johnson Rancho and Hop Farm Properties

According to the USDA SCS, Yuba County Soil Survey, as well as the *Preliminary Geotechnical Engineering Report* prepared for the Johnson Rancho property, the project site is made up of the following soils (See Figure 4.8-1, Soils Map):

- Columbia fine sandy loam, 0 to 1 percent slopes (137);
- Columbia fine sandy loam, 0 to 1 percent slopes, occasionally floods (138);
- Conejo loam, 0 to 2 percent slopes (141);
- Dumps, mine tailing (146);
- Holillipah loamy sand, 0 to 1 percent slopes, occasionally floods (162);
- Horst sandy loam, 0 to 1 percent slopes (169);
- Horst silt loam, 0 to 2 percent slopes (170);
- Perkins loam, 0 to 2 percent slopes (203); and
- Redding gravelly loam, 3 to 8 percent slopes (208).

The predominant soil complexes identified throughout the project site area are described below:

170 Horst silt loam, 0 to 2 percent slopes

The Horst silt loam is a very deep well-drained soil that would be located on stream terraces. Characteristics include moderate shrink-swell potential, slight water erosion, and subject to rare flooding.

208 Redding gravelly loam, 3 to 8 percent slopes

The Redding gravelly loam is a well-drained soil that would be located on high fan terraces and is moderately deep to a hardpan. The soil is formed in alluvium derived from mixed sources. The native vegetation consists mainly of annual grass. The surface layer is typically brown gravelly loam about six inches thick. The upper 13 inches of the subsoil is yellowish red gravelly loam and the lower 14 inches is reddish brown and red clay. An indurated hardpan is at a depth of 33 inches. The soil is suited to rangeland and responds well to fertilizer, range feeding, and proper grazing use. The production of vegetation suitable for livestock grazing is limited by the low available water capacity.

More specifically, the complete range of soil types found within the project site through a review of the Yuba County Soil Survey, are described below in Table 4.8-1.

Figure 4.8-1
Soils Map

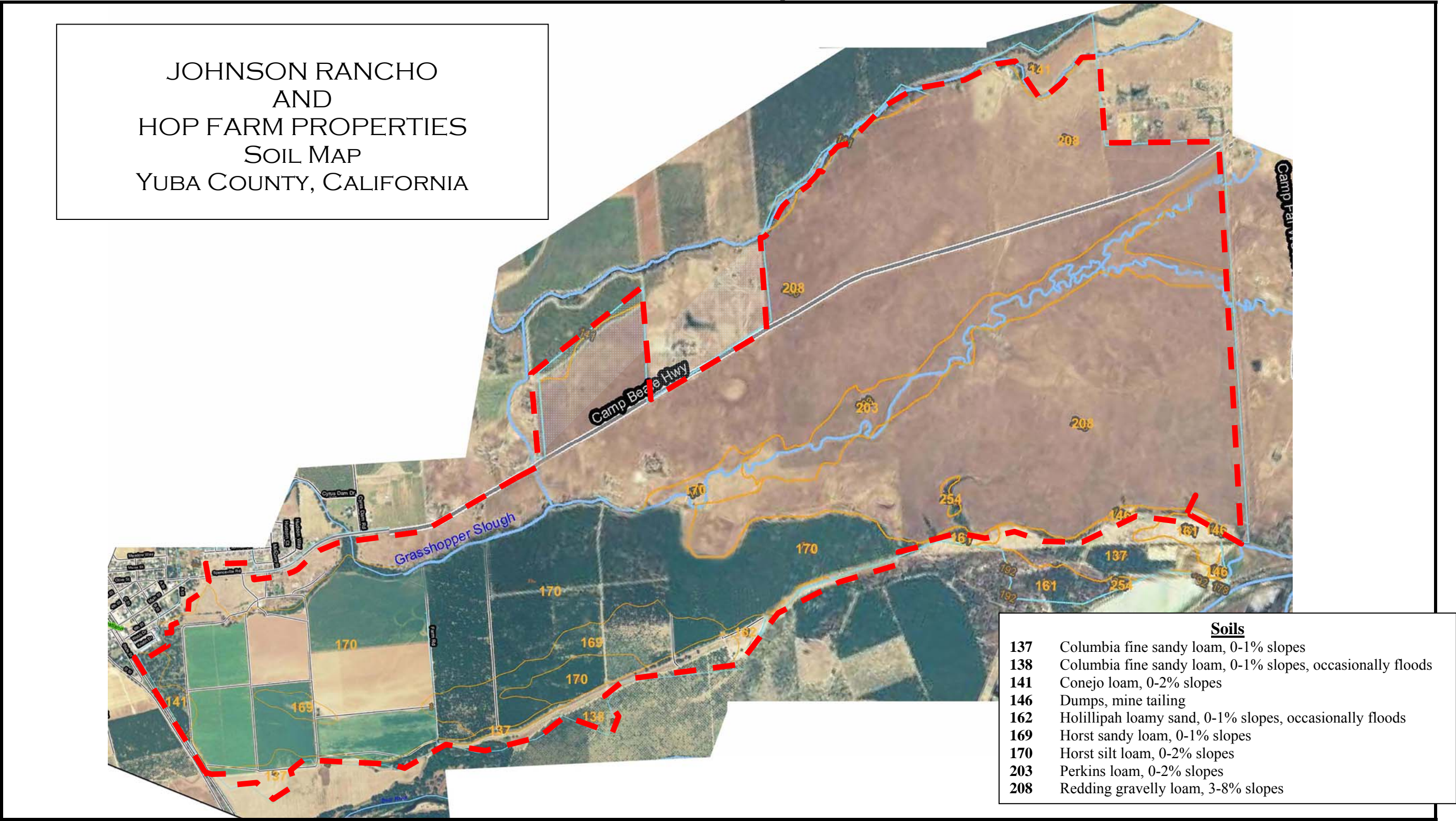


Table 4.8-1 Proposed Project Soil Index		
Soil Map Units		Storie Index Rating
137	Columbia fine sandy loam, 0 to 1 percent slopes	85
138	Columbia fine sandy loam, 0 to 1 percent slopes, occasionally flooded	43
141	Conejo loam, 0 to 2 percent slopes	90
146	Dumps, mine tailing	0
162	Holillipah loamy sand, 0 to 1 percent slopes, occasionally flooded	49
169	Horst sandy loam, 0 to 1 percent slopes	81
170	Horst silt loam, 0 to 2 percent slopes	95
203	Perkins loam, 0 to 2 percent slopes	81
208	Redding gravelly loam, 3 to 8 percent slopes	14

Project Site Characteristics

The proposed project is located within Yuba County, east of the City of Wheatland (outside the City limits and within the Wheatland SOI). The proposed project is located on approximately 4,149 acres of agricultural land, which contains scattered residences. The project site is bordered by the Yuba County/Placer County line to the south; Wheatland city limits, State Route (SR) 65 and the Union Pacific Railroad (UPRR) tracks to the west; Spenceville Road and Dry Creek to the north; and the eastern boundary of the Wheatland SOI to the east.

The project site is currently made up of the following ownerships: Johnson's Crossing, AKT Wheatland Ranch, Dave Browne, and Browne Cattle Company; Bear River Hop Farm and Wheatland Hop Farm; and the five "Wheatland Parcels." The project area east of the future Wheatland Expressway alignment outside of the General Plan Study Area is referred to as the "Johnson Rancho" property, while the area west of the future Wheatland Expressway alignment within the General Plan Study Area is referred to as the "Hop Farm" property.

Hop Farm Property

The Hop Farm property was visited on March 23, 2005 by ENGEO, Inc. in order for a site reconnaissance and subsurface exploration to be performed. During the site reconnaissance, the following things were observed:

- The triangular shaped parcel, in the western area of the site, is used as an orchard with rows of walnut trees ranging in height between approximately 10 and 15 feet;
- Much of the ground surface in the orchard is covered with a light growth of grass and weeds approximately 0.5-foot-tall;

- Numerous dirt roads forming the parcel boundaries were observed and, at the time of ENGEO, Inc.'s visit, the roads were inaccessible to two-wheel drive vehicles due to the presence of mud and ponded surface water;
- Various earthen channels with depths up to five feet were observed throughout the site; and
- Pole-mounted power lines cross the site at several locations.

Historical Topographic Maps

Historical topographic maps of the site taken from the United States Geological Survey 15-minute Wheatland Quadrangle from 1947 and 1973 were reviewed by ENGEO, Inc. Both of the topographic maps show that the site topography is very gentle and ranges from approximately 85 feet msl to 90 feet msl. In general, the ground surface decreases in elevation from the northern to the southern site boundary. Several dirt roads are mapped within the project site.

Aerial Photograph Review

The following aerial photographs were reviewed for information regarding past conditions and land use at the subject site and in the immediate vicinity:

1962 Photograph

In the 1962 aerial photograph, the site is bound by SR 65 to the west and Spenceville Road to the north. Agricultural farmland borders the site to the south and east. The northwest corner of the site is bordered by a residential development, a few commercial or industrial structures, and agricultural farm land. Seven tall structures exist on a small parcel of land; the exact shape of the structures cannot be determined from the photograph. Power lines appear to traverse through and next to the site.

The western and northern portions of the site appear to be dry and have box-linear harvest patterns. The central and southern portions of the site consist of orchards, as indicated by the evenly spaced grid-configuration of the trees. The trees appear to be fairly large, which indicates that the orchard is older. A drainage ditch traverses the center of the site from southwest to northeast. The ditch also extends along the northeast border of the site. A dark rectangular feature that the harvest patterns detour around exists near the northwest site boundary.

1969 Photograph

In the 1969 aerial photograph, the orchards at the center of the site have been removed. This portion of the site appears to be vacant and dry and has widely spaced, parallel harvest patterns. The western portion of the site is covered in a young orchard, and a small mounded area exists on the northeast edge of the site, near the neighboring structures. Pole-mounted power lines are visible along the west and north boundaries of

the site. Two rows of power lines also traverse from north to south through the center of the site.

1973 Photograph

In the 1973 aerial photograph, the mounded area on the northern edge of the site is no longer visible. The orchard in the western portion of the site has grown and appears healthy. A dirt road that traverses from north to south across the site exists on the east side of the orchard.

1989 Photograph

In the 1989 aerial photograph, the orchard in the western portion of the site has full-grown trees. The central and eastern portions of the site have wide-spaced row crops. The northern portion of the site, near Spenceville Road appears to be vacant. A flooded area that could have originated from a well exists at the center of the northern portion of the site.

1993 Photograph

In the 1993 aerial photograph, the site and the neighboring properties appear relatively unchanged from the 1989 aerial photograph.

Site Geology

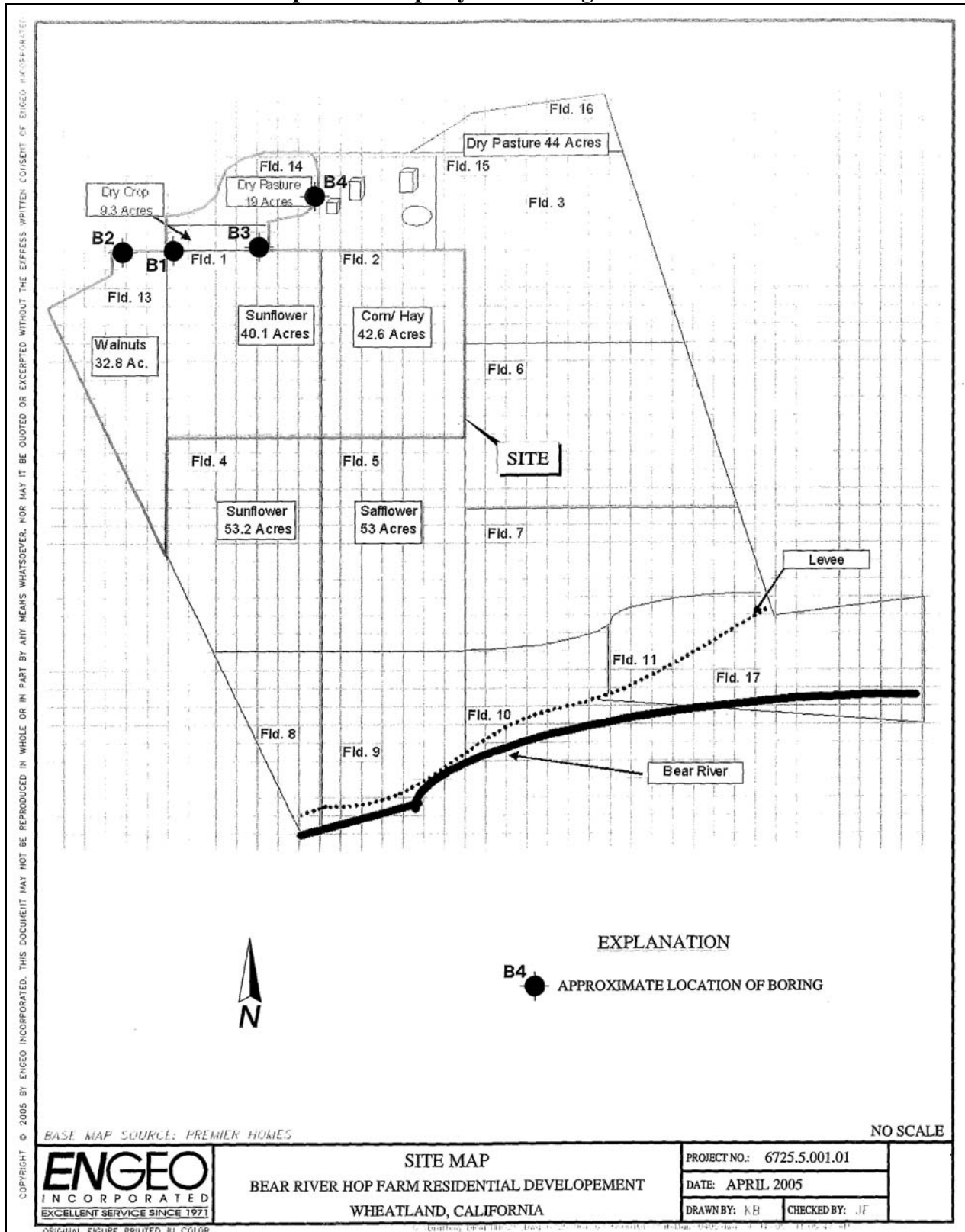
The *Geologic Map of the Late Cenozoic Deposits of the Sacramento Valley and Northern Sierran Foothills, California* (Helley and Harwood, 1985) indicates that the site is underlain by two geologic formations. The geologic formations mapped on the site are the Laguna Formation in the northern, approximately one third of the site, and Holocene Alluvium in the remaining southern site area. The Laguna Formation consists of arkosic alluvial deposits of gravel, sand and silt. The Holocene Alluvium consists of unweathered gravel, sand, and silt.

Soil Conditions

Subsurface Conditions

Due to the wet weather and muddy conditions at the time of ENGEO, Inc.'s exploration, much of the site was inaccessible to equipment. Soil borings were performed at the locations shown on Figure 4.8-2. In general, the soil borings encountered very stiff to hard, slightly to highly plastic, clayey silt and silty clay with intermediate lenses of sand and silty sand with gravel to the maximum 15-foot depth explored. Noticeably weak or compressible soil was not encountered in the exploratory locations.

**Figure 4.8-2
Hop Farm Property Soil Boring Locations**



Soil Expansion Potential

A relatively thin layer of highly expansive surficial clay was encountered in one of the four soil borings performed on-site. Based on ENGEO, Inc.'s preliminary evaluation, the assumption can be made that isolated pockets of highly expansive surficial clay could be encountered at various locations across the site.

Seismic Setting

According to the *Geologic Map of California* (Jennings, 1977), known faults are not mapped within the property. In ENGEO Inc.'s review of aerial photographs, readily apparent geomorphic evidence of recently active faulting was not observed.

The California Geological Survey website does not list Wheatland or Yuba County as areas included in the Alquist-Priolo earthquake hazard zones. According to parameters of the 2001 California Building Code, this site is in Earthquake Zone 3. The closest known faults classified as active by the State of California Geologic Survey are the type A Bartlett Springs fault located approximately 59 miles to the west and the type B Hunting Creek-Berryessa fault located approximately 55 miles to the southwest. The type C Foothills Fault System is considered potentially active and lies approximately eight miles to the east. The Foothills Fault System is a poorly constrained system of faults with an assumed moment magnitude of 6.5.

Groundwater

The Department of Water Resources (DWR) tracks groundwater levels in several wells in the Wheatland area. Wells located within one mile of the property boundaries indicate that, historically, the water level recorded at the well sites has fluctuated widely. Water levels have been recorded as shallow as 20 feet and as deep as 80 feet below the ground surface. Fluctuations in groundwater levels are expected to occur seasonally in response to changes in precipitation, irrigation, and other factors.

Liquefaction

A response to severe ground shaking that can occur in loose soils is liquefaction. This transformation from solid state to liquid state ("quicksand"), as a response to seismically induced ground shaking, can cause structures supported on the soils to tilt or settle (sometimes very violently and rapidly) as the supporting capabilities of the soils diminish. Water-saturated, clay-free sediments in the most recent Holocene unit are generally expected to have a high susceptibility to liquefaction. Notably, soils having high clay content may also be considered to have moderate-to-high liquefaction potential. As identified in the *Yuba County General Plan*, the portion of the County that includes the Wheatland area is potentially susceptible to liquefaction because the area is underlain by unconsolidated sands and finer grained materials.

Johnson Rancho Property

The Johnson Rancho portion of the proposed project site is located south of Spenceville Road and east of Jasper Lane in Yuba County, California. The property is identified as Yuba County Assessor's Parcel Numbers (APNs) 015-160-029, 015-160-098, 015-370-001, 015-360-024, and 015-360-025. The site is bounded to the north by Spenceville Road, to the east by rangeland and several rural residences, to the south by densely wooded land and orchards, and to the west by undeveloped rangeland.

At the time of WKA's subsurface investigation, the site consisted of undeveloped rangeland used to graze cattle. Grasshopper Slough was observed traversing across the site from the northeast to southwest. The slough ranged in size from approximately five to 20 feet wide by approximately two feet to eight feet deep and contained between one to three feet of water. Several mature trees were observed along the alignment of Grasshopper Slough, and denser concentrations of trees were observed near the southern boundary of the site. Four relatively small man-made ponds were also observed along the southern boundary of the site. Mined tailing piles were observed near the southeast corner of the site, extending approximately 150 feet into the property from the Camp Far West Historic site. Review of a historical topographic map indicates that the tailings have been present since at least 1949. Further investigation of the site revealed a small concentration of debris within a drainage swale located near the center of the site. The debris observed within the swale generally consisted of bottles, tin cans, glass, bailing wire, wood, and other miscellaneous trash. During the subsurface investigation, the debris was dug into with a backhoe and it was determined that the debris was surficial.

Information obtained from the Phase I Environmental Site Assessment (ESA) prepared for the Johnson Rancho property indicates the presence of a hand-dug water well that is approximately 70 feet deep, adjacent to one of the on-site barns, and a septic system located north of the residence. Another septic system is located on-site and services an on-site travel trailer.

Aerial Photograph Review

Review of a 1962 aerial photograph indicates that the property was primarily open rangeland. Two structures are visible in the photograph located near the central portion of the property, in addition to Grasshopper Slough, which traverses the site from northeast to southwest. A pond is also visible in the aerial photograph located in the southwest portion of the site. A small area of mine tailings is visible in the southeast corner of the site. Several dirt access roads access the property on the west and east sides of the property.

The 1969 aerial photograph of the property revealed virtually no change to the site. Review of a 2002 color aerial photograph indicates the site to be in much the same condition the site was during the years previously discussed. Additional access roads are visible across the property, as well as four structures and corrals located in the central portion of the site.

Site Geology

The Johnson Rancho property is located in the central portion of the Great Valley geomorphic province of California. The Great Valley lies between the mountains and foothills of the Sierra Nevada Range to the east and the California Coast Ranges to the west. The geologic formations of the Great Valley are typified by thick sequences of alluvial (river) sediments deposited during the filling of a large ancient basin. The property is predominately underlain by Pliocene age alluvium, as identified by the Department of Interior United States Geologic Survey publication *Geologic Map of the Chico Quadrangle* (1992). Based on the map, the Pliocene age Laguna Formation appears to cover the entire property, and consists of alluvial deposits of gravel, sand, silt, and clay.

Based on WKA's review of available geologic literature, faults are not mapped crossing the property. According to review of the *Fault Activity Map of California and Adjacent Areas* (1994), the nearest known fault with evidence of movement within the last 10,000 years is the Cleveland Hill Fault, which is located 25 miles north of the Johnson Rancho property. The Spenceville Fault system is located approximately five miles to the east of the site and is noted on the fault map as showing evidence of displacement within late Quaternary time (less than 700,000 years ago).

Soil Conditions

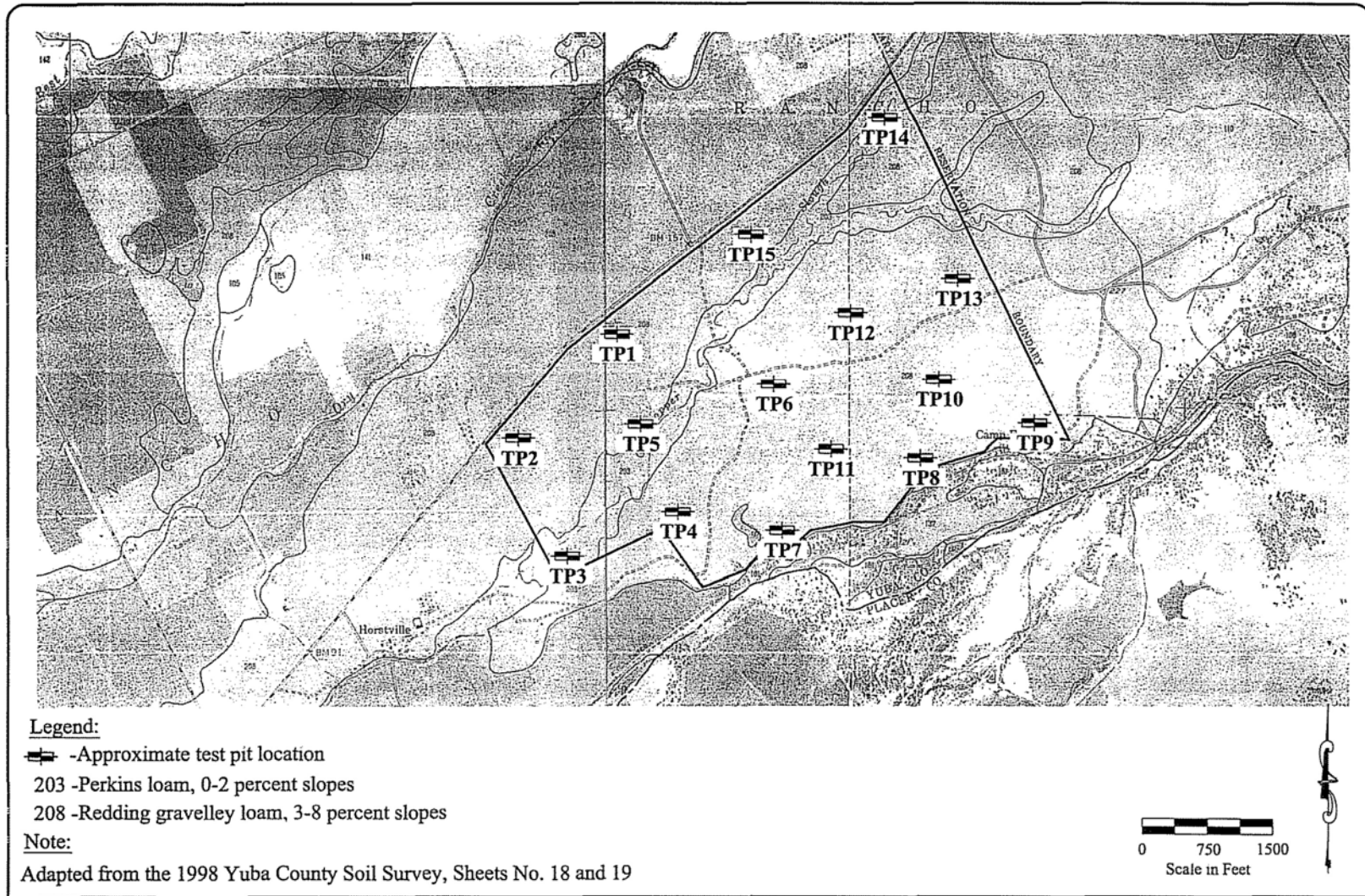
Test Pit Soil Conditions

WKA's review of 15 test pits that were excavated to a maximum depth of approximately 10 feet indicates a subsurface profile consisting of a surface layer of sandy silt and/or silty sand generally a few inches thick (up to approximately two feet in thickness) underlain by alternating layers of sandy gravels and cobbles, and variably cemented layers of silty sands and sandy silts to the maximum depth explored. A discontinuous layer of sandy clay was observed within 10 of the 15 test pits and varied in thickness from approximately one-half foot to two feet in thickness. (See Figure 4.8-3 for the location of the 15 test pits.)

Soil Expansion Potential

The *Preliminary Geotechnical Engineering Report* indicates that the Johnson Rancho site's surface soils vary from non-expansive and low plasticity sandy silts and silty sands to very highly expansive clay soils. The near-surface silty sands and sandy silts are considered to possess a low expansion potential. Clay layers were observed at 10 of the 15 sample locations at depths below approximately one-half foot to two feet, and ranged in thickness from approximately one-half foot to two feet thick. Laboratory testing of the clays indicated that these materials possess a moderate to very high expansion potential when tested in accordance with ASTM D4829 (UBC 29-2).

Figure 4.8-3
Test Pit Locations – Johnson Rancho Property



Based on WKA's laboratory test results, the conclusion was made that the near-surface clayey soils are capable of exerting very high expansion pressures on structural foundations and exterior flatworks. These soils are expected to experience significant volume changes with increasing or decreasing soil moisture content and should be taken into consideration during design and construction of foundations and slab-on-grade floors.

Soil Corrosion Potential

Four samples of near surface soils were tested by WKA to determine resistivity, pH, chloride, and sulfate concentrations to help evaluate the potential for corrosive attack upon reinforced concrete and buried metal. The results of the corrosivity testing are summarized in Table 4.8-2.

Table 4.8-2					
Soil Corrosion Test Results					
Analyte	Test Method	Bulk Sample Identification			
		TP2 (0'-2')	TP3 (5.5'-7')	TP8 (1'-2')	TP14 (2'-10')
pH	CA DOT 643 Modified*	5.17	5.76	6.28	10.69
Minimum Resistivity	CA DOT 643 Modified*	23580 Ω-cm	9110 Ω-cm	1130 Ω-cm	2550 Ω-cm
Chloride	CA DOT 422	12.6 ppm	14.3 ppm	43.6 ppm	27.7 ppm
Sulfate	CA DOT 417	0.3 ppm	0.7 ppm	2.3 ppm	141.5 ppm
<i>Source: Wallace-Kuhl & Associates, Inc., Preliminary Geotechnical Engineering Report, Johnson's Crossing, April 2, 2004.</i>					

Published literature⁷ defines a corrosive area as an area where the soil and/or water contains more than 500 parts per million (ppm) of chlorides, more than 2,000 ppm of sulfates, has a minimum resistivity of less than 1,000 ohm-centimeters or has a pH of less than 5.5. Laboratory test results indicate the near-surface soils at the Test Pit No. 8 location possess a moderate corrosion potential to exposed buried metal. Also of concern is the low pH at the Test Pit No. 2 location.

Groundwater Elevation

WKA reviewed available groundwater elevation data obtained from a California Department of Water Resources-monitored well located approximately 1,800 feet west of the Johnson Rancho property. The surface elevation at this location is approximately 125 feet msl. The Department of Water Resources periodically measured water elevations in this well from June 1965 to March 1976. Based on the available data, the lowest measured groundwater elevation in the DWR-monitored well occurred on March 12, 1976 at an elevation of approximately 18 feet msl (or approximately 107 feet below existing site grades), and the highest elevation (approximately 38 feet msl or approximately 87 feet below the surface) occurred on March 15, 1966. According to the *Preliminary Geotechnical Engineering Report*, WKA used the ground surface elevation at

the DWR-monitored well to determine depth-to-groundwater in the area. Groundwater in the vicinity of the DWR-monitored well has historically ranged from approximately 87 to 107 feet below the ground surface. Subsurface seepage was observed in Test Pits 1, 3, 6, and 15, generally originating from approximately two to seven feet below the existing ground surface. The seepage was relatively slow and water did not reach equilibrium prior to backfill of the pits.

Liquefaction

A response to severe ground shaking that can occur in loose soils is liquefaction. This transformation from solid state to liquid state (“quicksand”), as a response to seismically induced ground shaking, can cause structures supported on the soils to tilt or settle (sometimes very violently and rapidly) as the supporting capabilities of the soils diminish. Water-saturated, clay-free sediments in the most recent Holocene unit are generally expected to have a high susceptibility to liquefaction. Notably, soils having high clay content may also be considered to have moderate-to-high liquefaction potential. As identified in the *Yuba County General Plan*, the portion of the County that includes the Wheatland area is potentially susceptible to liquefaction because the area is underlain by unconsolidated sands and finer grained materials.

REGULATORY CONTEXT

The following section is a brief summary of the regulatory context under which soils and geologic hazards are managed at the State and local levels.

State Regulations

National Pollutant Discharge Elimination System (NPDES)

As required under the federal Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources, such as construction sites, that discharge pollutants into waters of the United States. In California, NPDES permit issues are overseen by the nine individual Regional Water Quality Control Boards. The City of Wheatland would be overseen by the Central Valley Regional Water Quality Control Board. For further discussion of NPDES, please refer to Chapter 4.10 (Hydrology and Water Quality) of this Draft EIR.

California Building Standards Code / Uniform Building Code

The State of California provides minimum standards for building design through the California Building Standards Code (California Code of Regulations [CCR], Title 24). The California Uniform Building Code (CUBC) is used widely throughout the U.S. and has been modified for California conditions with numerous more detailed and/or more stringent regulations.

Geologic and soils conditions would also determine the proper installation of underground communications and utility lines.

Local Regulations

The *City of Wheatland General Plan* establishes the following goals and policies applicable to geology issues.

Goal 9.B To minimize the loss of life, injury, and property damage due to seismic and geologic hazards.

Policy 9.B.1. The City shall require the preparation of a soils engineering and geologic/seismic analysis prior to permitting development in areas prone to geologic or seismic hazards (i.e., ground shaking, liquefaction, expansive soils).

Policy 9.B.2. The City shall require submission of a preliminary soils report, prepared by a registered civil (geotechnical) engineer and based upon adequate test borings, for every subdivision.

Policy 9.B.3. The City shall require that new structures intended for human occupancy be designed and constructed to minimize risk to the safety of occupants due to ground shaking.

Policy 9.B.4. The City shall require that new structures and alterations to existing structures comply with the current edition of the Uniform Building Code.

Policy 9.B.6. The City shall require that new structures intended for human occupancy, public facilities (i.e., treatment plants and pumping stations, major communication lines, evacuation routes, etc.), and emergency/disaster facilities (i.e., police and fire stations, etc.) are designed and constructed to minimize risk to the safety of people due to ground shaking.

Policy 9.B.7. The City shall require all proposed developments, reconstruction, utilities, or public facilities situated within areas subject to geologic/seismic hazards as identified in the soils engineering and geologic/seismic analysis to be sited, designed, and constructed to mitigate the risk associated with the hazard (e.g., expansive, liquefaction, etc.).

IMPACTS AND MITIGATION MEASURES

Standards of Significance

The following thresholds of significance related to Geology, Soils, and Seismicity are derived from the criteria listed in Appendix G of the State California Environmental Quality Act (CEQA) Guidelines.

Impacts resulting from the project would be considered significant if the project would:

- Expose people or structures to substantial adverse effects as a result of strong ground-shaking, seismic-related ground failure, liquefaction, lateral spreading, landslides, or lurch cracking;
- Result in substantial erosion or unstable slope soil conditions through alteration of topographic features, dewatering, or changes in drainage patterns;
- Expose people, structures, or infrastructure components to increased risk of injury or damage due to the presence of expansive soils, soil settlement/compaction, or other geotechnical constraints; or
- 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 lateral spreading, subsidence, liquefaction or collapse.

As discussed in the Introduction to the Analysis chapter of this Draft EIR, impacts identified in the Initial Study as less-than-significant or having no impact, which do not require mitigation, have already been addressed in the Initial Study. As stated in the Initial Study, the proposed project would not be impacted by seismically-induced landslides, and the project would not create any impacts related to the use of septic systems. All other impacts identified as potentially significant within the Initial Study are addressed below.

Method of Analysis

The environmental setting section and the impact discussions below are based primarily on the *Preliminary Geotechnical Engineering Report, Johnson's Crossing* prepared by Wallace Kuhl & Associates, Inc. in April 2004 and the *Preliminary Geotechnical Report, Bear River Hop Farm Residential Development* prepared by ENGEO, Inc. in April 2005. Other documents were also reviewed including, but not limited to, the *City of Wheatland General Plan*, the *City of Wheatland General Plan EIR*, and the *National Resources Conservation Service Web Soil Survey*.

Hop Farm Property

ENGEO, Inc.'s field investigation for the project site consisted of a subsurface field exploration on March 23, 2005 and subsequent laboratory testing of soils, data analysis, and the formulation of preliminary conclusions, as well as a review of aerial photographs and historical topographic maps for the project area. Laboratory tests were performed on selected soil samples to determine their engineering properties. For the proposed project, ENGEO, Inc. performed moisture content, dry density, and plasticity index testing.

Johnson Rancho Property

Wallace Kuhl & Associates' field investigation for the project site consisted of general site reconnaissance, excavation of 15 test pits to a maximum depth of about 10 feet, sampling of site soils, review of available aerial photographs, and review of available geologic maps and the

Department of Agricultural Soils Conservation Service Soil Survey for Yuba County. At the time of the site reconnaissance, bulk samples were collected from the site and were taken to the laboratory to determine the engineering characteristics of the near surface site soils. The results of the site reconnaissance, geologic literature review, and laboratory work were then analyzed to develop preliminary geotechnical engineering conclusions regarding the following: site preparation and fill placement; underground utility construction; foundation design and interior floor slab support for residential structures; and street subgrade quality.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Johnson Rancho and Hop Farm), unless otherwise noted.

4.8-1 Damage to foundations, pavement, and other structures from expansive soils.

Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. These soils are typically characterized by large amounts of finer grained materials such as silts and clays within the soil matrix. Expansion is measured by shrink-swell potential, which is the relative volume change in a soil with a gain in moisture.

As discussed above, the *Preliminary Geotechnical Engineering Report* prepared by WKA indicates that the Johnson Rancho site's surface soils vary from non-expansive and low plasticity sandy silts and silty sands to very highly expansive clay soils. The near-surface silty sands and sandy silts are considered to possess a low expansion potential. However, the near-surface clayey soils are capable of exerting very high expansion pressures on structural foundations and exterior flatworks. These soils are expected to experience significant volume changes with increasing or decreasing soil moisture content and should be taken into consideration during design and construction of foundations and slab-on-grade floors.

In addition, as discussed above, the *Preliminary Geotechnical Report* prepared by ENGEO, Inc. indicates that a relatively thin layer of highly expansive surficial clay was encountered in one of the four soil borings performed on the Hop Farm portion of the project site and, based on the preliminary soil evaluation, the assumption can be made that isolated pockets of highly expansive surficial clay could be encountered at various locations across the Hop Farm portion of the project site.

Conclusion

Expansive soil can cause distress to foundations, floor slabs, pavements, sidewalks, and other improvements that are sensitive to soil movements. The geotechnical reports for the proposed project identify preliminary measures necessary to ensure that foundations are not damaged by expansive soil activity. The reports state that the site is suitable for the proposed development, provided that the concerns described in the reports regarding expansive soils are addressed by future geotechnical investigations. The reports further

state that future, site-specific studies should include additional laboratory testing to further define the expansion potential of the on-site soils. As a result, because the proposed project site contains expansive soils, without future geotechnical investigation of site constraints, a ***potentially significant*** impact would result.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.8-1(a) *The City shall include the following as a condition of approval on **each** tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

“In conjunction with submission of Improvement Plans for any development application within the Johnson Rancho and Hop Farm Annexation area, a final design-level geotechnical report shall be prepared and submitted to the City for review and approval. The geotechnical consultant shall consider the recommendations made in the Preliminary Geotechnical Engineering Reports prepared by Wallace-Kuhl & Associates, Inc. (April 2004) and ENGEO, Inc. (April 2005) including, but not limited to, the recommendations regarding expansive soils. The recommendations in the design-level geotechnical report shall be incorporated into the design of the infrastructure improvements.”

Compliance with this condition shall be ensured by the City Engineer prior to the approval of Improvement Plans.

4.8-1(b) *The City shall include the following as a condition of approval on **each** tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

“Prior to issuance of building permits, the recommendations of the final geotechnical report shall be incorporated into the individual building designs for the review and approval of the City Building Official.”

Compliance with this condition shall be ensured by the City Building Official prior to the issuance of building permits.

4.8-2 Impacts related to corrosive soils on-site.

As discussed above, and as shown in Table 4.8-2, laboratory test results provided by WKA indicate that near-surface soils on the Johnson Rancho Property portion of the proposed project site possess a moderate corrosion potential to exposed buried metal.

The *Preliminary Geotechnical Engineering Report* prepared by WKA states that to further define soil corrosion potential at the proposed project site, or to determine the

need or design parameters for cathodic protection or grounding systems, a corrosion engineer should be consulted. Therefore, impacts related to corrosive soils on-site would be *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.8-2 *Implement Mitigation Measures 4.8-1(a) and (b).*

4.8-3 Loss of structural support due to liquefaction.

Soil liquefaction is a phenomenon primarily associated with saturated, cohesionless soil layers located close to the ground surface. These soils lose strength during cyclic loading, such as imposed by earthquakes. During the loss of strength, the soil acquires mobility sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie close to the ground surface.

At the proposed project site, the anticipated intensity of seismic ground motion is relatively low. However, according to the *City of Wheatland General Plan* (page 7-3), the site is located in an area mapped as having underlain Holocene alluvial deposits. The water saturated, clay free sediments are generally expected to have a high susceptibility to liquefaction in event of an earthquake. Therefore, due to the susceptibility for soil liquefaction, the impact would be considered *potentially significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.8-3 *Implement Mitigation Measures 4.8-1(a) and (b).*

4.8-4 Impacts related to seismic activity.

As discussed above, although the Wheatland area is subject to potential ground shaking from active faults both within and outside Yuba County, the California Geological Survey website does not list Wheatland or Yuba County as areas included in the Alquist-Priolo earthquake hazard zones. The proposed project site is not located within an Alquist-Priolo Special Study Zone (AP Zone) nor is any active fault near the City.

Although a low potential for seismic activity exists in the project area, the effects can be minimized by appropriate design and construction practices. The Uniform Building Code (UBC) classifies Yuba County as being within the seismic region Zone 3. The minimum ground acceleration used for structure design within seismic region Zone 3 is 0.3g. Because the City of Wheatland requires that all construction comply with the UBC,

seismically induced ground shaking would have a ***less-than-significant*** impact on the proposed project.

Mitigation Measure(s)

None required.

4.8-5 Construction-related increases in soil erosion.

Construction activities typically result in disturbance of site soils, in turn leading to increased soil erosion due to loss of soil cohesiveness. Surface grading and earth-moving activities associated with construction projects would create temporary exposed earth surfaces. Once the protective vegetative cover is removed and the soil is broken into easily transported particles, exposed earth surfaces are susceptible to wind and water erosion. During dry months wind can move dry soil particles into the air creating fugitive dust emissions. Water may erode the topsoil by moving across the ground and picking up soil particles. Precipitation causes additional erosion by loosening soil particles for transport and the transport of soil particles could lead to the sedimentation of on- and off-site waterways, including Grasshopper Slough and Dry Creek.

Grading activities in general on the proposed project site would result in the disturbance and relocation of topsoils, rendering earth surfaces susceptible to erosion from wind and water, which could affect water quality (Please refer to Chapter 4.10, Hydrology and Water Quality, of this EIR for further detail on potential project impacts to water quality). Soil erosion, or the loss of topsoil, resulting from grading and excavation of the project site would be considered a ***potentially significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a ***less-than-significant*** level.

4.8-5 *The City shall include the following as a condition of approval on **each** tentative map application for any development within the Johnson Rancho and Hop Farm Annexation area:*

“In conjunction with submission of Improvement Plans for any development application within the Johnson Rancho and Hop Farm Annexation area, the project applicant shall prepare and submit an erosion control plan for the City Engineer’s review and approval. The erosion control plan shall be in compliance with the State Water Resources Control Board requirements established pursuant to the State General Construction Permit. The erosion control plan shall utilize standard construction practices to limit the erosion effects during construction. Measures could include, but are not limited to, the following:

- *Hydro-seeding;*

- *Placement of erosion control measures within drainageways and ahead of drop inlets;*
- *The temporary lining (during construction activities) of drop inlets with “filter fabric” (a specific type of geotextile fabric);*
- *The placement of straw wattles along slope contours;*
- *Directing subcontractors to a single designation “wash-out” location (as opposed to allowing them to wash-out in any location they desire);*
- *The use of siltation fences; and*
- *The use of sediment basins and dust palliatives.*

Compliance with this condition shall be ensured by the City Engineer prior to the approval of Improvement Plans.

Cumulative Impacts and Mitigation Measures

The continuing buildout of developments in the City of Wheatland and General Plan Study Area would be expected to increase the need for surface grading and excavation, thereby, increasing the potential for impacts related to soil erosion, unforeseen hazards, and exposure of people and property to earthquakes.

4.8-6 Long-term geologic and seismic impacts from the proposed project in combination with existing and future developments in the Wheatland area.

Future buildout of the proposed project would include, but not necessarily be limited to, the development of single- and multi-family residential, commercial, recreational, and school uses on the approximately 4,149-acre site. Therefore, the proposed project would increase the number of people and structures within Wheatland that could be exposed to potential effects related to seismic hazards. Site preparation would also result in temporary and permanent topographic changes that could affect erosion rates or patterns.

However, potentially adverse environmental effects associated with seismic hazards, as well as those associated with geologic or soils constraints, topographic alteration, and erosion, are site-specific and generally would not combine with similar effects that could occur with other projects in Wheatland. Furthermore, all projects would be required to comply with UBC, California Building Code (CBC), and other applicable safety regulations. Consequently, the proposed project would generally not be affected by, nor would the project affect, other development approved by the City of Wheatland. The incremental contribution of the proposed project to cumulative geologic impacts would not be cumulatively considerable; therefore, the impact would be considered ***less-than-significant***.

Mitigation Measure(s)

None required.

Endnotes

- ¹ Wallace Kuhl & Associates, Inc. *Preliminary Geotechnical Engineering Report, Johnson's Crossing*. April 2, 2004.
- ² ENGEO, Inc. *Preliminary Geotechnical Report, Bear River Hop Farm Residential Development*. April 18, 2005.
- ³ City of Wheatland. *City of Wheatland General Plan Policy Document*. July 2006.
- ⁴ Raney Planning & Management, Inc. *City of Wheatland General Plan EIR*. July 11, 2006.
- ⁵ Yuba County. *Yuba County General Plan*. May 1994.
- ⁶ U.S. Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey of the Project Site*. <http://websoilsurvey.nrcs.usda.gov/app/>. Accessed July 1, 2010.
- ⁷ California Department of Transportation, Division of Engineering Services, Materials Engineering and Testing Services, Corrosion Technology Branch. *Corrosion Guidelines (Version LO)*. September 2003.