Nichols Grove

SCH# 2006102089

Draft
Environmental Impact Report

Prepared For
The City of Wheatland

August 2008

Prepared By
Raney Planning & Management, Inc.

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1 INTRODUCTION

INTRODUCTION

The Nichols Grove 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 Nichols Grove 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, located adjacent to the northern border of the City of Wheatland, is on the eastern edge of the northern Sacramento Valley within the Wheatland Sphere of Influence (See Figure 3-1). The proposed project consists of a residential and mixed-use development, Nichols Grove Tentative Map (See Figure 3-2), and the annexation to the City of Wheatland and prezone of ten adjacent non-participating properties (See Figure 3-3). The proposed Nichols Grove Tentative Map project is a development of up to 1,609 dwelling units on approximately 485.5 acres. The Nichols Grove Tentative Map site consists of the Nichols Ranch property (Assessor's Parcel Number [APN] 015-150-092) and the Powell property (APN 015-360-003). The non-participating properties portion of the proposed project includes the annexation of a total of 110.67 acres of unincorporated land to the City of Wheatland. The non-participating properties are identified as APNs 015-140-155, 015-260-001, 015-260-002, 015-260-003, 015-260-004, 015-500-008, 015-500-011, 015-500-013, 015-500-020, and 015-610-001. All of the parcels currently have a Yuba County General Plan designation of Valley Agricultural (VA), and Yuba County zoning designations that range from Agricultural Exclusive, 10-acre minimum parcel (AE-10) and Agricultural Exclusive, 40-acre minimum parcel (AE-40) to Commercial (C). Development of the non-participating properties is not planned at this time.

Nichols Grove Tentative Map

The Nichols Grove Vesting Tentative Large Lot Map contains 19 lots ranging in size from 1.91 to 69.42 acres. Twelve of the lots are designated for single-family residential, three of the lots are designated for parkland or parkland/stormwater detention basins, two lots are identified as school sites, one lot is designated for high-density residential, and one lot is identified as commercial mixed-use with a provision for a mixture of high density residential and commercial uses.

The Nichols Grove Vesting Small Lot Tentative Subdivision Map includes 1,427 single family residential lots, one high density residential lot containing up to 91 units, one commercial mixed-use lot accommodating up to 91 units, seven park and open space lots containing parks and landscape corridors, four well lots, two school lots, and 30 miscellaneous lots.

Non-Participating Properties

A total of 10 non-participating properties are included in the proposed project, and are proposed for annexation to the City of Wheatland and prezoning to a Planned Development zone. In addition, the UPRR and SR 65 rights-of-way (ROWs), which are located west of the Nichols Grove Tentative Map site, are two additional non-participating properties that are also proposed to be annexed to the City of Wheatland.

PURPOSE OF THE EIR

As provided in the CEQA Guidelines, Section 15021, 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 apprises 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/project-level EIR. The project-level analysis evaluates the potential environmental impacts of the Nichols Grove Tentative Map, pursuant to CEQA Guidelines Section 15161. A project-level analysis examines the environmental impacts of a specific development project and should focus primarily on the changes in the environment that would result from the development of the project. A project-level EIR should examine all phases of the project including planning, construction, and operation. The program-level EIR analysis, prepared pursuant to CEQA Guidelines Section

15168, evaluates the potential environmental impacts associated with buildout of the non-participating properties, pursuant to existing General Plan land use designations. 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 NOP was prepared and circulated for the Nichols Grove project from October 19, 2006 to November 17, 2006. A public scoping meeting was held on November 9, 2006.

As soon as 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 § 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 preparation of an Initial Study, review of comments received on the NOP, and review of testimony received at the scoping hearing. The Initial Study prepared for the proposed project concluded that several environmental issues would result in a less-than-significant impact. The complete text of the Initial Study is contained in Appendix C.

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

- Aesthetics;
- Land Use;
- Agricultural Resources;
- Transportation and Circulation;
- Noise;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality; and
- Public Services and Utilities.

The evaluation of potential impacts is presented on a resource-by-resource basis in Chapters 4.1 through 4.11. Each chapter is divided into 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 23 comment letters during the open comment period on the NOP and nine verbal comments during the public scoping meeting for the Nichols Grove EIR. A copy of each letter is provided in Appendix B of this EIR. The following letters were authored by representatives of State and local agencies and other interested parties:

NOP Comment Letters

- Amelia B. Oliver - Resident
- Bridget Binning – California Department of Health Services
- Clyde and Stephen Waltz - Residents
- Douglas and Lucille Waltz - Residents
- Ed Palmeri – County of Yuba Community Development Department
- Gregory M. Guth – Attorney at Law representing Baker Ranch
- James and Patricia Rice - Residents
- John Sohrakoff - Resident
- Kevin Boles – California Public Utilities Commission, Utilities Engineer
- Larry L. Lucero – Nichols Grove, LP
- Lonnie Rohde - Resident
- Marilyn Waltz – Property Owner
- O. D & M. Lucille Greathouse - Residents
- Rick and Jane Paskowitz – Residents
- Robert Abe - Resident
- Robert S. Boom – Resident
- Sandra Morey – California Department of Fish and Game
- Sandy Hesnard – California Department of Transportation, Division of Aeronautics
- Sharon Sheehan - Resident
- S. Silsbee – Department of California Highway Patrol
- Thomas Eres – Attorney at Law representing Hoffman Ranch
- Virgil L. Ditch – Resident
- William Davis - California Department of Transportation

Verbal Comments from Public Scoping Meeting

- Don Boom
- Michelle Boom
- Thomas Eres - Representing Hoffman Ranch
- Gregory M. Guth –Representing Baker Ranch

- Martin Heatlie
- Jim Mock
- Jane Paskowitz
- Rich Paskowitz
- Douglas Waltz

The following list, categorized by issue, summarizes the issues and concerns provided in the letters and verbal comments listed above:

Aesthetics (*c.f.* Chapter 4.1)	Concerns related to: • Potential visual impacts on existing and planned uses in the area.
Land Use and Agricultural Resources (*c.f.* Chapter 4.2)	Concerns related to: • Deferring annexation until Municipal Service Review and Sphere of Influence review and update is complete, in accordance with the Cortese-Knox-Hertzberg Act. • Privacy issues related to multi-level housing near adjoining property. • Conversion of prime agricultural land. • Right-to-farm on Almond Orchard. • Proximity of project site to Beale Air Force Base (AFB) and regional airport land use planning issues. • Evaluate project with conservation planning efforts pursuant to the Natural Community Conservation Plan and Habitat Conservation Plan in Yuba County. • Separation and limited access to adjoining property. • Analysis of cumulative and off-site impacts, including reasonably foreseeable growth inducement. • Joint documentation is needed from the Local Agency Formation Commission (LAFCO) & the City of Wheatland.
Transportation and Circulation (*c.f.* Chapter 4.3)	Concerns related to: • The extent of access for construction on the property. • Need for construction of a new intersection at McDevitt and State Route 65 (SR 65). • Assess impacts related to increased traffic on Nichols Road and the east and west portions of Waltz and Baker. • Road crossings need to be evaluated at Ring Road and McDevitt Road for accuracy of boundaries in conjunction with the Nichols Grove proposal. • Project site is within the Beale AFB Area of Influence. • Safety of the rail corridor as related to increased traffic volumes, pedestrian circulation patterns, and railroad right-of-way. • Increased traffic on SR 65. • Increased traffic on Spenceville Road, McCurry Way, North Ring Road,

	and Sullivan Way. • Limiting access to adjoining properties. • Construction traffic on C Street and 4th Street. • Extension of B Street as a means of ingress/egress. • Written approval from Union Pacific Railroad (UPRR) for the location of a new at-grade crossing at McDevitt Drive. • Access to the development. • Access to existing resources and pedestrian circulation.
Noise (*c.f.* Chapter 4.4)	Concerns related to: • Project is located in the Beale AFB Area of Influence. • Noise from farming activities being performed at properties adjacent to the project site.
Air Quality (*c.f.* Chapter 4.5)	Concerns related to: • Odor impacts on existing and planned uses in the area.
Biological Resources (*c.f.* Chapter 4.6)	Concerns related to: • Preservation of existing native oak, buckeyes, and blue oak trees. • Impacts to wetlands, valley oak woodlands, irrigated and dry land pasture, grasslands, riparian habitats, and sensitive wildlife species, especially Swainson's hawk. • Impacts on the presence of, and potential habitats for, all State and federally listed species and species of concern. • Identification of offsite infrastructure improvements required as part of the project and evaluation of potential biological impacts. • Development of alternative design that avoids oak woodlands, streams, and swale habitats. • Evaluation of habitat fragmentation and population isolation of all plant and animal populations. • Evaluation of the project with conservation planning efforts pursuant to the Natural Community Conservation Plan and Habitat Conservation Plan in Yuba County.
Hazards *(c.f.* Chapter 4.9)	Concerns related to: • The project site being within the Beale AFB Area of Influence.
Hydrology and Water Quality (*c.f.* Chapter 4.10)	Concerns related to: • Amendment of the water system permit. • The design of the wastewater facility as a regional facility. • Discharge flows on road crossings such as Jasper Lane and Forty Mile Road. • Discharge flows on the hydraulics of Best Slough, both upstream and downstream.

	• Flooding during heavy rains, especially near Dry Creek and SR 65. • Height of Dry Creek Levee on the south side. • Effects on groundwater supply for domestic and agricultural wells for project and surrounding areas. • Impacts on water quality and availability. • Impact on the Western Pacific Interceptor Canal. • Impact on drainage facilities within the State right-of-way (ROW). • Impacts to existing wastewater treatment plant (WWTP). • Impact of siltation to nearby creeks. • Impact of drainage internally and externally on Hoffman Ranch. • Overflow impact to Dry Creek & Grasshopper Slough. • Drainage from the Almond Estates and Nichols Grove projects would affect ponding to Baker Ranch.
Public Services & Utilities (*c.f.* Chapter 4.11)	Concerns related to: • Cost of the WWTP Best Slough project to the residents. • The project straining the school system's capacity. • Impact of the additional pump station's direction and cost. • State agencies such as the PUC and the United States Fish and Wildlife Service (USFWS) should be notified. • A detailed and complete EIR emphasizing full technical reports. • Application to amend the water system permit must be reviewed and approved by CDHS Redding District Office. • WWTP should be designed as a regional facility. • Impact of discharge flows on the hydraulics of Best Slough, both upstream and downstream. • Staffing levels of the Yuba-Sutter CHP relative to the development. • Impacts relating to schools. • Sites designated for fire and police stations.
Alternatives	Concerns related to: • Higher density alternatives.

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

ORGANIZATION OF THE DRAFT EIR

The Nichols Grove 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 project-level (Nichols Grove), program-level (non-participating properties), 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 IS, and additional technical information.

2 EXECUTIVE SUMMARY

INTRODUCTION

The Executive Summary chapter provides an overview of the Nichols Grove project (described in detail in Chapter 3 – Project Description), and summarizes the conclusions of the environmental analysis, provided in detail in Chapter 4. This chapter also 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 each technical issue section of Chapter 4. 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, located adjacent to the northern border of the City of Wheatland, is on the eastern edge of the northern Sacramento Valley within the Wheatland Sphere of Influence. The proposed project is an existing agricultural site, which is surrounded to the north by existing agricultural land and Dry Creek, to the east by existing agricultural land, to the west by State Route 65 (SR 65) and the Union Pacific Railroad (UPRR) tracks (except for the non-participating properties 015-026-001 through -004), and to the south by the northern Wheatland City limits and an existing residential neighborhood. The project would serve as a residential extension of the neighborhood located south of the site.

The Nichols Grove Vesting Tentative Large Lot Map contains 19 lots ranging in size from 1.91 to 69.42 acres. Twelve of the lots are designated for single-family residential, three of the lots are designated for parkland or parkland/stormwater detention basins, two lots are identified as school sites, one lot is designated for high-density residential, and one lot is identified as commercial mixed-use with a provision for a mixture of high density residential and commercial uses.

The Nichols Grove Vesting Small Lot Tentative Subdivision Map includes 1,427 single family residential lots, one high density residential lot containing up to 91 units, one commercial mixed-use lot accommodating up to 91 units, seven park and open space lots containing parks and landscape corridors, four well lots, two school lots, and 30 miscellaneous lots.

A total of 10 non-participating properties are also included in the proposed project, and are proposed for annexation to the City of Wheatland and prezoning to a Planned Development zone. In addition, the UPRR and SR 65 rights-of-way (ROWs), which are located west of the Nichols Grove Tentative Map site, are two additional non-participating properties that are also proposed to be annexed to the City of Wheatland.

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/Agricultural Resources;
- Transportation and Circulation;
- Noise;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazards;
- Hydrology and Water Quality; 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 below. 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 EIR summarizes existing regional and project area aesthetics, including a description of the existing visual character of the site. This chapter also includes an analysis of whether any scenic vistas, scenic highways, or scenic resources, such as trees and/or historic resources exist within the project area. Creation of new sources of light and glare by the project and their effects upon the surrounding vicinity are also evaluated in the Aesthetics chapter.

The Aesthetics analysis concludes that impacts relating to the generation of light and glare from the proposed residences and businesses would be potentially significant under the proposed project. However, implementation of mitigation measures would reduce the impact to a less-than-significant level. The impacts related to alteration of the existing agricultural character, as well as cumulative impacts to the visual character of the region would be significant and unavoidable. Impacts to scenic views and vistas would be less-than-significant.

Land Use/Agricultural Resources

The Land Use/Agricultural Resources chapter evaluates the consistency of the proposed project with the City of Wheatland's adopted plans and policies, as well as summarizing the status of the existing agricultural resources on the site and the areas surrounding the City of Wheatland. The evaluation is based upon a thorough review of the City's General Plan and General Plan EIR, and uses the current State agricultural model and data, as well as any other appropriate documents, to address consistency issues. The Land Use/Agricultural Resources chapter further assesses the compatibility of the proposed project with the surrounding land uses, both existing and proposed, and includes identification of any State-designated Important Farmlands, Williamson Act contracts, or right-to-farm ordinances applicable to the project site. This chapter further includes a discussion regarding conversion of farmland to non-agricultural uses.

The Land Use analysis identifies the proposed project as being inconsistent with the City of Wheatland General Plan regarding the proposed deletion of the B Street extension shown on the General Plan Circulation Diagram. Approval of the project is a discretionary action of the City Council; therefore, should the City Council approve the project, the requested General Plan Circulation Diagram Amendment would be approved concurrently and a less-than-significant impact would result. In addition, the proposed project would include prezoning the Nichols Grove Tentative Map and non-participating properties as Planned Development.

Yuba County does not participate in the Williamson Act, as stated in the Initial Study (See Appendix C); therefore, the project would not conflict with an existing Williamson Act Contract. The analysis notes that significant incompatibilities would arise from the proximity of the proposed residences to agricultural lands to the south of the site. This significant impact would be significant and unavoidable during the near-term, and less-than-significant in the long-term as the City builds out. The implementation of the proposed project would result in loss of Prime Farmland on the project site. This significant impact would be significant and unavoidable under both the project-specific and cumulative scenarios.

Transportation and Circulation

The Transportation and Circulation chapter of the Draft EIR is based on a traffic study prepared for the Nichols Grove Tentative Map project site. This chapter describes existing traffic conditions, summarizes the existing and planned regional and local transportation network, and describes the traffic load and capacity of street systems, including level of service standards for critical street segments and intersections. The Transportation and Circulation chapter also includes an analysis of the Five Year Existing Plus Approve Projects With and Without Nichols Grove and the Cumulative traffic scenario (Future Cumulative Traffic Conditions (Year 2025) With and Without Project). Other issues addressed in the chapter include traffic hazards due to design features, emergency access, and transit and bicycle facilities.

The Transportation and Circulation analysis finds that project-related impacts to study intersections and roadway segments would be significant and unavoidable. In addition, impacts to intersections and roadway segments under the Five Year Existing Plus Approved Projects Plus Nichols Grove Tentative Map scenario would be significant and unavoidable even with

mitigation. Cumulative plus project (General Plan buildout) impacts to roadway segments, cumulative plus additional anticipated growth within the Wheatland Sphere of Influence, impacts to railroad crossings, and pedestrian/bicycle activity are identified as less-than-significant. Impacts to transit, construction traffic, and cumulative impacts to intersections are identified as potentially significant in the analysis. The implementation of mitigation measures identified in the chapter would be expected to reduce the transit, construction, and cumulative intersection impacts to less-than-significant levels.

Noise

The Noise chapter of the Draft EIR is based on an environmental noise assessment prepared specifically for the Nichols Grove Tentative Map site. The noise assessment includes an analysis of the existing noise setting, including measurements of existing traffic, UPRR noise, and general ambient noise levels in and near the project area. The Noise chapter also identifies all significant noise impacts upon, and generated by, the proposed project. Determination of significance is based on the criteria set forth in the City of Wheatland General Plan Noise Element and City of Wheatland Zoning Code, as well as applicable State guidelines. In addition, the Noise chapter evaluates noise levels associated with the construction and operation of the Nichols Grove project and the resulting impacts to sensitive receptors in the vicinity of the project site.

The Draft EIR finds that traffic noise increase caused by the Nichols Grove Tentative Map site would result in less-than-significant impact. However, impacts from the non-participating properties would be potentially significant because a conclusive determination as to whether future development on these properties would be subject to adverse noise levels cannot be made at this time. Aircraft noise, train noise, construction noise, interior noise levels, and cumulative traffic noise would be potentially significant. All of the impacts would be reduced to a less-than-significant level with implementation of the mitigation measures identified in the chapter.

Air Quality

The Air Quality chapter is based on an air quality assessment prepared for the Nichols Grove Tentative Map project and presents the regional air quality setting, including climate and topography, ambient air quality, and regulatory setting. The Air Quality chapter addresses impacts associated with project construction activities, carbon monoxide impacts, residences near the Union Pacific Railroad, PM_{10}, ozone precursors, and ROG to local air quality, Global Climate Change, and cumulative air quality impacts.

The Air Quality analysis identifies significant impacts from short-term construction emissions and project emissions of PM_{10}, ozone precursors, and ROG to local air quality that would be significant and unavoidable after mitigation. In addition, the analysis finds that impacts pertaining to increased carbon monoxide concentrations at project-area intersections and impacts to residences near the Union Pacific Railroad would be less-than-significant. Under long-term cumulative conditions, air quality impacts are found to be significant and unavoidable with mitigation. Furthermore, the project's impacts concerning the production of greenhouse gases are found to be significant and unavoidable even with mitigation.

Biological Resources

The Biological Resources chapter summarizes the existing biological resources setting for the project area. Data from the California Department of Fish and Game (DFG) and the U.S. Fish and Wildlife Service (USFWS) are analyzed and reviewed. The chapter presents the results of a records search of the California Natural Diversity Database (CNDDB), which was conducted to determine the potential of the project area to support rare, threatened, endangered, or otherwise sensitive species. The chapter also provides the results of on-site field studies pertaining to the identification of potential habitats for special-status species and wetlands. Finally, the chapter identifies the biological resources-related permits required as part of the development process.

The Draft EIR finds that implementation of the proposed project would result in potentially significant impacts to valley elderberry longhorn beetle, Swainson's hawk, burrowing owl, raptors, ground-nesting, or migratory songbirds/passerines, Yuma myotis bat, western pond turtle, wetlands and waters of the U.S., woodland resources, and cumulative impacts to biological resources in the project site. 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. Impacts identified as less-than-significant include those pertaining to special-status plants and essential fish habitat.

Cultural Resources

The Cultural Resources chapter is based upon a cultural resources assessment prepared for the Nichols Grove Tentative Map project. The chapter summarizes the existing setting and describes potential construction-related effects to historical, archaeological, and paleontological resources. Significance criteria for cultural resources impacts are based on applicable federal, State, and local laws and regulations. The Cultural Resources analysis finds that the proposed project would have potentially significant impacts to previously unknown archeological resources and existing structures on the non-participating properties. These impacts would be reduced to a less-than-significant level with the incorporation of mitigation measures included in the Draft EIR. The existing buildings on the Nichols Grove Tentative Map site are not considered historically significant, architecturally distinctive, or associated with important persons or events; therefore, a less-than-significant impact would occur to existing structures. In addition, cumulative impacts to cultural resources in the Wheatland area would be less-than-significant.

Geology and Soils

The Geology chapter summarizes the setting and describes the potential effects to proposed land uses on the Nichols Grove site from expansive and liquefaction-prone soils, seismic hazards, and soil erosion, as well as any other pertinent geological concerns.

The Draft EIR finds that project-related impacts associated with expansive soils, liquefaction-prone soils, and soil erosion would be considered less-than-significant after mitigation. In addition, the Geology chapter finds that impacts pertaining to seismic hazards, as well as cumulative impacts, would be less-than-significant.

Hazards

The Hazards chapter summarizes and describes existing and potentially occurring hazards and hazardous materials on the project site. The section discusses potential impacts posed by these hazards to the environment, as well as to workers, visitors, and residents within and adjacent to the project site.

The Draft EIR finds that implementation of the proposed project would result in potentially significant impacts from burn piles and other on-site farm implements, water supply wells, above ground storage tanks, Polychlorinated Biphenyl (PCB) transformers, exposure of construction workers to asbestos and lead-based paint, and potential hazards associated with extending McDevitt Drive in the vicinity of petroleum and natural gas pipelines. In addition, the presence of pesticides and/or herbicide residues in the soil would have a less-than-significant impact on the Nichols Grove Tentative Map site; however, a potentially significant impact to the non-participating properties would result because, at this time, a determination cannot be made whether persistent residues exist in the soils at harmful levels. However, mitigation has been included to reduce the potential impact to a less-than-significant level. Overall, the long-term hazard related impacts from the proposed project in combination with existing and future developments in Wheatland would have a less-than-significant impact.

Hydrology and Water Quality

The Hydrology and Water Quality chapter summarizes setting information and identifies potential project-associated impacts pertaining to stormwater drainage and degration of water quality.

The Draft EIR finds that the proposed project would result in potentially significant impacts related to stormwater runoff, basin maintenance, and degration of water quality. These impacts would be reduced to a less-than-significant level with the mitigation measure identified in the chapter. However, impact to regional flooding would be significant and unavoidable. Impacts related to groundwater recharge and cumulative peak stormflows are considered less-than-significant.

Public Services and Utilities

The Public Services and Utilities chapter of the Draft EIR summarizes setting information and identifies potential new demand for services on the domestic water supply, wastewater treatment systems, fire protection, law enforcement, solid waste disposal, gas and electric service, schools, and parks and recreation. This chapter is based in part on a Water Supply Assessment prepared for the Nichols Grove project.

The Draft EIR finds that implementation of the proposed project would result in increased demands for public services and utilities. Specifically, the EIR finds potentially significant impacts pertaining to domestic water supply, waste disposal/recycling, electricity distribution, law enforcement, fire protection, schools, and parks and recreation. However, the Nichols Grove Tentative Map site impact to parks and recreation would be less-than-significant as sufficient

park space would be provided. Impacts related to the adequate provision of wastewater treatment infrastructure would be significant and unavoidable as the infrastructure to supply the project is currently not in place. The Draft EIR includes mitigation measures that would reduce all other above impacts to public services and utilities to a less-than-significant level. Therefore, the cumulative impacts from additional demand would result in a less-than-significant impact due to the mitigation requirements.

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

Under the No Project/No Development Alternative, the project site would remain in the County as active agricultural land.

Reduced Intensity Alternative

The Reduced Intensity Alternative would involve the development of 1,000 residential units on the approximately 486-acre project site, as opposed to the 1,609 units planned for the proposed project. The commercial center, parks, and other public sites included in the proposed project would be included as part of this Alternative. Although average residential lot sizes would increase under this Alternative, the same types of residential units, and ratios of unit types, proposed for the proposed project would be included in the Reduced Intensity Alternative. For example, under the proposed project, approximately 72 percent of the total number of units are single-family detached units. Therefore, for the Reduced Intensity Alternative, 72 percent of 1,000 units, or 720 units, would be single-family detached units.

Reduced Acreage Alternative

The Reduced Acreage Alternative would result in the development of 1,609 residential units in the same mix of detached single-family, attached single-family, medium density "townhomes," and mixed-use high density. The project would also include the neighborhood commercial center, parks, and public uses considered under the Proposed Project. Unlike the proposed project, the 93-acre non-participating property would not be annexed to the City. The remaining nine non-participating properties would need to be annexed along with the Nichols Grove Tentative Map project site to avoid the creation of islands of County property, which would most likely not be approved by Yuba LAFCo. However, excluding the largest non-participating parcel (APN 015-140-056) from the annexation limits would still permit an annexation contiguous to existing City limits. The 93-acre property is directly west of the Proposed Project, north of the existing City limits, and east of State Route 65. The remaining nine non-participating parcels are located southeast and southwest of the Nichols Grove project site. Parkland obligations remain the same as the Proposed Project for this Alternative, at five acres per 1,000 population.

Modified West Access Alternative

The Modified West Access Alternative would result in a project containing 1,609 residential units as considered under the proposed project, in the same mix of detached single family, attached single family, medium density "townhomes," and mixed-use high density. The project would also include other land uses, such as the neighborhood commercial center, the school sites, open space, parks, and associated streets, as well as the non-participating parcels. An alternative point of access to the development would be provided from the westerly direction. Instead of access from an extension of the existing McDevitt Drive across the Union Pacific Railroad Tracks (UPRR) at the southwest corner of the proposed project, access would be provided near the northwest corner of the project via a planned SR 65 overcrossing, located at the City's northern boundary and aligned approximately with the City storm detention ponds. The alternative could result in fewer transportation and circulation impacts and equal impacts to all other issues.

Environmentally Superior Alternative

For the Nichols Grove Project, the Reduced Intensity Alternative would be considered the environmentally superior alternative, aside from the No Project Alternative. The Reduced Intensity Alternative has the potential to reduce environmental impacts pertaining to aesthetics, air quality, biological resources, and public services and utilities, because the Alternative reduces the total number of units from 1,609 to 1,000. However, although aesthetics, air quality, biological resources, 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 Intensity Alternative, traffic impacts would be expected to be less intense than with implementation of the Proposed Project. Utilizing trip generation information provided in the Traffic Impact Analysis prepared by KDAnderson for the Proposed Project, the Reduced Intensity Alternative would generate a gross total of approximately 19,555 average daily trips ends (ADT), while the Proposed Project would generate a gross total of approximately 25,186 average daily trip ends (ADT).

Summary of Impacts and Mitigation Measures

The following table (Table 2-1) summarizes the impacts identified in the environmental section of this Draft EIR. The proposed project impacts are identified for each environmental analysis section (Chapters 4.1 – 4.11) in the Draft EIR in Table 2-1 below. The level of significance of each impact, any mitigation measures required for each impact, and the resulting level of significance after mitigation are also given below.

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 altering the existing agricultural character of the project site.	S	*Nichols Grove Tentative Map, Non-Participating Properties* *4.1-1 None Feasible.*	SU
4.1-2 Impacts related to light and glare.	PS	*Nichols Grove Tentative Map* *4.1-2(a) A detailed lighting plan shall be submitted for the Nichols Grove Tentative Map site, for review and approval of the City Engineer in conjunction with the project improvement plans. In conjunction with development of the proposed project, the developer shall shield all on-site lighting, consistent with the lighting plan, so that lighting is directed within the project site and does not illuminate adjacent properties.*	LS
	PS	*Non-Participating Properties* *4.1-2(b) For any future development application(s) being processed for the non-participating properties, a conceptual lighting plan shall be submitted for review and approval of the City Engineer. The plan shall show proposed shielding of all on-site lighting, so that lighting is directed within the project site and does not illuminate adjacent properties.*	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
4.1-3 Impacts related to scenic vistas and visual resources.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.1-3 None Required.*	N/A
4.1-4 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	*Nichols Grove Tentative Map, Non-Participating Properties* *4.1-3 None Feasible.*	SU
4.2 Land Use and Agricultural Resources			
4.2-1 Compatibility with surrounding land uses.	S	*Nichols Grove Tentative Map and Non-Participating Property (APN 015-140-056)* *4.2-1 The 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. The language and format of such notification shall be reviewed and approved by the City Attorney prior to recording final map. Each disclosure statement shall be acknowledged with the signature of each prospective property owner.*	Near-term SU Long-term 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
4.2-2 Consistency with the Wheatland General Plan.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.2-2 None Required.*	N/A
4.2-3 Consistency with existing zoning.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.2-3 None Required.*	N/A
4.2-4 Consistency with Yuba County LAFCO Standards.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.2-4 None Required.*	N/A
4.2-5 Increases in the intensity of land uses in the region due to the proposed project and all other projects in the Wheatland area.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.2-5 None Required.*	N/A
4.2-6 Conversion of Prime Farmland to urban uses.	S	*Nichols Grove Tentative Map, Non-Participating Properties* *4.2-6 None Feasible.*	SU
4.2-7 Cumulative loss of agricultural land.	S	*Nichols Grove Tentative Map, Non-Participating Properties* *4.2-7 None Feasible.*	SU
4.3 Transportation and Circulation			
4.3-1 Impacts to study intersections.	S	*Nichols Grove Tentative Map* *4.3-1 The applicant shall pay the City of Wheatland's Traffic Development Impact Fees prior to issuance of building permits in accordance with applicable City requirements.*	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
4.3-2 Impacts to roadway segments.	S	*Nichols Grove Tentative Map* *4.3-2 Implement Mitigation Measure 4.3-1.*	SU
4.3-3 Impacts related to transit.	PS	*Nichols Grove Tentative Map* *4.3-3 Prior to the approval of final maps, the project shall include facilities to accommodate future transit use (i.e., bus pull outs on arterial streets), for the review and approval of the City Engineer.*	LS
4.3-4 Impacts related to existing and proposed railroad crossings.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.3-4 None Required.*	N/A
4.3-5 Impacts related to pedestrian/bicycle activity.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.3-5 None Required.*	N/A
4.3-6 Impacts from construction traffic.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.3-6 Prior to any construction taking place on the site, the project applicant shall prepare a Construction Traffic Management Plan for review and approval by the City Engineer. The plan should include all plans for temporary traffic control, temporary signage and striping, location points for ingress and egress of construction vehicles, staging areas, and timing of construction activity which appropriately limits hours during which large construction equipment may be brought on or off the site.*	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
4.3-7 Impacts to intersections under the Five Year Plus Project scenario.	S	*Nichols Grove Tentative Map* *4.3-7(a) Prior to the issuance of building permits for each stage of development, the project applicant shall pay the project's fair share of the applicable traffic improvements associated with the particular stage of development being pursued, and which have been identified in the General Plan and included in the City's Traffic Development Impact Fees. The fair-share fee shall be satisfied by paying the appropriate City Traffic Development Impact Fees, as determined by the City Engineer. The fees shall be paid prior to issuance of building permits for the following stages of improvements:* *1. State Street improvements between Main Street and SR 65.* *2. McDevitt extension and completion of project streets to downtown Wheatland.* *3. Oakley Lane extension to SR 65.* *4. South Ring Road and connection to SR 65 via grade-separation.* *In the event that the improvement is not included in the approved City of Wheatland Capital Improvement Project list, the applicant shall construct the improvements, and shall subsequently*	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
		be eligible for reimbursement from future fair-share payments. *4.3-7(b) Prior to the issuance of building permits for each subsequent stage of development after completion of Stage 1, a traffic impact study shall be conducted at the discretion of the City Planning Director and City Engineer to validate that the improvements identified in this traffic study for subsequent Stages 2 through 4 still remain appropriate, and that the corresponding number of units that could be developed for each phase remain consistent with the numbers outlined in this EIR for Stages 2 through 4. If the improvements are not sufficient to accommodate the particular stage of development, the number of housing units shall be reduced to an appropriate level, or additional traffic improvements shall be required, as determined by the City Engineer.*	
4.3-8 Impacts to roadways under the Five Year Plus Project scenario.	S	*Nichols Grove Tentative Map* *4.3-8 Implement Mitigation Measure 4.3-7(a) and 4.3-7(b).*	SU
4.3-9 Impacts to intersections in long-term (2025) cumulative conditions.	PS	*Nichols Grove Tentative Map* *4.3-9(a) Implement Mitigation Measure(s) 4.3-1, 4.3-7(a), and 4.3-7(b).*	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
		4.3-9(b) *The installation of traffic signals at the following intersections shall be indicated on improvement plans containing the affected intersections, and shall be installed concurrent with the completion of the roadways.* • *McDevitt Drive/Nichols Grove Drive* • *McDevitt Drive / Ring Road* • *Nichols Grove Drive / Ring Road* *The final improvement selected shall be determined by the City Engineer.* *4.3-9(c)* *The site plan design shall provide at least 700 feet from the McDevitt Drive railroad crossing to the center of the McDevitt Drive / Nichols Grove intersection for the review and approval of the City Engineer.*	
	LS	*Non-Participating Properties* *4.3-9(d)* *In conjunction with submittal of an application for any of the non-participating properties, the applicant shall provide a traffic study, at the discretion of the Planning Director, analyzing any potential on- and off-site traffic impacts resulting*	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
		from the proposed project. The traffic study shall recommend mitigation measures and the applicant shall be required to adhere to the mitigation measures recommended in the study, ensuring that adverse impacts are reduced to the maximum extent feasible. *4.3-9(e) The project applicant(s) shall pay City's Traffic Development Impact fees prior to issuance of building permits for the review and approval of the City Engineer.*	
4.3-10 Impacts to roadway segments in long-term (2025) cumulative conditions.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.3-10 None Required.*	N/A
4.3-11 Cumulative conditions (General Plan buildout) plus additional anticipated growth within Wheatland Sphere of Influence.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.3-11 None Required.*	N/A
4.4 Noise			
4.4-1 Increase in Traffic Noise Levels.	LS PS	*Nichols Grove Tentative Map – None Required.* *Non-Participating Properties* *4.4-1 In conjunction with submittal of a development application and at the discretion of the City Engineer, the applicant shall submit a noise*	N/A 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
		assessment, which determines the noise levels due to and upon the proposed project. The assessment shall determine if noise level exposure to sensitive receptors exceeds established Wheatland thresholds, as a result of development of the project. If noise levels are determined to exceed standards, the noise assessment shall include mitigation to reduce exterior and interior noise levels to below the City's standards, which the applicant shall be required to comply with, for the review and approval of the City Engineer.	
4.4-2 Traffic Noise Impacts on Project Site.	PS	*Nichols Grove Tentative Map* *4.4-2(a) Prior to the issuance of building permits, site plans that include noise barriers shall be submitted for the review and approval of the City Engineer. Noise barriers shall be constructed along the boundaries of the residences proposed adjacent to the railroad tracks, at the locations shown on Figure 4.4-3. Table 4.4-7 shows the predicted noise levels for barriers of various heights. The results shown in Table 4.4-7 indicate that a barrier six feet in height (relative to back yard elevation) would be required to reduce future railroad noise levels to 60 dB L_{dn} or less at the nearest backyards proposed adjacent to the railroad tracks. Barriers could take the form of earthen berms, solid walls, or a combination of*	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
		the two. Appropriate materials for noise walls include precast concrete or masonry block. Other materials may be acceptable provide they have a density of approximately four pounds per square foot. *4.4-2(b) 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 reductions with windows open. Because future railroad noise levels are not predicted to exceed 70 dB L_{dn} at the building facades of the residences proposed nearest to the railroad tracks, standard construction practices would be sufficient to achieve compliance with the City of Wheatland 45 dB L_{dn} interior noise level standard, provided that windows could be closed.* *Therefore, mechanical ventilation (air conditioning) shall be provided for all residences constructed within this development adjacent to the railroad tracks to allow occupants to close doors and windows as desired for additional acoustic isolation. Although standard construction would be acceptable to achieve satisfaction with the City's 45 dB L_{dn} interior noise level standard, an additional*	

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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
		five dB of building facade noise level reduction would be required to reduce interior SEL values to 60 dB. Prior to issuance of building permits, the project applicant shall have a detailed noise analysis of proposed floor plans and construction materials conducted by a qualified acoustical consultant selected by the City Engineer, to ensure that exterior windows and wall assemblies provide adequate noise insulation. The analysis shall be submitted to the City Engineer along with proposed site plans prior to the issuance of building permits.	
	PS	*Non-Participating Properties*	LS
		4.4-2(c) Implement Mitigation Measure 4.4-1. The assessment shall provide a detailed acoustical analysis that shall determine the exterior and interior noise levels experienced at non-participating properties as a result of UPRR train operations. The assessment shall also identify appropriate mitigation measures to reduce the exterior and interior noise levels at sensitive receptors to be consistent with City of Wheatland General Plan Noise standards if applicable. These mitigation measures may include, but are not limited to: use of setbacks; use of barriers; site design guidelines, and building location and	

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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
		orientation guidelines. The applicant shall be required to incorporate noise-related mitigation measures into the site design for review and approval of the City Engineer prior to the approval of tentative map(s).	
4.4-3 Aircraft Noise Impacts on Project Site.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.4-3 Implement Mitigation Measure 4.4-2(b).*	LS
4.4-4 Interior Noise Levels Within the Project Site.	PS	*Nichols Grove Tentative Map* *4.4-4(a) Implement Mitigation Measure(s) 4.4-2(a) and 4.4-2(b).*	LS
	PS	*Non-Participating Properties* *4.4-4(b) Implement Mitigation Measure 4.4-2(c).*	LS
4.4-5 Construction Noise.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.4-5 The project applicant shall place a note on the improvement plans and within construction contracts that requires:* • *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*	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
		generators) shall have manufacturers installed mufflers; and • *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.* *The note and improvement plans shall be reviewed and approved by the City Engineer prior to initiation of ground disturbance activities.*	
4.4-6 Cumulative impacts of traffic noise levels on proposed residences.	PS	*Nichols Grove Tentative Map* *4.4-6(a) Implement Mitigation Measure(s) 4.4-2(a) and 4.4-2(b).*	LS
	PS	*Non-Participating Properties* *4.4-6(b) Implement Mitigation Measure 4.4-2(c).*	LS
4.5 Air Quality			
4.5-1 Short-term construction-related air quality impacts.	S	*Nichols Grove Tentative Map* *4.5-1(a) Prior to initiation of ground disturbance activities, the contractor shall submit an Off-road Construction Equipment Emission Reduction Plan for review and approval of the FRAQMD. The plan shall demonstrate a project wide heavy-duty (> 50 horsepower) off-road vehicle (owned, leased, and*	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
		subcontracted) fleet-average 20 percent NO_X reduction and 45 percent particulate reduction as compared to the most recent CARB fleet average at the time of construction. The Off-road Construction Equipment Emissions Reduction Plan shall include a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that would be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughout for each piece of equipment. Acceptable options for reducing emissions may include use of late model engines, low-emissions diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or options as they become available.	
		4.5-1(b) *During construction, throughout the duration of the project, the inventory shall be updated and submitted monthly for review by the FRAQMD, except for any 30-day period in which construction activity does not occur.*	
		4.5-1(c) *At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide FRAQMD with the anticipated*	

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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
		construction timeline, including start date, name, and phone number of the project manager and on-site foreman. *4.5-1(d)* *Prior to initiation of ground disturbance activities, all construction contracts shall stipulate the following:* • *Construction equipment exhaust emissions shall not exceed FRAQMD Rule 3.0, Visible Emission Limitations. Operators of vehicles and equipment found to exceed opacity limits shall take action to repair equipment within 72 hours or remove the equipment from service. Failure to comply may result in a Notice of Violation;* • *The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained;* • *Equipment operators shall be instructed to minimize equipment idling time to five minutes;* • *Utilize existing power sources (e.g. power poles) or clean fuel generator rather than temporary power generators;* • *Portable engines and portable engine-drive*	

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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
		equipment units used on the project 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; and • *Open burning of removed vegetation during infrastructure improvements shall not be permitted. Vegetative material shall be chipped or delivered to waste energy facilities.* *4.5-1(e) Prior to initiation of ground disturbance activities, the applicant shall submit a Construction Dust Control Plan for the review and approval of the FRAQMD. The Plan shall include the following and any additional measures contained in the FRAQMD's current list of Best Available Mitigation Measures (BAMM) for construction:* • *All active water construction areas shall be watered at least twice a day, or as need to*	

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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
		prevent visible dust plumes from blowing off-site; • *On-site storage piles shall be covered with tarpaulins or other effective covers;* • *All trucks hauling dirt, sand, soil, or other lose material on public streets shall be covered or shall maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114;* • *All unpaved access roads, parking areas, and staging areas the construction sites, shall be paved, applied with (non-toxic) soil stabilizers, or applied with water three times daily;* • *All paved access routes, parking areas, and staging areas shall be swept daily (preferably with water sweepers);* • *Trucks and other equipment leaving the construction site shall be washed to remove particulate matter;* • *Incorporation of the use of non-toxic stabilizers according to manufacturer's specifications to all inactive construction areas;*	

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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
		• *Exposed stockpiles shall be enclosed, covered, watered twice daily, or applied with (non-toxic) soil binders;* • *Construction site vehicles shall be limited to 15 miles per hour (mph) on unpaved areas;* • *Disturbed areas shall be replanted with vegetation as quickly as possible;* • *All grading operations shall be suspended by the developer or contractor or as directed by the FRAQMD when winds exceed 20 mph; and* • *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.* *4.5-1(f)* *Prior to initiation of ground disturbance activities, the applicant shall develop and submit a Construction Phase Trip Reduction Plan, for review and approval of the FRAQMD, to achieve a minimum average vehicle ridership (AVR) of 1.5 for construction employees.* *4.5-1(g)* *During construction, all architectural coatings used at the project site shall be compliant with the most*	

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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
		current FRAQMD Rule 3.15, Architectural Coatings, for review and approval of the City Engineer and FRAQMD. *4.5-1(h) Implement the following feasible construction phase emissions measures for Traffic Control as reviewed and approved by the City Engineer:* • *Construction activities shall minimize disruptions to traffic flow;* • *Provide temporary traffic control as needed during all phases of construction to improve traffic flow, as deemed appropriate by the Department of Public Works and/or Caltrans; and* • *Schedule operations affecting traffic for off-peak hours to the greatest extent possible.*	
	S	*Non-Participating Properties* *4.5-1(i) In conjunction with submittal of a development application for any of the non-participating properties, the applicant shall submit an air quality analysis at the discretion of the Planning Director. The analysis shall include, but not be limited to, quantification of construction and operational*	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
		emissions, determination of air quality impacts, and identification of mitigation measures needed to reduce any significant impacts. The applicant shall be required to implement mitigation measures recommended in the air quality impact analysis per the review and approval of the City Engineer.	
4.5-2 Impacts of carbon monoxide to local air quality due to project trip generation.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.5-2 None Required.*	N/A
4.5-3 Impacts to residences located next to Union Pacific Railroad.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.5-3 None Required.*	N/A
4.5-4 Impacts of PM_{10}, ozone precursors, and ROG on local air quality.	S	*Nichols Grove Tentative Map* *4.5-4(a) Prior to initiation of ground disturbance activities, the applicant shall submit an Operational Emissions Reduction Plan for review and approval of the FRAQMD. In addition, the Plan shall be provided to the air district, the public, and the City of Wheatland with adequate time for air district and public review and comment period prior to submittal to the governing board for consideration at a public hearing. The Plan shall be the applicant's commitment to feasible mitigation measures from the BAMM list, recommended measures from air district staff, or voluntary off-site mitigation projects sufficient to provide a minimum*	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
		35 percent reduction in emissions.	
	S	*Non-Participating Properties*	SU
		4.5-4(b) Implement Mitigation Measure 4.5-1(i). If PM_{10}, ozone precursors, or ROG operational impacts to local air quality are determined to be significant for a particular project, the air quality impact analysis shall require implementation of Mitigation Measure 4.5-4(a).	
4.5-5 Cumulative impacts to regional air quality.	S	*Nichols Grove Tentative Map*	SU
		4.5-5(a) Implement Mitigation Measures 4.5-4(a).	
	S	*Non-Participating Properties*	SU
		4.5-5(b) Implement Mitigation Measure 4.5-4(b).	
4.5-6 Project impacts concerning the production of greenhouse gases.	S	*Nichols Grove Tentative Map*	SU
		4.5-6(a) Implement Mitigation Measures 4.5-1(a-d and f-h) and 4.5-4(a).	
	S	*Non-Participating Properties*	SU
		4.5-6(b) Implement Mitigation Measures 4.5-1(i) and 4.5-4(b).	

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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
4.6 Biological Resources			
4.6-1 Impacts to Valley Elderberry Longhorn Beetles.	PS	*Nichols Grove Tentative Map* *4.6-1(a) Per the Guidelines, the USFWS must be contacted if encroachment within the 100-foot buffer is expected and for a Section 7 FESA consultation if elderberry bushes shall be disturbed. The following conditions shall be implemented to minimize impacts to the existing bushes:* • *Orange barrier fencing shall be placed a minimum of 20 feet from the drip line of each elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level, and construction personnel and/or activities shall avoid fenced areas;* • *Project proponent shall employ dust control measures during all construction activities; and* • *No insecticides, herbicides, fertilizers, or other chemicals shall be applied within 100 feet of elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level during the*	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
		construction activities. All drainage water during and following construction shall be diverted away from the bushes. *4.6-1(b)* *If complete avoidance of elderberry plants is not possible, transplantation shall be used as prescribed by the Guidelines to a USFWS-approved conservation area. At the discretion of the USFWS, a plant that would be extremely difficult to move because of access problems may be exempted from transplantation (USFWS 1999). In cases where transplantation is not possible, the minimization ratios may be increased to offset the additional habitat loss.* *If elderberry shrubs would be adversely affected by construction (i.e. directly impacted), the elderberry bushes shall be transplanted to a mitigation area in compliance with USFWS standards. A qualified biologist shall be onsite during the transplanting to assure compliance with the Guidelines. Transplanting shall preferably take place between November 1 and February 15 after the bushes have lost the majority of their leaves. Elderberry bushes shall be cut back to three to six feet from the ground or to 50 percent of their height, which ever is tallest. All stems measuring greater than 1-inch shall be*	

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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
		transplanted. A backhoe shall be used to excavate a hole of adequate size in the conservation area for each bush, and then the bushes shall be excavated. The root ball and surrounding soil shall be maintained during the transplanting process. Once the plants have been moved, a water basin shall be placed around each bush that measure three feet in diameter, the walls shall measure eight inches wide and six inches tall. *Each elderberry stem measuring ≥1 inch at ground level that is adversely affected (i.e., transplanted or destroyed) must be replaced, in the conservation area, with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 8:1 (new plantings to affected stems). If the USFWS determines that the elderberry plants on the proposed project site are unsuitable candidates for transplanting, the USFWS may require the applicant to plant seedlings or cuttings at a ratio higher than those stated above for each elderberry plant that cannot be transplanted.* *Associate native plant seedlings will consist of willows, sycamores (Platanus racemosa), Oregon ash, button willow (Cephalanthus occidentalis), and wild grape (Vitus californicus). Each seedling and associate plant shall be provided with a water basin*	

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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
		measuring 3 feet by 8 inches by 6 inches. The conservation area shall be protected in perpetuity and shall be maintained by the project proponent, or delegated third party. Plants shall be manually watered until they are established and watering is no longer necessary. Weed control and vegetation maintenance shall be managed as stated in the Vegetation Maintenance section of the Guidelines. *4.6-1(c)* *Any conservation area shall be monitored for 10 consecutive years. Two site visits shall take place each year between 14 February and 30 June by a qualified biologist. The surveys shall include:* • *Population census of adult beetles;* • *Census of beetle exit holes;* • *Evaluation of the transplanted bush, seedlings, and associated plants;* • *Evaluation of protective measures (i.e., fencing, signs, and weed control); and* • *General habitat assessment.* *A yearly report and original field notes shall be prepared describing the conditions as stated above. Reports shall be submitted by 31 December of the same year to the USFWS, Chief of the Endangered*	

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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
		Species Branch, Sacramento. Success criteria will be judged on 60 percent survival rate of the elderberry and associate plants. If the success rate drops below 60 percent additional plants shall be planted to assure a 60 percent survival rate. *Non-Participating Properties* *4.6-1(d) In conjunction with submittal of a development application for any of the non-participating properties, the applicant(s) shall submit a Biological Resources Assessment at the discretion of the Planning Director. The assessment shall include, but not be limited to, identification and analysis of all occurrences of elderberry bushes, impacts to special-status species, and loss of biological resources and/or wetlands, and mitigation to reduce significant impacts. The applicant shall be required to implement all mitigation measures recommended in the assessment.* *4.6-1(e) If suitable Valley elderberry longhorn beetle habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-1(a-c).*	

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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
4.6-2 Impacts to Swainson's hawk.	PS	*Nichols Grove Tentative Map* *4.6-2(a) If Swainson's hawks are found nesting within 0.5-mile of the Nichols Grove Tentative Map site appropriate Management Conditions per the Staff report regarding mitigation for impacts to Swainson's hawks (Buteo swainsoni) in the Central Valley of California (CDFG 1994) shall be required as follows:* • *No intensive new disturbances (e.g., heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities) or other project-related activities that may cause nest abandonment or forced fledging, shall be initiated within 0.25 miles (buffer zone) of an active nest between March 1 and September 15. The buffer zone should be increased to 0.5 mile in nesting areas away from urban development (i.e., in areas where disturbance [e.g., heavy equipment operation associated with construction, use of draglines, new rock crushing activities] is not a normal occurrence during the nesting season). Nest trees shall not be removed unless there is no feasible way of avoiding*	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
		the trees. If a nest tree must be removed, a Management Authorization (including conditions to offset the loss of the nest tree) must be obtained from CDFG with the tree removal period specified in the management Authorization, generally between October 1 and February 1. *If construction or other project-related activities that may cause nest abandonment or forced fledging are necessary within the buffer zone, monitoring of the nest site (funded by the project sponsor) by a qualified biologist (to determine if the nest is abandoned) shall be required.* *If the nest site is abandoned and the nestlings are still alive, the project proponent shall fund the recovery and hacking (controlled release of captive reared young) of the nestlings. Routine disturbances such as agricultural activities, commuter traffic, and routine maintenance activities within 0.25-mile of an active nest should not be prohibited. A qualified wildlife biologist shall verify fledging of nestlings.*	

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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
		4.6-2(b) Prior to initiation of ground disturbance activities, the project applicant and City staff shall consult with CDFG to determine the extent of mitigation necessary for the loss of 239.9 acres of Swainson's hawk foraging habitat. *Or;* *Prior to initiation of ground disturbance activities, upon approval of the pending Yuba-Sutter Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP), the applicant shall participate and incorporate mitigation measures set forth in the NCCP/HCP.*	
	PS	*Non-Participating Properties* *4.6-2(c) Implement Mitigation Measure 4.6-1(d). The assessment shall include an analysis of active nesting sites within 0.5-mile of any of the properties. If Swainson's hawk nests are found within 0.5-mile of any of the properties, the applicant shall be required to implement Mitigation Measure 4.6-2(a). The assessment shall also determine if the property (or properties) is considered Swainson's hawk foraging habitat. If the property (or properties0 is determined to be Swainson's hawk foraging habitat, the*	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
		applicant shall be required to implement Mitigation Measure 4.6-2(b).	
4.6-3 Impacts to Western burrowing owls.	PS	*Nichols Grove Tentative Map* *4.6-3(a) The Staff Report on Burrowing Owl Mitigation, published by CDFG (1995), recommends pre-construction surveys shall be conducted to locate active burrowing owl burrows. Prior to issuance of grading permits, this preconstruction survey shall be conducted by a qualified biologist or ornithologist during both the wintering and nesting season, unless the species is detected on the first survey. If possible, the winter survey shall be conducted between December 1 and January 31 (when wintering owls are most likely to be present) and the nesting season survey should be conducted between April 15 and July 15 (the peak of breeding season). Surveys conducted from two hours before sunset to one hour after, or from one hour before to two hours after sunrise, are preferable. The survey techniques shall be consistent with the Staff Report survey protocol and include a 260-foot-wide buffer zone surrounding the project area. Repeat surveys should also be conducted not more than 30 days prior to initial ground disturbance to inspect for re-occupation and the need for additional protection measures. The survey(s) shall be paid by the applicant and*	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
		approved by the City. *4.6-3(b) If no burrowing owls are detected during preconstruction surveys, then no further mitigation is required. If active burrowing owl burrows are identified, project activities shall not disturb the burrow during the nesting season (February 1–August 31) or until a qualified biologist has determined that the young have fledged or the burrow has been abandoned. A no disturbance buffer zone of 160-feet is required to be established around each burrow with an active nest until the young have fledged the burrow as determined by a qualified biologist.* *4.6-3(c) If destruction of the occupied burrow is unavoidable during the non-breeding season, September 1–January 31, passive relocation of the burrowing owls shall be conducted. Passive relocation involves installing a one-way door at the burrow entrance, encouraging owls to move from the occupied burrow. No permit is required to conduct passive relocation; however, this process shall be conducted by a qualified biologist and in accordance with CDFG mitigation measures. In addition, to offset the loss of foraging and burrow habitat on the project site, a minimum of 6.5 acres*	

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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
		of foraging habitat (calculated on a 300-ft foraging radius around the burrow) per pair or unpaired resident bird, shall be acquired and permanently protected at a location acceptable to the CDFG. *4.6-3(d) If burrowing owls are identified on the project site, the City of Wheatland must receive copies of the Mitigation Agreement by and between the applicant and CDFG, prior to the issuance of grading permits for the proposed project.*	
	PS	*Non-Participating Properties* *4.6-3(e) Implement Mitigation Measure 4.6-1(d). If suitable burrowing owl habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-3(a-d).*	LS
4.6-4 Impacts to raptors.	PS	*Nichols Grove Tentative Map* *4.6-4(a) A qualified wildlife biologist shall conduct a pre-construction raptor survey during April-May, or no more than 30 days prior to construction activities, to determine the presence/absence of nesting raptors in the project site. Should nesting raptors be observed, appropriate spatial and temporal buffers shall be required by CDFG. In addition, larger*	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
		trees (i.e., ≥12" dbh) to be removed shall be removed between September 1 and March 1 to ensure that active raptor nests are not removed as a result of construction-related activities.	
	PS	*Non-Participating Properties* *4.6-4(b) Implement Mitigation Measure 4.6-1(d). If the property(ies) is determined to contain raptor nesting habitat, the applicant shall be required to implement Mitigation Measure 4.6-4(a).*	LS
4.6-5 Impacts to Migratory Songbirds/Passerines.	PS	*Nichols Grove Tentative Map* *4.6-5(a) All vegetation (i.e., trees, shrubs) that would need to be removed for construction shall be cut down between September 16 and February 14 (outside the nesting season for migratory bird species with potential to occur on the site) to ensure that active nests are not removed as a result of the project. To avoid potential erosion impacts, vegetation removal shall be limited to cutting of shrubs and trees at ground level to maintain the root system. Once the rainy season has passed, the root systems can be removed. If all vegetation removal associated with construction activities is completed between September 16 and February 14, no pre-construction surveys or additional mitigation is required.*	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
		4.6-5(b) *To avoid impacts to migratory nesting birds during the breeding season (February 15 through September 15), a qualified biologist approved by the USFWS shall conduct a pre-construction survey of all suitable nesting habitat within the project site no more than 30 days prior to construction. If nesting migratory birds are not detected, no further mitigation shall be necessary.* *If nesting migratory birds are detected, a no-disturbance buffer per USFWS shall be established during the nesting season and no construction shall occur within the buffer area until a qualified biologist confirms that there was no nesting attempt or that the fledglings are no longer occupying the area. Additionally, signs shall be placed locating areas to be avoided.*	
	PS	*Non-Participating Properties* *4.6-5(c)* *Implement Mitigation Measure 4.6-1(d). If suitable migratory songbird and/or passerine habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-5(a-b)*	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
4.6-6 Impacts to Yuma Myotis Bat.	PS	*Nichols Grove Tentative Map* *4.6-6(a) A pre-construction survey for roosting bats shall be performed by a qualified biologist within 30 days prior to any removal of trees or structures on the site. If no active roosts are found, then no further action would be warranted. If either a maternity roost or hibernacula (structures used by bats for hibernation) is present, the following mitigation measures shall be implemented.* *4.6-6(b) If active maternity roosts or hibernacula are found in trees or structures which will be removed as part of project construction, the project shall be redesigned to avoid the loss of the tree or structure occupied by the roost to the extent feasible as determined by the City. If an active maternity roost is located and the project cannot be redesigned to avoid removal of the occupied tree or structure, demolition shall commence before maternity colonies form (i.e., prior to March 1) or after young are volant (flying) (i.e., after July 31). Disturbance-free buffer zones as determined by a qualified biologist in coordination with the California Department of Fish and Game shall be observed during the maternity roost season (March 1 - July 31).*	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
		4.6-6(c) *If a non-breeding bat hibernacula is found in a tree or structure scheduled for removal, the individuals shall be safely evicted, under the direction of a qualified biologist (as determined by a Memorandum of Understanding with the California Department of Fish and Game), by opening the roosting area to allow airflow through the cavity. Demolition shall then follow at least one night after initial disturbance for airflow. This action should allow bats to leave during darkness, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. Trees or structures with roosts that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.* *4.6-6(d)* *If special-status bats are found roosting within trees or structures on-site that require removal, appropriate replacement roosts shall be created at a suitable location on-site or off site in coordination with a qualified biologist, the California Department of Fish and Game, and the City of Wheatland.*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	*Non-Participating Properties* *4.6-6(e) Implement Mitigation Measure 4.6-1(d). If suitable Yuma myotis bat habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-6(a-d).*	LS
4.6-7 Impacts to western pond turtle.	PS	*Nichols Grove Tentative Map* *4.6-7(a) A qualified biologist shall conduct a pre-construction survey for western pond turtles in all construction areas identified as potential nesting or dispersal habitat located within 1,000 feet of potential aquatic habitat 48 hours prior to initiation of construction activities. If western pond turtle is found during pre-construction surveys, the turtle(s) shall be relocated as necessary to a location deemed suitable by the biologist and CDFG (i.e., at a location which is a sufficient distance from construction activities). This survey shall include looking for turtle nests within the construction area. If a nest is found within the construction area, construction shall not take place within 100 feet of the nest until the turtles have hatched and have left the nest or can be safely relocated with assistance from CDFG.*	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
		4.6-7(b) *Because attempting to locate pond turtle nests will not result in a realistic probability of detection, after completion of pre-construction surveys, and relocation as necessary, exclusion fencing shall be placed around all construction-sites adjacent to aquatic habitats to eliminate the possibility of nest establishment in uplands adjacent to aquatic areas.* *4.6-7(c)* *If construction activities occur in aquatic areas where turtles have been identified during pre-construction or other surveys, a biological monitor shall be present during disturbance of those aquatic habitats. If any turtle is found, the turtle(s) shall be relocated as necessary to a location deemed suitable by the biologist and CDFG (i.e., at a location which is a sufficient distance from construction activities).* *4.6-7(d)* *A qualified biologist shall provide project contractors and construction crews with a worker-awareness program before any work within aquatic habitats or adjacent upland habitats that are appropriate for western pond turtles. This program shall be used to describe the species, its habits and habitats, its legal status and required protection, and all applicable mitigation measures.*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	*Non-Participating Properties* *4.6-7(e) Implement Mitigation Measure 4.6-1(d). If suitable western pond turtle habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-7(a-d).*	LS
4.6-8 Impacts to Essential Fish Habitat.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.6-8 None Required.*	N/A
4.6-9 Impacts to Natural Woodland Resources.	PS	*Nichols Grove Tentative Map* *4.6-9(a) Prior to approval of the project improvement plans an ISA Certified Arborist shall review the plans and provide a detailed impact assessment, including identification of trees which may require removal for home construction and other contemplated site development activities. This will be particularly important if homes, residential and/or pedestrian activities fall within or near the fall zone of a tree which has been noted as having structural defects, questionable long-term longevity and/or a conditional rating which is less than "Fair," and for trees which measure 16 inches or greater in diameter which will be retained with close proximity to development, particularly trees which will be retained on home sites, as trees of this size*	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
		may pose a more significant hazard if a sudden limb shed and/or catastrophic failure should occur. The review shall also include an assessment of impacts that will be sustained by the trees retained within the development area, along with specific recommendations on a tree-by-tree basis to help reduce adverse impacts of construction on the retained trees, where possible. The ISA Certified Arborist shall subsequently prepare a Tree Preservation Report, which includes a requirement of 1:1 tree replacement ration. The Report shall include preservation recommendations, with consideration given to the recommendations made in the Nichols Ranch, LP Arborist Report prepared by Sierra Nevada Arborists, dated January 23, 2007.	
	PS	*Non-Participating Properties*	LS
		4.6-9(b) In conjunction with submittal of a development application for any of the non-participating properties, the applicant(s) shall submit an arborist report at the discretion of the Planning Director. The report shall evaluate the structure and vigor of each tree 6 inches or greater in diameter at breast height, as well as include recommendations for removal of trees which may be hazardous due to	

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		nature and extent of defects, compromised health, and/or structural instability and proximity to planned development activities. The developer shall comply with and implement the approved report.	
4.6-10 Impacts to wetlands and other Waters of the United States.	PS	*Nichols Grove Tentative Map* *4.6-10(a) Prior to initiation of ground disturbance activities, the applicant shall consult with the Army Corps of Engineers with respect to the potential impacts to the wetlands identified in the formal wetland delineation previously accepted by the Army Corps of Engineers. If the Army Corps of Engineers 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 Corps determines that jurisdictional waters are present on- or off-site, which may be impacted by the project, 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*	LS

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		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 initiation of ground disturbance activities.	
		4.6-10(b) Prior to initiation of ground disturbance activities, the applicant shall submit to the California Department of Fish and Game (CDFG) a formal wetland delineation based on current regulations of the Army Corps of Engineers. 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 appropriate mitigation, and shall abide by the conditions of any executed permits for any work related to the outfall.	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		4.6-10(c) *If the project would result in impacts to the jurisdictional wetlands identified on the project site, the acreage of jurisdictional habitat removed shall be replaced on a "no-net-loss" basis in accordance with Corps and CDFG regulations. A conceptual on-site wetlands mitigation plan, including an agreed-upon replacement ratio of wetlands with the Corps. 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, the Corps. 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.*	
	PS	*Non-Participating Properties*	LS
		4.6-10(d) *Implement Mitigation Measure 4.6-1(d). If wetlands and/or Waters of the United States are identified the applicant shall conduct a formal wetland delineation based on current regulations of the Army Corps of Engineers. Following acceptance of*	

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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
		the delineation by the Army Corps of Engineers, the applicant(s) shall be required to implement Mitigation Measures 4.6-10(a-c).	
4.6-11 Cumulative loss of biological resources in the City of Wheatland and the effects of ongoing urbanization in the region.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.6-11 None required.*	N/A
4.7 Cultural Resources			
4.7-1 Disturbance or destruction of previously unknown archaeological resources on the project site.	PS	*Nichols Grove Tentative Map* *4.7-1(a) 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*	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
		significance. *4.7-1(b)* *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 Planning Director for approval.* *4.7-1(c)* *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.*	
	PS	*Non-Participating Properties*	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
		4.7-1(d) In conjunction with submittal of an application for any of the non-participating properties, the applicant shall provide a cultural resources assessment, at the discretion of the Planning Director, analyzing any potential on-site archaeological and/or historical resources. The cultural resources report shall recommend mitigation measures, if applicable, and the applicant shall be required to adhere to the mitigation measures recommended in the cultural resources assessment, ensuring that adverse impacts to resources would not result from project implementation. *4.7-1(e) Implement Mitigation Measures 4.7-1(a-c).*	
4.7-2 Impacts to existing structures.	LS PS	*Nichols Grove Tentative Map – None Required.* *Non-Participating Properties* *4.7-2 Implement Mitigation Measure 4.7-1(d).*	N/A LS
4.7-3 Disturbance or destruction of previously unknown archaeological resources in combination with other development in the Wheatland area.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.7-3 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
4.8 Geology and Soils			
4.8-1 Damage to foundations, pavement, and other structures from expansive soils.	PS	*Nichols Grove Tentative Map* *4.8-1(a) Prior to approval of final maps, 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 (February 2003 and March 2004) for the Nichols Grove project including, but not limited to, the recommendations regarding expansive soils/loose/previously filled areas. The recommendations of the final geotechnical report shall be incorporated into the project design prior to issuance of building permits for the review and approval of the City Engineer.*	LS
	PS	*Non-Participating Properties* *4.8-1(b) In conjunction with development application submittal for any of the non-participating properties, the project applicant shall submit a design-level geotechnical study to the City Engineer for review and approval, which specifically addresses whether expansive soils or soils prone to liquefaction are present in the development area,*	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
		and includes measures to address these soils where they occur. All grading and foundation plans designed by the project Civil and Structural Engineer must be reviewed and approved by the City Engineer and Building Inspector prior to initiation of ground disturbance activities and issuance of building permits, to ensure that all geotechnical recommendations specified in the geotechnical report are properly incorporated and utilized in design. In addition, all projects shall comply with UBC standards.	
4.8-2 Loss of structural support due to liquefaction.	PS	*Nichols Grove Tentative Map* *4.8-2(a) Implement Mitigation Measure 4.8-1(a).*	LS
	PS	*Non-Participating Properties* *4.8-2(b) Implement Mitigation Measure 4.8-1(b).*	LS
4.8-3 Impacts related to seismic activity.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.8-3 None Required.*	N/A
4.8-4 Construction-related increases in soil erosion.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.8-4 Prior to the approval of the Improvement Plans, the project applicant shall prepare and submit an erosion control plan to the City Engineer for review and approval. The erosion control plan shall utilize*	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
		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.*	
4.8-5 Long-term geologic and seismic impacts from the proposed project in combination with existing and future developments in the Wheatland area.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.8-5 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
4.9 Hazards			
4.9-1 Impacts from burn piles and other on-site farm implements.	PS	*Nichols Grove Tentative Map* *4.9-1(a) 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 (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 onsite, these substances shall be removed and the soil remediated to the satisfaction of the City of Wheatland and the Yuba County Environmental Health Department, at the expense of the applicant.*	LS
	PS	*Non-Participating Properties* *4.9-1(b) In conjunction with submittal of a development application, the applicant(s) shall submit a Phase 1 Environmental Site Assessment for any of the non-participating properties to determine if any on-site structures contain hazards and to identify soil*	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
		contamination, potential hazards related to nearby properties, and the location of wells, aboveground storage tanks, stored items and debris. The Phase 1 Environmental Site Assessment shall identify and include mitigation measures necessary to reduce significant hazardous and hazardous materials impacts. If the Phase 1 Environmental Site Assessment determines the presence of soil contamination under burn or debris piles, the project contractor shall implement Mitigation Measure 4.9-1(a) to the satisfaction of the City of Wheatland and the Yuba County Environmental Health Department, at the expense of the applicant(s).	
4.9-2 Impacts from water supply wells.	PS	*Nichols Grove Tentative Map* *4.9-2(a) Prior to initiation of any ground disturbance activities 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, per review and approval of the City Engineer and the Yuba County Environmental Health Department.*	LS
	PS	*Non-Participating Properties*	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
		4.9-2(b) *Implement Mitigation Measure 4.9-1(b). If wells are located on site, the applicant shall implement Mitigation Measure 4.9-2(a) to the satisfaction of the City of Wheatland and the Yuba County Environmental Health Department, at the expense of the applicant(s).*	
4.9-3 Impacts from aboveground storage tanks.	PS	*Nichols Grove Tentative Map* *4.9-3(a)* *Before site grading and excavation of soils in the area of ASTs and fuel dispensers, the area shall be evaluated for unusual odors, visible discoloration, or other indications of soil contamination. If soils suspected of being contaminated are encountered, they shall be stockpiled on plastic sheeting. Stockpiled soils shall be sampled in accordance with RWQCB guidelines, and the findings forwarded to the RWQCB for review. Further remediation, if necessary, and disposal of the soils shall be conducted in accordance with State and federal guidelines.*	LS
	PS	*Non-Participating Properties* *4.9-3(b)* *Implement Mitigation Measure 4.9-1(b). If aboveground storage tanks are located on site, the applicant shall implement Mitigation Measure 4.9-3(a) to the satisfaction of the City of Wheatland and*	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
		the Yuba County Environmental Health Department, at the expense of the applicant(s).	
4.9-4 Impacts from Polychlorinated Biphenyls (PCBs).	PS	*Nichols Grove Tentative Map* *4.9-4(a) Prior to the issuance of building permits, the applicant shall coordinate with PG&E to sample and analyze the contents of the project site transformers. If the transformers are found to be 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.*	LS
	PS	*Non-Participating Properties* *4.9-4(b) Prior to the issuance of building permits for any properties containing electrical transformers, the applicant(s) shall implement Mitigation Measure 4.9-4(a) to the satisfaction of the City of Wheatland and the Yuba County Environmental Health Department, at the expense of the applicant(s).*	LS
4.9-5 Impacts from existing on-site structures and exposure of construction workers to asbestos and lead-based paint.	PS	*Nichols Grove Tentative Map* *4.9-5(a) Prior to issuance of a demolition permit by the City for any onsite structures, the project proponent shall provide a site assessment that determines*	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
		whether any structures to be demolished contain lead 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 local, state, and federal 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 local, state, and federal regulations subject to approval of the City Engineer.	
	PS	*Non-Participating Properties*	LS
		4.9-5(b) Implement Mitigation Measure 4.9-5(a).	
		4.9-5(c) Prior to issuance of a demolition permit by the City for any onsite 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	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		contain asbestos, the application for the demolition permit shall include an asbestos abatement plan consistent with local, State, and federal standards, subject to approval by the City Engineer.	
4.9-6 Presence of pesticide and/or herbicide residues in project site soils.	LS PS	*Nichols Grove Tentative Map – None Required.* *Non-Participating Properties* *4.9-6 Implement Mitigation Measure 4.9-1(b). The Phase 1 Environmental Site Assessment shall include surficial soil samples to determine the presence of pesticides. If pesticide concentrations 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 1 Environmental Site Assessment.*	N/A LS
4.9-7 Impacts of the McDevitt Drive extension on petroleum and natural gas pipelines.	PS	*Nichols Grove Tentative Map* *4.9-7(a) Prior to construction in the petroleum or natural gas pipelines rights-of-way, the project applicant in coordination with the City's Public Works Department shall contact representatives from Kinder Morgan and PG&E, and endeavor to meet with them on the project site in order to prepare site-specific safety guidelines for construction in the*	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
		field to the satisfaction of the Public Works Director. Should Kinder Morgan and/or PG&E decline to participate in the development of safety guidelines, the City shall retain a consulting firm qualified to assist with the preparation of such guidelines. These guidelines shall include provisions relating to the identification and protection of existing gas and petroleum pipelines on the project site. The safety guidelines shall be noted on the improvement plans and be included in all construction contracts involving the project site.	
		4.9-7(b) *During construction in the petroleum or natural gas pipelines' rights-of-way, an on-site safety manager shall be designated to address any discovered release or accidental rupture of the pipeline(s) that might occur during construction. The on-site safety manager shall obtain and keep in a readily available location the emergency response plans of fuel line operators and the appropriate contact phone numbers for emergencies. This requirement shall be noted on the improvement plans and shall be included in all construction contracts for the review and approval of the Public Works Director.*	
		4.9-7(c) *Prior to construction in the petroleum or natural gas pipeline's rights-of-way, the project applicant*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		in coordination with the City shall endeavor to coordinate with Kinder Morgan and PG&E to ensure that service from the pipelines within the project area is not affected.	
	PS	*Non-Participating Properties* *4.9-7(d) Implement Mitigation Measure 4.9-1(b). If natural gas pipelines are determined to be present on-site, Mitigation Measures 4.9-7(a-c) shall be implemented.*	LS
4.9-8 Long-term hazard-related impacts from the proposed project in combination with existing and future developments in the Wheatland area.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.9-8 None Required.*	N/A
4.10 Hydrology and Water Quality			
4.10-1 Impact from project stormwater runoff.	PS	*Nichols Grove Tentative Map* *4.10-1(a) Development of the project shall incorporate the improvements described in the drainage plan; however, the proposed Nichols Grove drainage plan shall be modified to include the following recommendations set forth in the Nichols Ranch Draft Drainage Report, dated November 2007, for the review and approval of the City Engineer prior*	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
		to the initiation of ground disturbance activities: • *Storm drainlines upstream from the DNR-2D detention basin shall be sized for the 100-year flows starting with the 100-year hydraulic grade at Nodes 203;* • *Storm drainlines south of the north Branch of Grasshopper Slough (Tributary 2) shall be designed for the 10-year flow;* • *Flows exceeding the 100-year flows in the DNR2C detention basin shall be drained to Tributary 2 of Grasshopper Slough;* • *The existing 12-inch culvert, located in the western portion of the project, shall be replaced with a 10-foot by 3-foot box culvert to return Tributary 2 of Grasshopper Slough to the historical flow levels; and* • *The existing 18-inch culvert that connects Tributary 2 of Grasshopper Slough with the adjacent low-lying field shall be removed.* *4.10-1(b)* *Prior to the issuance of building permits, the applicant shall fund the necessary improvements for the addition of 11 cfs of pumping capacity to the existing pump station for the City detention basin south of Dry Creek, for the review and approval of*	

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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
		the City Engineer.	
	PS	*Non-Participating Properties*	LS
		4.10-1(c) In conjunction with submittal of a development application for any non-participating properties, the applicant(s) shall submit a Drainage Report, analyzing the water quality and hydrology impacts of the non-participating properties. The report shall identify pre- and post-project stormwater flows and include necessary mitigation to reduce post-project flows to at or below pre-project levels. The drainage report shall include, but not be limited to, a study of stormwater runoff for 100-year and two-year scenarios. The applicant shall be required to adhere to the recommendations in the report for the review and approval of the City Engineer.	
4.10-2 Detention basin maintenance.	PS	*Nichols Grove Tentative Map, Non-Participating Properties*	LS
		4.10-2 The applicant(s) shall develop a long-term maintenance and funding strategy for the drainage improvements for the review and approval of the City Engineer prior to the recording of final map. The strategy shall include, but not limited to, the following:	
		• *Dispersion of alluvial sediment deposition at*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		inlet structures, thus limiting the extended localized ponding of water; • *Periodic sediment removal;* • *Monitoring of the facility to ensure the site is completely and properly drained;* • *Outlet riser cleaning;* • *Vegetation management to prevent marsh vegetation from taking hold, and to limit habitat for disease-carrying fauna;* • *Removal of graffiti, grass trimmings, weeds, tree pruning, leaves, litter, and debris;* • *Preventative maintenance on monitoring equipment;* • *Vegetative stabilization of eroding banks and basal areas;* • *Animal and vector control;* • *Structural inspection; and* • *Funding plan for the above strategies.*	
4.10-3 Degradation of water quality.	PS	*Nichols Grove Tentative Map* *4.10-3(a) Prior to initiation of ground disturbance activities, the applicant shall obtain a National Pollutant Discharge Elimination System (NPDES) Construction General Permit from the Regional Water Quality Control Board. The permit is required to control both construction and operation*	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
		activities that may adversely affect water quality. The General Permit requires the applicant to file a Notice of Intent (NOI) with the SWRCB and prepare a Stormwater Pollution Prevention Plan (SWPPP) that describes the site, 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 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 monitor and maintain all BMPs during construction to ensure they function properly for review an approval of the City Engineer.	
	PS	*Non-Participating Properties* *4.10-3(b) Non-participating properties that would disturb more than one acre shall be required to implement Mitigation Measure 4.10-3(a). The report shall*	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
		include site-specific recommendations for BMPs, as well as mitigate for all other significant impacts to water quality.	
4.10-4 Impacts to groundwater recharge.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.10-4 None required.*	N/A
4.10-5 Impacts related to regional flooding.	S	*Nichols Grove Tentative Map and Non-Participating Properties* *4.10-5(a) Flood Related Mitigation.* *1. General. Except for development in the Phase 1 Development Grading Plan area that may be permitted pursuant to 4.10-5(b) below, future development of the project will require, and cannot proceed without, the completion of flood control or other improvements to mitigate flooding from the Bear River and Dry Creek sources and to provide the project property with an "urban level of flood protection," defined as the level of protection that is necessary to withstand flooding that has a 1-in-200 chance of occurring in any given year using criteria consistent with, or developed by, the State Department of Water Resources (Government Code section 65007(k)).* *2. Bear River Levee Improvements. The*	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
		mitigation of flooding from the Bear River shall be implemented as follows: *The applicant acknowledges that (a) the City, Reclamation District 2103, State Department of Water Resources, and the developers of the Heritage Oaks East and Jones Ranch subdivisions have approved a plan that should provide funding to complete Bear River levee improvements that would protect the project property from flooding from the Bear River, (b) Reclamation District 2103 has prepared an engineering report to determine a cost estimate for the Bear River levee improvements and a geographical zone of benefit of properties provided with flood protection by the Bear River levee improvements (Levee Zone of Benefit), (c) the project property or most of it will be included within the Levee Zone of Benefit, (d) City will be preparing a Bear River levee development fee study that will allocate the cost of the Bear River levee improvements on a pro-rata fair share basis among benefiting properties within the Levee Zone of Benefit, and (e) City intends to adopt an ordinance requiring properties within the Levee Zone of Benefit to pay a Bear*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		River levee improvement development impact fee, to ensure that all properties within the Levee Zone of Benefit pay their fair share of the Bear River levee improvements as a condition of development. *The applicant shall pay the Bear River levee improvement development impact fee in accordance with the requirements of the fee ordinance and/or resolution to be adopted by the City upon completion of fee study and in the amount in effect at time of issuance of building permit.* *If the Bear River levee improvements are not completed by Reclamation District No. 2103 by December 31, 2009, then applicant implementation of a plan to mitigate flooding from the Bear River shall be added to the requirements of subsection 3 below.* *3. Dry Creek. For the mitigation of flooding from Dry Creek, the applicant shall commit to a program to fully fund the cost of the flood control improvements necessary to provide an urban level of flood protection to the project property by either (a) directly constructing the*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		necessary flood control improvements, (b) entering into and participating in an advance funding agreement with other participating developers, (c) including the property in a community facilities district or assessment district and approving payment of a CFD special tax or assessment, (d) participating in a development impact fee program, (e) participating in some other funding program acceptable to the City, or (f) some combination of the foregoing. The final terms of the proposed program shall be subject to the review and approval by the City to ensure that the selected program will satisfactorily fully fund the cost of the flood control improvements necessary to provide an urban level of flood protection to the property. The applicant shall demonstrate its satisfactory compliance with one of these options as a condition of developing the property. *4.10-5(b) Phase 1 Development Grading Plan Area. This mitigation measure applies only to the Phase 1 Development Grading Plan area described in the project description. Prior to the submittal of any final map for this area, the applicant and its engineers shall prepare and submit a grading plan*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		with hydraulic analysis that demonstrates that the developable area would no longer be in a special flood hazard area (as defined by the City Floodplain Management Ordinance (Wheatland Municipal Code chapter 15.12) in accordance with the City Floodplain Management Ordinance. The plan will be subject to review and approval by the City Engineer and the final map will not be approved until after the City Engineer has approved the plan. *4.10-5(c) Development Pending Completion of Flood Control Improvements.* *1. Land Preparation. If the Federal Emergency Management Agency (FEMA) issues a Conditional Letter of Map Revision (CLOMR) for the property indicating that the property would no longer be in a special flood hazard area (as defined by the City Floodplain Management Ordinance) upon completion of a specified flood control improvement project or improvements, then the Developer may proceed with the following development-related activities: land preparation, such as clearing, grading, and filling; construction of streets, curbs and sidewalks; construction and*	

N/A = *Not Applicable*; LS = *Less-than-Significant*; PS = *Potentially Significant;* SU = *Significant and Unavoidable*

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		installation of water, sewer, other utility and storm drainage improvements; and, preparation and submittal of a large lot final subdivision map application (which shall be approved by the City if it otherwise complies with the requirements of the approved tentative map, Subdivision Map Act, City subdivision ordinance and this Agreement). Performance of any grading or construction related work shall be subject to and in compliance with the terms of a floodplain development permit, with permit conditions, to be issued by the City pursuant to its Floodplain Management Ordinance. *2. Building Permits and Small Lot Final Maps. Building permits for construction of buildings or structures on the Property and small lot final subdivision maps shall not be issued or approved by the City until (a) FEMA has issued a Letter of Map Revision (LOMR) for the property showing that the property is no longer in a special flood hazard area, and (b) the City Engineer has determined in writing that the property has an urban level of flood protection.*	

N/A = *Not Applicable*; LS = *Less-than-Significant*; PS = *Potentially Significant;* SU = *Significant and Unavoidable*

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.10-6 Cumulative increases in peak stormwater flows into the existing drainage system.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.10-6 None Required.*	N/A
4.10-7 Cumulative adverse impacts to water quality.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.10-7 None Required.*	N/A
4.11 Public Services and Utilities			
4.11-1 Adequate water supply and delivery for new residents.	PS	*Nichols Grove Tentative Map* *4.11-1(a) Prior to review of project improvement plans, a Water Supply Verification shall be conducted to ensure that water infrastructure can provide sufficient water supply needed for the project (estimated at 1,320 afa in the WSA). The Water Supply Verification showing adequate supply for the Nichols Grove Tentative Map project shall be submitted to the City Engineer and Director of Public Works for review and approval.* *4.11-1(b) Prior to issuance of building permits, the applicant shall pay the City's Development Water Impact Fees, as determined by the City Engineer and Department of Public Works.* *4.11-1(c) To ensure proper management of groundwater supply, the applicant shall pay for the City to perform groundwater monitoring at the four new*	LS

N/A = *Not Applicable*; LS = *Less-than-Significant*; PS = *Potentially Significant;* SU = *Significant and Unavoidable*

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		on-site wells to ensure that the new concentration of urban supply wells is not causing groundwater depletion, nor adversely affecting the City's water supply.	
	PS	*Non-Participating Properties* *4.11-1(d) In conjunction with submittal of a development application for any of the non-participating properties, the applicant(s) shall be required to submit a Water Supply Assessment (WSA) at the discretion of the Planning Department and City Engineer. The applicant shall be required to implement recommended mitigation measures from the WSA, for review and approval of the City Engineer and Public Works Director.*	LS
4.11-2 Adequate wastewater facilities for new residents.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.11-2(a) Prior to issuance of building permits, the project applicant shall be required to pay the City's Wastewater Development Impact Fees, as determined by the City Engineer.* *4.11-2(b) Prior to occupancy, adequate wastewater treatment and sewer collection system capacity shall exist to accommodate the project, as determined by the City Engineer.*	SU

N/A = *Not Applicable*; LS = *Less-than-Significant*; PS = *Potentially Significant;* SU = *Significant and Unavoidable*

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.11-3 Need for additional waste disposal/recycling services.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.11-3 Prior to the commencement of grading or construction activities for the Nichols Grove Tentative Map or any non-participating properties, the project developer 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 developer shall submit a performance deposit, as established in the project's conditions of approval to the City to ensure recycling of demolition materials. In addition, the project developer shall cover all staff costs related to the review, monitoring and enforcement of this condition through the deposit account.*	LS
4.11-4 Project impact on electricity distribution.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.11-4 Prior to issuance of building permits, the applicant shall coordinate with PG&E and the City of Wheatland to determine the electrical utilities and/or easements and improvements needed to serve the project. The Improvement Plans for the*	LS

N/A = *Not Applicable*; LS = *Less-than-Significant*; PS = *Potentially Significant;* SU = *Significant and Unavoidable*

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		project(s) shall incorporate the necessary easements for the review and approval of the City Engineer. The applicant shall be responsible for all costs associated with the identified improvements.	
4.11-5 Adequate ratio of law enforcement personnel to residents.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.11-5 Prior to issuance of building permits, the applicant shall be required to pay The City's Police Development Impact Fees.*	LS
4.11-6 Adequate fire protection services available to new residents.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.11-6 Prior to issuance of building permits, the applicant shall be required to pay the City's Fire Protection Development Impact Fees.*	LS
4.11-7 Number of enrolled students exceeding capacity.	PS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.11-7 The applicant shall be required to pay all applicable school impact fees in effect at the time of building permit issuance.*	LS
4.11-8 Adequate provision of parks and recreation space for new residents.	LS PS	*Nichols Grove Tentative Map – None Required.* *Non-Participating Properties* *4.11-8 In conjunction with submittal of a development application for any non-participating properties, the applicant(s) shall include on the site plan a ratio of at least five acres of park for every 1,000 residents*	N/A LS

N/A = *Not Applicable*; LS = *Less-than-Significant*; PS = *Potentially Significant;* SU = *Significant and Unavoidable*

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		or pay in lieu fees, for the review and approval of the City Engineer.	
4.11-9 Increase in demand for additional public services and utilities as a result of the proposed project and other projects proposed in the Wheatland area.	LS	*Nichols Grove Tentative Map, Non-Participating Properties* *4.11-9 None required.*	N/A

N/A = *Not Applicable*; LS = *Less-than-Significant*; PS = *Potentially Significant;* SU = *Significant and Unavoidable*

3 PROJECT DESCRIPTION

INTRODUCTION

The Project Description chapter provides a comprehensive description of the proposed project components. The proposed project is made up of both the Nichols Grove Tentative Map site and the 10 parcels surrounding the Tentative Map site, which would be included in the annexation limits of the project in order to establish continuity between the Tentative Map area and the existing City limits. The 10 parcels adjacent to the Tentative Map site are referred to as "non-participating properties" throughout the remainder of the EIR. In addition, the required approvals and objectives for the proposed project are discussed.

SITE CHARACTERISTICS

The proposed project, located adjacent to the northern border of the City of Wheatland, is on the eastern edge of the northern Sacramento Valley within the Wheatland Sphere of Influence (See Figure 3-1). The proposed project consists of a residential and mixed-use development, Nichols Grove Tentative Map (See Figure 3-2), and the annexation to the City of Wheatland and prezone of 10 adjacent non-participating properties (See Figure 3-3). The proposed Nichols Grove Tentative Map project is a development of up to 1,609 dwelling units on approximately 485.5 acres. The Nichols Grove Tentative Map site consists of the Nichols Ranch property (Assessor's Parcel Number [APN] 015-150-092) and the Powell property (APN 015-360-003). The non-participating properties portion of the proposed project includes the annexation of a total of 110.67 acres of unincorporated land to the City of Wheatland. The non-participating properties are identified as APNs 015-140-056, 015-260-001, 015-260-002, 015-260-003, 015-260-004, 015-500-008, 015-500-011, 015-500-013, 015-500-020, and 015-610-001.

The proposed project is an existing agricultural site, which is surrounded to the north by existing agricultural land and Dry Creek, to the east by existing agricultural land, to the west by State Route 65 (SR 65) and the Union Pacific Railroad (UPRR) tracks (except for the non-participating properties 015-026-001 through -004), and to the south by the northern Wheatland City limits and an existing residential neighborhood. The project would serve as a residential extension of the neighborhood located south of the site.

Nichols Ranch Property

The Nichols Ranch property is located approximately one-quarter of a mile north of the central business district of Wheatland. The irregular shaped property consists of approximately 388 acres of agricultural land. The property lies east of SR 65 and south of Dry Creek. The project site is characterized by orchards, grasslands, and oak woodland corridors. In addition, the northern boundary of the Nichols Grove site contains riparian corridors along Dry Creek. Riparian Corridors are located along two branches of Grasshopper Slough in central portion of the site.

Figure 3-1
Regional Location Map

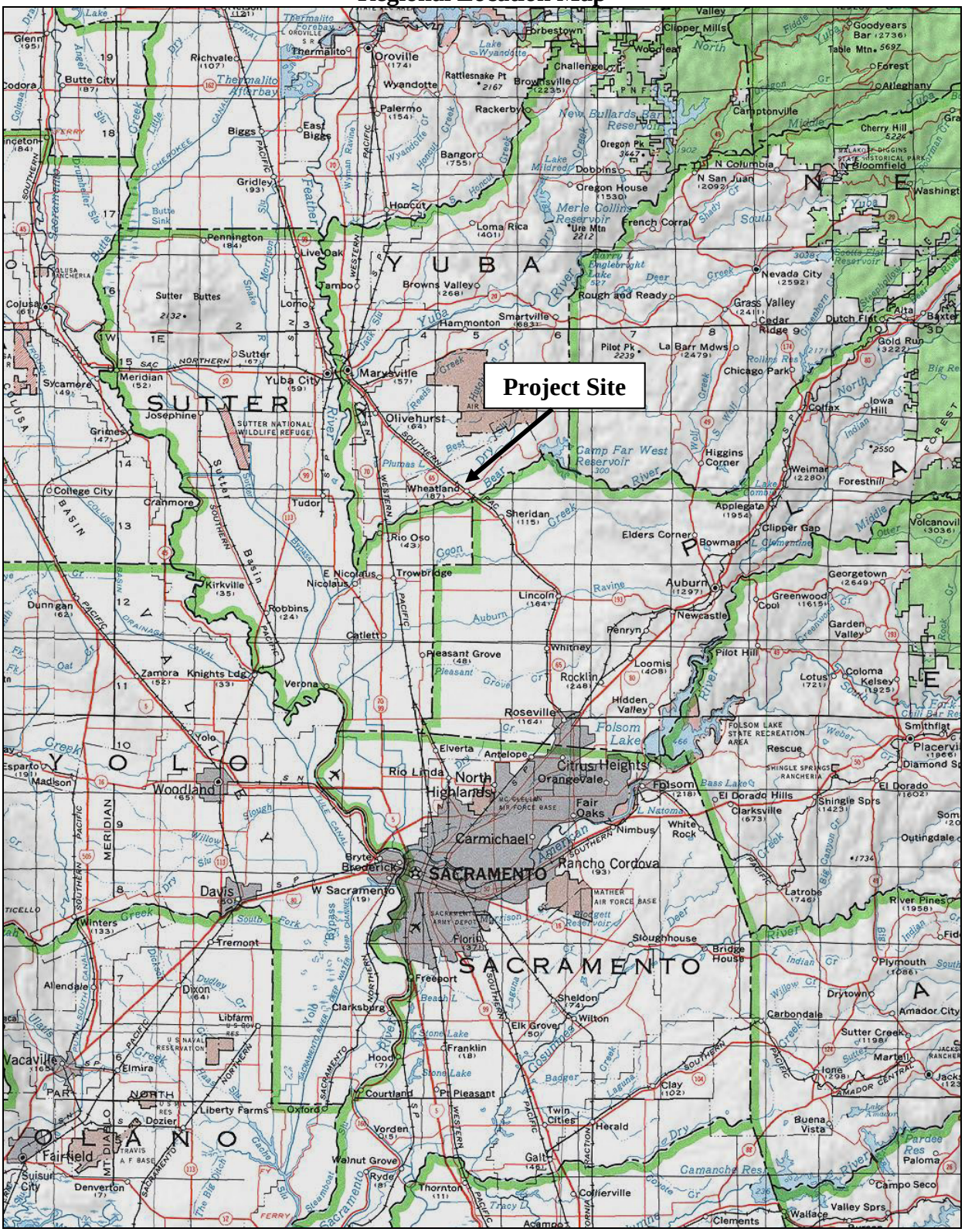


Figure 3-2
Nichols Grove Tentative Map Location

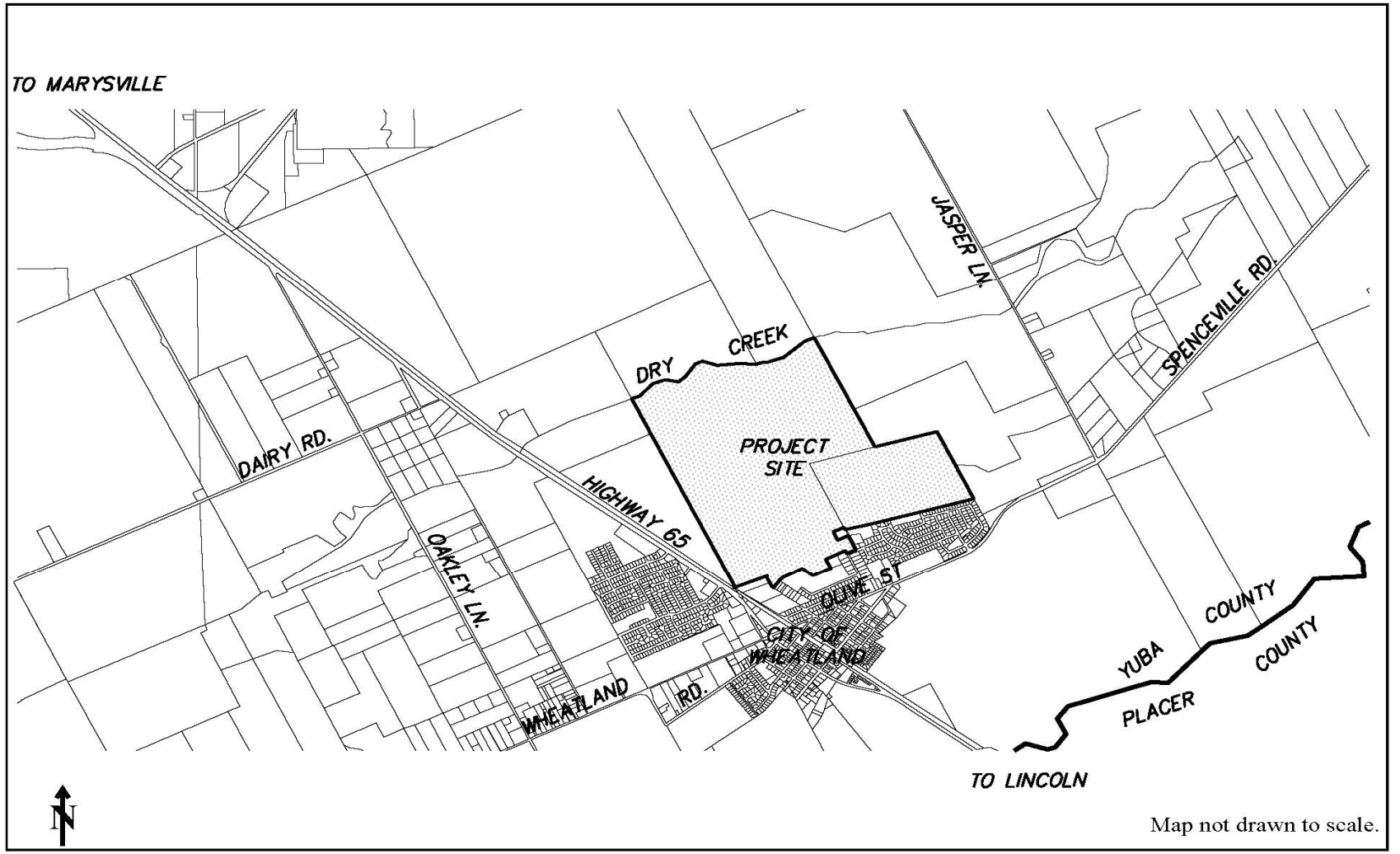
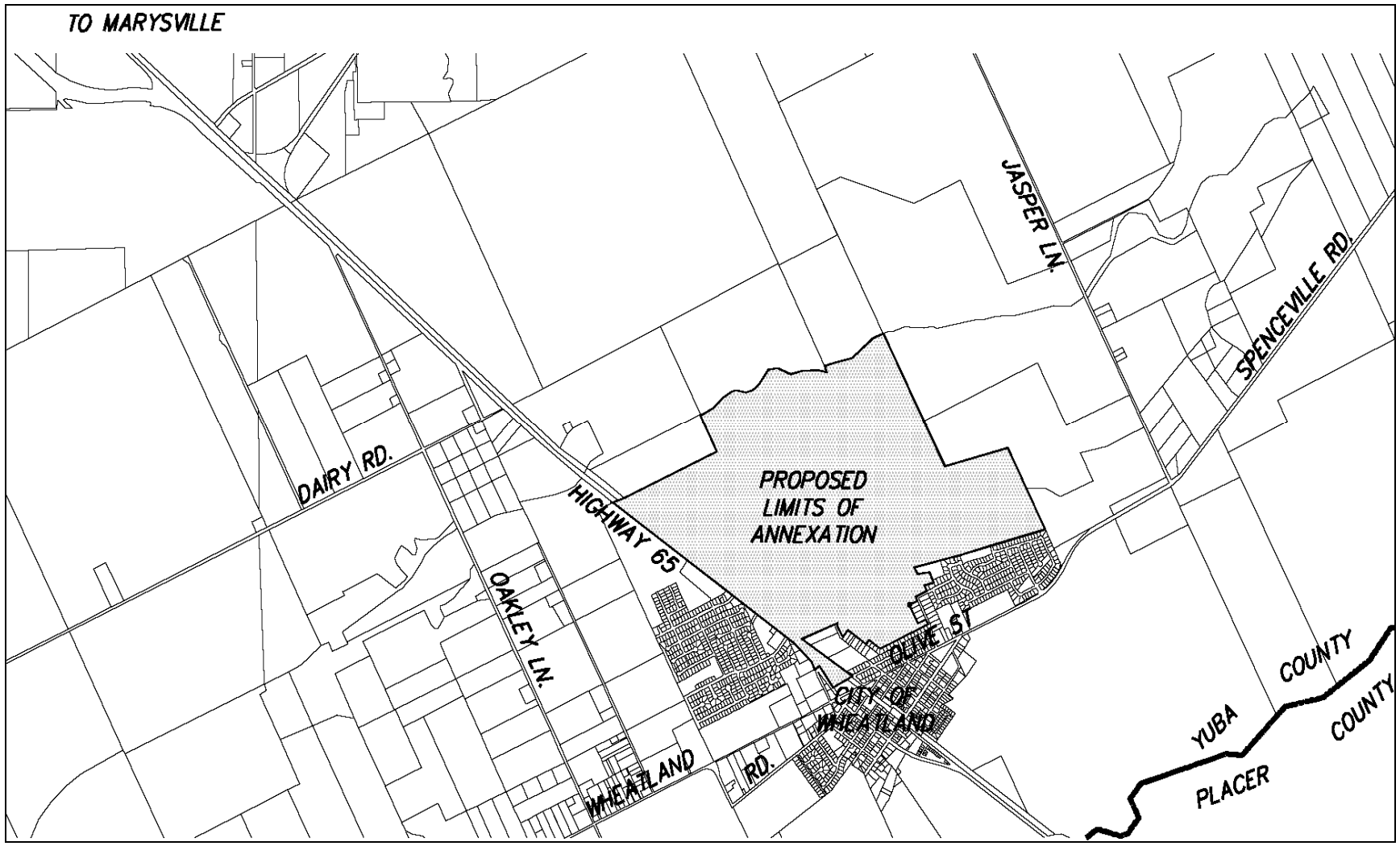


Figure 3-3
Project Location (Includes Non-Participating Properties)



Grasshopper Slough serves as the main drainage channel for the project site, and the two branches flow from a southeasterly direction to a northwesterly direction. The northern branch of Grasshopper Slough has been heavily channelized and only a small segment, located on the easternmost portion of the property, remains on the Slough's original course. The southern branch of Grasshopper Slough has been filled in and rerouted in two areas, and gently meanders across the property site.

The Nichols Grove Tentative Map site is generally described as nearly level agricultural land. The agricultural lands on the project site consist of several fields and orchards separated by the north and south forks of Grasshopper Slough or by access roads. The north and northeast portions of the Nichols Grove Tentative Map site support almond and walnut orchards. An alfalfa field and fallow lands lie in the center of the property; and pastures are located on the southeast and south-central portions of the property.

The property presently supports five farm structures on two different areas of the site. The farm structures include a barn workshop, storage building, and a pesticide shed, which are located in the southern portion of the proposed project site. A pole barn is located approximately 2,000 feet north of the other buildings. Four water supply wells are located on the project site: three irrigation wells and one domestic water well. A submersible pump operates the domestic well and the irrigation wells are operated by electrical pump motors and surrounded by concrete bases.

Powell Property

The Powell property is located directly east of the Nichols Ranch property, approximately one-half mile northeasterly of the central business district of Wheatland. The rhomboid-shaped property consists of approximately 100 acres of agricultural land. The property is located east of Nichols Road and approximately one-half mile south of Dry Creek. The project site is separated into four fields by the north and south branches of Grasshopper Slough or by access roads. The two larger fields located in the northeast and west sides of the property support disced alfalfa fields. The southeast field, located on the northeast portion of the property and south of an existing access road, supports dry-farmed grain fields. The remainder of the property consists of non-oiled access roads and fallow land covered with green and dried grasses and weeds.

The property site does not contain any structures, earthwork equipment, or maintenance areas. However, one irrigation well exists and evidence of an underground irrigation system exist in the northeast and west fields. The irrigation well pump is operated by an electrical motor and stands on top of a concrete pedestal.

Non-Participating Properties

A total of 10 non-participating properties are included in the proposed project, and are proposed for annexation to the City of Wheatland and prezoning to a Planned Development zone. In addition, the UPRR and SR 65 rights-of-way (ROWs), which are located west of the Nichols Grove Tentative Map site, are also proposed to be annexed to the City of Wheatland. The non-participating properties are described generally in the following section.

APN 015-140-056

This parcel is the largest non-participating property, and is located directly adjacent to the western boundary of the Nichols Grove Tentative Map site. The western boundary of the property consists of the UPRR tracks and SR 65. This property is comprised of 93 acres of agricultural land. The parcel is divided into two fields by the northern branch of Grasshopper Slough, and contains additional farm structures. This parcel has an existing zoning designation of Agricultural Exclusive, 10-Acre Minimum (AE-10).

APN 015-500-008

This parcel is comprised of approximately 11.6 acres of agricultural land and is located adjacent to the southern portion of the Nichols Grove Tentative Map site. In addition, this parcel abuts APN 015-500-013. The parcel has an existing zoning designation of Agricultural Exclusive, 10-Acre Minimum (AE-10).

APN 015-500-011

This parcel is located adjacent to the southeast portion of the Nichols Grove Tentative Map site and is comprised of approximately 0.3 acres of agricultural land. In addition, this parcel abuts APN 015-500-013. The parcel has an existing zoning designation of AE-10.

APN 015-500-013

This parcel is comprised of approximately one acre of agricultural land and is located adjacent to APN 015-500-011 and the southeast portion of the Nichols Grove Tentative Map site. The parcel has an existing zoning designation of AE-10.

APN 015-500-020

This approximately 1.1-acre parcel of agricultural land is located southeast of the Powell property, and is adjacent to the western boundary of the Nichols Ranch property. The parcel has an existing zoning designation of AE-10.

APN 015-610-001

This parcel is comprised of approximately 0.9 acres of agricultural land and is located near the southeastern portion of the Nichols Grove Tentative Map site. The parcel has an existing zoning designation of AE-10.

APNs 015-260-001 through –004

These parcels are located between the UPRR and SR 65 ROWs, adjacent to the southwestern boundary of the Nichols Grove Tentative Map site. The parcels have existing zoning designations of General Commercial (C).

Union Pacific Railroad Right-of-Way

The Union Pacific Railroad (UPRR) tracks are located west of the Nichols Grove Tentative Map site. The tracks are located immediately adjacent to APN 015-140-056, which is proposed for annexation as part of the project. Approval of the proposed project would include the annexation of the UPRR ROW to the City of Wheatland in order to avoid having a strip of County land inserted within the Wheatland City limits.

State Route 65 Right-of-Way

State Route 65 (SR 65) runs along the western boundary of the Nichols Grove Tentative Map site, and the SR 65 right-of-way (ROW) is located west of the Tentative Map site. The SR 65 ROW is located immediately adjacent to APN 015-140-056, which is proposed for annexation as part of the proposed project. Approval of the proposed project would include the annexation of the SR 65 ROW to the City of Wheatland in order to avoid having a strip of County land inserted within the Wheatland City limits.

Project Components

Annexation

The proposed Nichols Grove Tentative Map site, as well as all of the non-participating properties, are currently located in Yuba County and have County zoning designations ranging from AE-10 to AE-40, as well as Commercial. While the proposed project site is not located within the Wheatland City limits, the project site is located within the City of Wheatland Sphere of Influence (SOI). Approval of the project would include the annexation of the Tentative Map site and the non-participating properties to the City.

General Plan Amendment

The proposed Nichols Grove Tentative Map does not include the extension of B Street, as shown in the General Plan Circulation Diagram. Therefore, the proposed project involves an amendment to the General Plan Circulation Diagram to delete the proposed extension.

Prezone

The proposed project involves a request to prezone the Nichols Grove Tentative Map site to Planned Development District (PD District) (See Appendix K for a full description of the PD District designation). 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 Planned Development District is required to comply with the regulations and provisions of the General Plan. The proposed Nichols Grove Tentative Map 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 Design Guidelines. The project also includes the

prezoning of all non-participating properties to PD District. Therefore, future development proposals will be required to submit a general development plan for review and approval of City staff and, ultimately, the Wheatland City Council. The evaluation process will ensure the consistency of the proposed project(s) with the Planned Development zone.

Nichols Grove Vesting Large Lot Tentative Map

The Nichols Grove Vesting Tentative Large Lot Map contains 19 lots ranging in size from 1.91 to 69.42 acres (See Figure 3-4). Three of the large lots are parkland or parkland/stormwater detention basins; 12 of the lots are single-family residential, one lot is designated for high density residential, two lots are identified as school sites, and one lot is commercial/mixed-use with a provision for a mixture of high density residential and commercial (See Table 3-1 and Figure 3-3).

Table 3-1
Nichols Grove Large Lot Tentative Map Land Use Summary

Large Lots	Land Use	Zoning	Acres
Large Lot 1	HDR	PD	5.7
Large Lot 2	LMDR	PD	12.85
Large Lot 3	LMDR	PD	1.91
Large Lot 4	PARK/DET	PD	24.09
Large Lot 5	LDR	PD	16.23
Large Lot 6	PARK	PD	18.81
Large Lot 7	SCHOOL	PD	12.00
Large Lot 8	MDR	PD	11.04
Large Lot 9	LMDR	PD	46.87
Large Lot 10	LDR	PD	39.96
Large Lot 11	LMDR	PD	34.94
Large Lot 12	MDR	PD	27.64
Large Lot 13	CMU	PD	11.79
Large Lot 14	LMDR	PD	29.13
Large Lot 15	PARK/DET	PD	24.96
Large Lot 16	LDR	PD	69.42
Large Lot 17	LDR	PD	59.21
Large Lot 18	SCHOOL	PD	17.93
Large Lot 19	LDR	PD	2.09
Totals			**466.57***

***** *Acreage total above does not add to the acreage total of 485.5 for the entire Tentative Map site due to exclusion of street acreage.*

Key to land use designations:
- LDR- Low Density Residential
- LMDR- Low-Medium Density Residential
- MDR- Medium Density Residential
- HDR- High Density Residential
- Park Det.- Park/Detention Basin
- CMU- Commercial/Mixed-Use

Figure 3-4
Nichols Grove Vesting Large Lot Tentative Map

Nichols Grove Vesting Small Lot Tentative Map

The Nichols Grove Vesting Small Lot Tentative Subdivision Map includes 1,427 single family residential lots, one high density residential lot, one commercial/mixed-use lot, seven park and open space lots containing parks and landscape corridors, four well lots, two school lots, and 30 miscellaneous lots.

A total of 91 mixed-use residential units and 91 high-density residential units are included as part of the high density residential and commercial/mixed-use lots. The Nichols Grove Small Lot Tentative Map Land Use Summary on the vesting small lot tentative map provides the following breakdown of land uses (Table 3-2). As shown on Figure 3-5, the Nichols Grove Small Lot Tentative Map is broken down into 10 sub-regions, or "Villages."

Table 3-2
Nichols Grove Small Lot Tentative Map Land Use Summary

Residential Villages	Land Use Designation	Dwelling Units	Acres	Density (dwelling units/acre)
Village I	LDR	60	16.1	3.7
Village II	LMDR	76	14.7	5.2
Village III	LDR	147	39.0	3.7
Village IV	LMDR	143	34.7	4.1
Village V	MDR	197	27.6	7.1
Village VI	MDR	72	11.0	6.5
Village VII	LMDR	332	76.4	4.3
Village VIII	LDR	191	61.0	3.1
Village IX	LDR	209	70.0	3.0
Village HDR	HDR	91	5.7	16.0
Village CMU	CMU	91	11.4	8.0
Total		**1,609**	**366.3***	

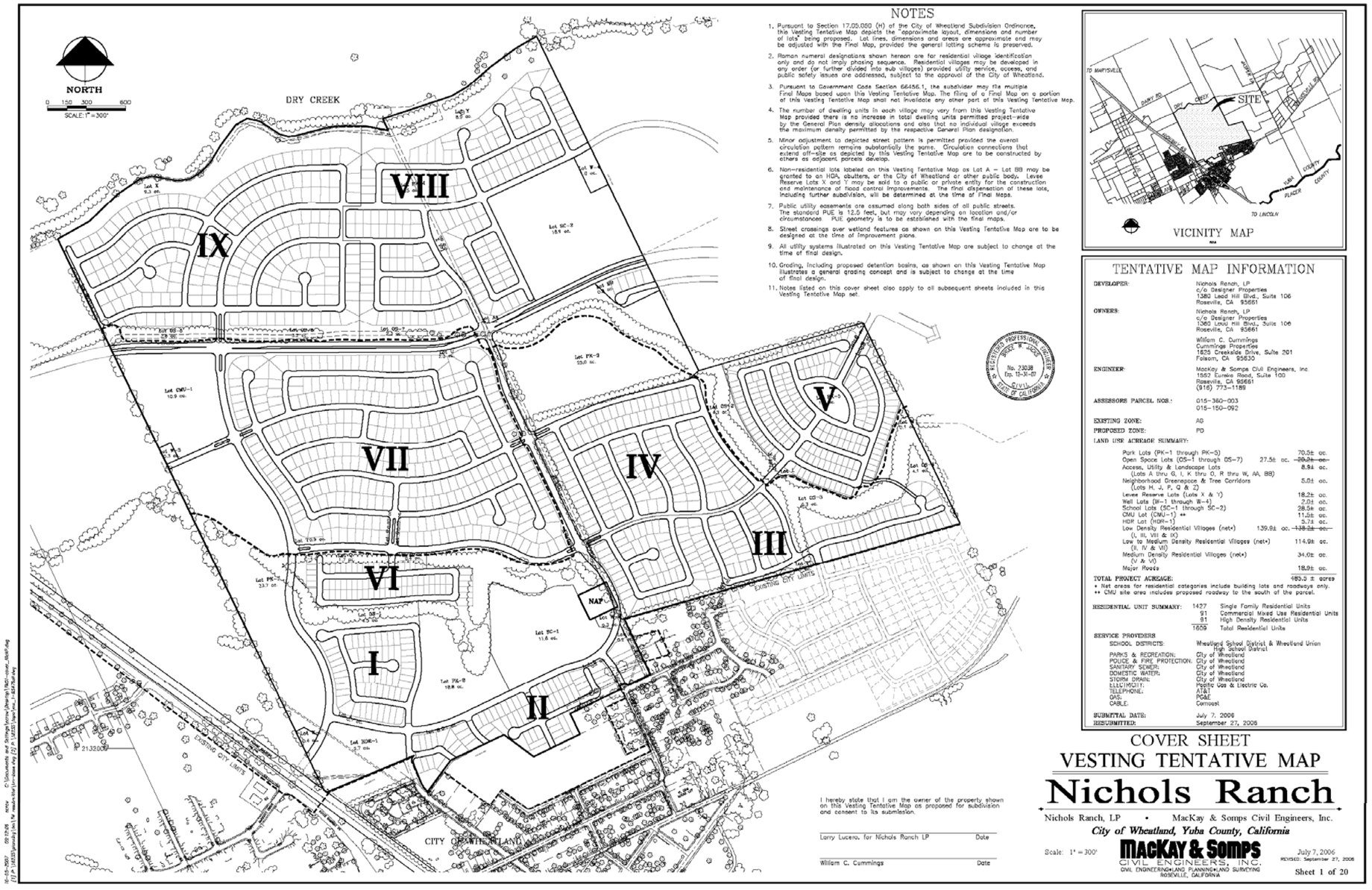
**Acreage differs from total project acreage listed above because this figure does not include school, park, and road acreages.*

Single Family Residential

The proposed Nichols Grove Tentative Map site would include 1,427 single-family lots. 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, in villages defined by landforms, street systems, and other land uses to create cohesive neighborhoods.

The Nichols Grove Tentative Map site contains nine single-family residential villages. The single-family residential villages are designated as LDR (Low Density Residential), LMDR (Low to Medium Density Residential), or MDR (Medium Density Residential) and each village is characterized by differing lot sizes and proposed housing products.

Figure 3-5
Nichols Grove Vesting Small Lot Tentative Map



High Density Residential

The Nichols Grove Tentative Map includes a High Density Residential (HDR) Lot, located in the southwestern portion of the site, adjacent to SR 65 and the UPRR tracks. The HDR component would be accessed by C Street and the east-to-west collector street proposed within the project site. The HDR designation allows for 9-16 dwelling units per acre, resulting in a total of up to 91 dwelling units on 5.7 acres. The HDR component would provide the residents of Wheatland with additional housing choices and opportunities.

Commercial/Mixed-Use

The Nichols Grove Tentative Map would include the dedication of a Commercial/Mixed-Use (CMU) Lot. The Commercial/Mixed-Use Lot would be located in the northwestern portion of the site. The CMU site would be accessed by the "ring road" and the proposed McDevitt Drive extension. The CMU site would allow up to 91 dwelling units on 11.4 acres. The CMU site is proposed either as a commercial site paired with separate high density residential buildings, or a true mixed-use building incorporating commercial uses on the ground floor with residential units above. In addition, fuel stations may be allowed as part of the commercial site by Conditional Use Permit only. Fuel stations and accompanying mini-marts would only be allowed as an adjunct use, and not as a predominant feature of the commercial site. The CMU component is intended to serve the surrounding neighborhoods. As a result, the Design Guidelines for the proposed project include a list of permitted uses for the CMU site that are consistent with neighborhood commercial businesses.

Schools

The Nichols Grove Tentative Map includes the dedication of two school sites. The proposed elementary school site, located in the southern portion of the site, consists of 12.0 acres. The elementary school would be accessed by the Nichols Road extension and the proposed east to west collector street. The elementary school would be paired with a park and located adjacent to the southern branch of Grasshopper Slough. The proposed middle school site, located in the northeastern portion of the project, consists of 18.0 acres. The middle school would be accessed by the "ring road" and a proposed east to west collector street. The middle school site is located immediately west of the high school site designated in the Wheatland General Plan Land Use Diagram. The intent is for the future middle school on the Nichols Grove Tentative Map site to share facilities with the future high school to the east.

Transportation and Circulation

The transportation and circulation components of the Nichols Grove Tentative Map consist of access points and circulation.

Access Points

The City of Wheatland recently adopted a Circulation Diagram as part of the Wheatland General Plan Update, which depicts a proposed "ring road" encircling the City. The "ring road" would be designated as a four lane-arterial roadway and would be expected to disperse traffic throughout the City as compared to having all traffic travel in and out of the City via SR 65. The proposed project includes the construction of a segment of the "ring road", consistent with the alignment identified in the General Plan Circulation Diagram. The "ring road", located along the northern portion of the proposed project, would travel in an east to west direction and would provide the site with two major access points. Additionally, C Street and Nichols Road, which are both south centrally located just outside and adjacent to the project boundaries, would be extended north through the project. Furthermore, Sullivan Way, located near the southeast corner of the project boundary, would be extended to provide access to the residential areas in the southeastern portion of the project. An extension of McDevitt Drive is also proposed to provide access from SR 65 from the west side of the project. As previously indicated the Tentative Map does not include the extension of B Street, as shown in the General Plan Circulation Diagram. Therefore, the proposed project involves an amendment to the General Plan Circulation Diagram to delete the proposed extension.

Circulation

The proposed project includes the construction of a network of internal streets to serve residential, school, park, and commercial areas of the project. Major internal roads include the east-west "ring road" segment, extension of Nichols Road (north to south), and the extension of McDevitt Drive (north to south). These roads would provide primary access to uses in the project. Other internal roads include those roads within the residential areas, which provide direct access to residential lots.

The major internal roadways would branch off of the Nichols Road extension and the McDevitt Drive extension and extend into the project's various villages. The street sections for the internal roads of the proposed project would vary from 40 feet to 50 feet and would include attached sidewalks on both sides. In addition, all residential through streets would allow for on-street parallel parking.

The McDevitt Drive extension proposed as part of the project requires the installation of a new at-grade crossing at the Union Pacific Railroad (UPRR) tracks. This is consistent with the City's goals for future UPRR crossings as illustrated in the Wheatland General Plan Circulation Diagram. The General Plan indicates that a new at-grade crossing will be constructed opposite the SR 65 / McDevitt Drive intersection. The General Plan indicates that the existing second Street and Third Street crossings will be closed. Approval from UPRR and the California Public Utilities Commission (PUC) is needed to install a new at-grade crossing at the location of the proposed McDevitt Drive extension (See Figure 3-5). In addition, in order to facilitate this new at-grade crossing, the McDevitt Drive and SR 65 intersection would need to be signalized. Signalization of this intersection requires the

approval of the California Department of Transportation (Caltrans). The applicant for the Nichols Grove Tentative Map has proposed to install the needed signal at the intersection of McDevitt Drive and SR 65. The signal installation would be reviewed and approved by Caltrans. The City of Wheatland and the project applicant met with UPRR on May 11, 2007, Caltrans on July 11, 2007, and PUC on August 23, 2007. Given the initial favorable response from UPRR, Caltrans, and PUC regarding the proposed state route and railroad improvements, steps are currently being taken to receive official approval, including preparing the CPUC application.

Open Space

The Nichols Grove Tentative Map site is made up of grassland, orchards, and riparian corridors along wetland/slough channels that are lined with oak trees. Approximately 1,800 trees are currently on the proposed project site, which does not include orchard trees, and a majority of the trees are located along the riparian corridors. The design of the Tentative Map is such that the existing drainage corridors would be incorporated as open space areas.

The Nichols Grove Tentative Map designates two major open space corridors along the northern and southern branches of Grasshopper Slough. The open space corridors would include paved and unpaved trails that would allow pedestrians access to the open space areas along connection points. The open space areas would allow active and passive recreational activities compatible with the location including, but not limited to, picnic areas, seating areas, limited sports fields, and trails.

Parks and Trails

The Nichols Grove Tentative Map includes five park sites, totaling 70.5 acres, at various locations throughout the site. The project's large parks would provide various recreational activities and would be paired with the two school or open space areas. The large park amenities would serve as visual and social centerpieces of the planned community. In addition, the Tentative Map would incorporate small pocket parks and various landscape corridors throughout the site. Parks paired with the designated open space areas would serve as a conduit for pedestrian and bike traffic from the nearby trails.

Pedestrian circulation would be provided along the attached street sidewalks within all villages. Additionally, pedestrian circulation would be provided within the project's open space areas, as seen in Figure 3-6. A trail system is proposed to connect the open space areas and provide pedestrian linkages where possible. At points along the trail system, access points would be made to the street and sidewalk network within the Nichols Grove Tentative Map.

Figure 3-6
Nichols Grove Pedestrian Circulation

Public Services

The following discussion includes a brief description of the project's public service systems. A more detailed description of public services is included in the Public Services and Utilities chapter of this EIR.

Water Supply

Water service to the Nichols Grove Tentative Map site would be provided by a new looped system of wells, trunk lines, and water pipes. Once built and dedicated to the City, the system would constitute an extension of the existing municipal City of Wheatland water delivery system. The Water Supply Analysis prepared for the project ensures that the proposed water system is sufficient to meet the water needs of the Nichols Grove project, not only for residential and commercial users, but also for emergency purposes and recreational needs. Project improvements would include those identified in the "Master Water Plan Technical Report," adopted as part of the General Plan.

Wastewater

Wastewater flows from the Nichols Grove Tentative Map site would be conveyed via gravity or with the utilization of lift stations, if necessary, to the future City of Wheatland wastewater treatment plant identified in the General Plan Update. Project improvements would include those identified in the "Sewer Collection System Master Plan Technical Report," adopted as part of the General Plan.

Storm Drainage

Park/detention areas are proposed at two strategic points in the project. A total of 70.5 acres of park/detention area has been included in the project in order to contain the stormwater runoff generated by the impervious surfaces of the project. The project basin areas would be designed to work effectively with the citywide basin plan identified for local flooding control. Runoff from the Nichols Grove Tentative Map site would ultimately be routed to the appropriate basin(s), located within the northeast quadrant (north of the existing City limits and east of SR 65) of the General Plan area.

Well Sites

The Small Lot Tentative Map includes four well lots, totaling 2.0 acres, at various locations in the project. Well lot number one is located in the southwestern portion of the site and is bounded by the McDevitt Road Extension. The land use surrounding the well site to the north is the proposed park, to the south and east is the High Density Residential component, and to the west by Medium Density Residential as seen in the City of Wheatland Land Use Diagram. Well lot number two is located in the eastern portion of the proposed elementary school site. The land use surrounding the well site to the north is designated open space, to the south and west is the proposed elementary school, and to the east is Low Density

Residential. Well lot three is located in the southwestern corner of the Commercial/Mixed-Use element of the Nichols Grove Tentative Map. The land use surrounding the well site to the north and east is the Commercial/Mixed-Use site, to the south is a proposed park, and to the west is the proposed project boundary, across from which is Low Density Residential as identified in the Wheatland Land Use Diagram. Well lot four is located in the northeastern potion of the proposed middle school site. The land use surrounding the well site to the north is Low Density Residential, to the south and west is the proposed middle school site, and to the east is the Tentative Map boundary, across from which is agricultural land designated as Park in the Wheatland Land Use Diagram.

Design Guidelines

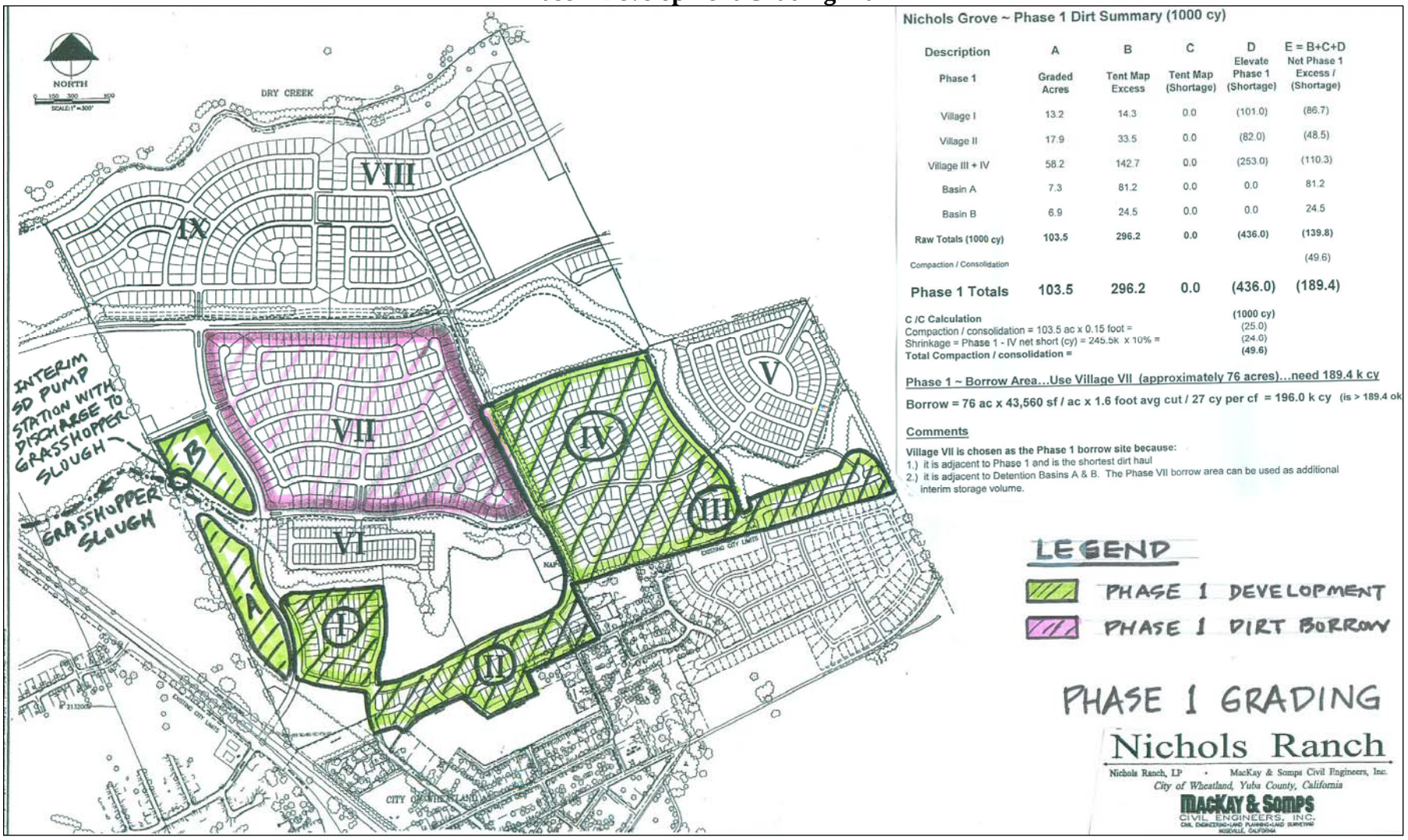
The Nichols Grove Tentative Map project would also require the approval of the *Nichols Grove General Development Plan and Design Guidelines*, which are part of the Tentative Map application and are available for public review at City Hall, 313 Main Street in the City of Wheatland. The *General Development Plan and Design Guidelines* provide detailed development policies, standards, and design guidelines to guide small lot residential development, as well as development of the high-density residential site, the commercial/mixed-use site, and the schools, parks, and various open space and landscaping areas. The Nichols Grove Tentative Map development standards and design guidelines will focus on preserving the existing natural setting of the project site, and creating high-quality architecture and a pedestrian-friendly neighborhood environment.

Nichols Grove Phase 1 Development Grading Plan

Given the flood constraint associated with the development of the project, it is important to consider that the ability exists to develop between 425 and 622 lots on 89.3 acres in advance of any repairs to the Dry Creek Levee. Much of the property designated as Villages I, II, III, IV and V is either not impacted by the estimated flood inundation area or is in the very shallow edge of the flood plain and can be easily elevated to a "flood safe" elevation with finished pads established at a minimum of 1-foot above the 100 year flood elevation. Figure 3-7, Phase 1 Development Grading Plan, illustrates this approach for Villages I thru IV. Village V could also be developed/graded in this manner and would also be available for Phase 1 development should wastewater treatment capacity become available.

The grading of these initial development areas would be accomplished by borrowing dirt from detention basins A and B as well as the Vilalge VII area and high points on Villages I – IV (See Figure 3-7). Village VII could then be used as a temporary stormwater detention area. The use of dirt from detention facilities for raising developed elevations would insure that in the near-term, in advance of other flood control improvements, there will be a net zero impact on the elevation of any flood event that might occur along this reach of the Dry Creek due to the on-site fill being utilized to elevate the Phase 1 development area.

Figure 3-7
Phase 1 Development Grading Plan



Nichols Grove ~ Phase 1 Dirt Summary (1000 cy)

Description	A	B	C	D	E = B+C+D
Phase 1	Graded Acres	Tent Map Excess	Tent Map (Shortage)	Elevate Phase 1 (Shortage)	Net Phase 1 Excess / (Shortage)
Village I	13.2	14.3	0.0	(101.0)	(86.7)
Village II	17.9	33.5	0.0	(82.0)	(48.5)
Village III + IV	58.2	142.7	0.0	(253.0)	(110.3)
Basin A	7.3	81.2	0.0	0.0	81.2
Basin B	6.9	24.5	0.0	0.0	24.5
Raw Totals (1000 cy)	103.5	296.2	0.0	(436.0)	(139.8)
Compaction / Consolidation					(49.6)
Phase 1 Totals	**103.5**	**296.2**	**0.0**	**(436.0)**	**(189.4)**

C /C Calculation (1000 cy)
Compaction / consolidation = 103.5 ac x 0.15 foot = (25.0)
Shrinkage = Phase 1 - IV net short (cy) = 245.5k x 10% = (24.0)
Total Compaction / consolidation = **(49.6)**

Phase 1 ~ Borrow Area...Use Village VII (approximately 76 acres)...need 189.4 k cy

Borrow = 76 ac x 43,560 sf / ac x 1.6 foot avg cut / 27 cy per cf = 196.0 k cy (is > 189.4 ok

Comments

Village VII is chosen as the Phase 1 borrow site because:
1.) it is adjacent to Phase 1 and is the shortest dirt haul
2.) it is adjacent to Detention Basins A & B. The Phase VII borrow area can be used as additional interim storage volume.

This Phase 1 area has three currently viable points of access which would be developed in conjunction with this development effort. Phase 1 includes an elementary school site and a park. At least one new domestic water well and potentially additional water storage would be included as a part of this Phase 1 plan. Local drainage and detention would be routed to detention basins A and B, and an interim pump station would be installed to discharge stormwater to Grasshopper Slough. The exact specifications required for the detention basins and interim pump station would depend on the number of lots to be developed, and would be determined by a subsequent drainage analysis and report defining storage and pumping requirements. The drainage system would be designed to limit total project discharge to historical rates. This information would be provided prior to the submittal of the first final map for the proposed project. All other required public utility services will be provided in standard fashion to the Phase 1 development area.

Non-Participating Properties

The proposed project includes the annexation and prezoning of 10 non-participating properties to Planned Development. For the Planned Development zone, project applicants would be required to submit general development plans that outline development standards and uses for the non-participating properties that are consistent with the General Plan land use designations of Low Density Residential, Medium Density Residential, Employment, Park, and Public.

Public Services

Water, sewer, and stormwater facilities do not currently exist for most of the 10 non-participating properties. In the future, as the non-participating properties are developed consistent with General Plan land use designations for the parcels, the necessary public services and facilities will need to be identified and constructed by the project applicant(s).

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; and
- Prezoning of the project site with City Planned Development (PD) zoning.

The following project-level entitlements are for the Nichols Grove Tentative Map site only:

- General Plan Circulation Diagram Amendment to delete the planned B Street extension;
- Approval of a Vesting Large Tentative Subdivision Map;
- Approval of a Small Lot Vesting Tentative Subdivision Map;
- Approval of project-specific Design Guidelines; and
- Approval of a Development Agreement.

PROJECT OBJECTIVES

The proposed project would achieve the following objectives:

1. Make efficient urban use of marginal quality agricultural lands immediately adjacent to existing urban uses;

2. Develop a project that allows for reasonably paced, balanced growth to help stabilize the community's housing market over the buildout period of the project. Provide a variety of desirable housing types and densities consistent with City policies that meet the housing needs of existing and future Wheatland residents. Provide a mix of housing choices and affordability levels between the neighborhoods so as to create ongoing housing opportunities for local employees;

3. Create an economically viable project that provides a fair-share contribution of infrastructure to the community through the payment of fees and/or construction of required capital improvements, while creating adequate revenue to fund that infrastructure and return a fair profit through the sale of housing of the types and styles that current and future citizens of Wheatland desire;

4. Provide safe, convenient transportation access for pedestrians, bicyclists and motorists between parks and near-by schools, as well as to future transit corridors, using street designs that balance the needs of pedestrians and motorists. Target pedestrian orientation as a key element within the development and facilitate access to potential nearby future transit corridors;

5. Ensure the economic success of the neighborhood commercial component of the Nichols Grove Tentative Map by including a sufficient number of nearby homes and an adequate traffic circulation system;

6. Complete a residential land plan that provides a broad range of high quality, single-family and attached homes that offer diverse designs and levels of affordability in an aesthetic streetscape comprised of distinct, yet integrated neighborhoods, parks, schools, pathways and green spaces;

7. Ensure the development of a range of housing types, including a significant proportion of reasonably priced, low to medium density housing, to meet the needs of a diverse population and which is consistent with the City's current housing goals;

8. Ensure that adequate school and park sites are available within the project on a logically phased basis; and

9. Develop a land use plan which when developed would primarily reinforce the existing commercial downtown core of Wheatland and function as a fully integrated part of the overall community.

4.0 INTRODUCTION TO THE ANALYSIS

INTRODUCTION

The Introduction to the Analysis chapter analyzes the potential impacts of the proposed project on a range of environmental issues. Chapters 4.1 through 4.11 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 CEQA, a significant effect is defined as a substantial or potentially substantial adverse change in the environment (Public Resources Code §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.

- *Air Quality:* The proposed project would not include industrial or intensive agricultural use, and therefore would not create unusual odors. The proposed project would have *no impact* relating to creation of odors.

- *Biological Resources:* 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 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.

- *Hazards and Hazardous Materials:* The project is 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 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 impacts* 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 the construction of the project therefore would not physically divide an established community, resulting in a *less-than-significant* impact. Furthermore, the project site is not located in any designated habitat conservation plan or natural communities conservation plan area; therefore, *no impact* would occur.

- *Mineral Resources*: The development of the proposed project would not involve the loss of known available mineral resources that are of value to the region; therefore, a *less-than-significant* impact 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 proposed project would induce population growth; however, the project is consistent with the type and intensity of development anticipated for the site in the General Plan. Therefore, a *less-than-significant* impact would occur. Furthermore, the proposed project would not displace existing housing or people because the site is not currently used for residential purposes. Therefore, the proposed project would have *no impact* on this aspect of population and housing.

- *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/Agricultural Resources;
- Transportation and Circulation;
- Noise;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazards;
- Hydrology and Water Quality; and
- Public Services and Utilities.

SECTION FORMAT

Each section in Chapter 4 addressing a specific environmental issue begins with an **introduction** describing the purpose of the section. 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) *Recommended mitigation measure(s) presented in italics and numbered in consecutive order.*

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

4.1 AESTHETICS

INTRODUCTION

This Aesthetics chapter describes existing visual and aesthetic resources for the proposed project site and the region, and evaluates 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]

ENVIRONMENTAL SETTING

The following setting information provides an overview of existing conditions of visual resources in the project site area, located within the City's General Plan Study Area 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 about 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 remained valued by its residents for its small town atmosphere and rural setting.

Project Area Setting

The proposed project site, located in the Wheatland Sphere of Influence, is directly adjacent to the northeastern edge of Wheatland's City limits. The proposed Nichols Grove 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). The current Wheatland General Plan Land Use designations for the proposed project site 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, Park, Public, and Employment The proposed project site is buffered to the north by existing agricultural land

and Dry Creek, to the east by existing agricultural land, to the west by State Route 65 (SR 65) and Union Pacific Railroad (UPRR) tracks, and to the south by an existing residential neighborhood.

The property site is generally described as nearly level agricultural land. The agricultural lands on the project site consist of several fields and orchards separated either by the north and south forks of Grasshopper Slough or by access roads. The north and northeast portions of the proposed project site support almond and walnut orchards. An alfalfa field and fallow lands lie in the center of the property; and pastures are located on the southeast and south-central portions of the property.

Unique Visual Features

Nichols Grove Tentative Map

The proposed project has three distinct woodland riparian corridors. The proposed project'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 the site. 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. In addition, the Nichols Ranch portion of the proposed project contains approximately 1,800 non-orchard trees.

Grasshopper Slough acts as the main drainage channel for the project site, and the two branches flow from a southeasterly direction to a northwesterly direction. According to the site assessment prepared for the project site,[3] the northern branch of Grasshopper Slough has been heavily channelized and only a small portion, located on the easternmost portion of the property, remains on its original course. The southern branch of Grasshopper Slough has been filled-in and rerouted in two areas and gently meanders across the property site.

Non-Participating Properties

Grasshopper Slough traverses the central portion of the non-participating property west of the Nichols Grove Tentative Map site, in a northwesterly direction. In addition, a riparian corridor exists along both sides of Grasshopper Slough.

Project Features

The proposed project consists of the Nichols Grove site and several non-participating properties. The following is a description of both portions of the proposed project.

Nichols Grove Tentative Map

The proposed Nichols Grove site includes the development of 1,609 dwelling units on approximately 485.5 acres in Yuba County, Assessor Parcel Numbers 015-360-003, and 015-

150-092. The Nichols Grove Large Lot Vesting Tentative Map contains 19 lots ranging in size from two to 70 acres. The Large Lot Vesting Tentative Map contains the following: three of the large lots are parkland or parkland/stormwater detention basins, 12 of the lots are single-family residential, one lot is designated for high-density residential, two lots are identified as school sites, and one lot is commercial/mixed use with a provision for a mixture of high density residential and commercial.

Additionally, the project includes a Small Lot Tentative Map, which is broken down into 10 sub-regions, or "villages." The Nichols Grove Vesting Small Lot Tentative Subdivision Map includes 1,427 single family residential lots, one high density residential lot, one commercial mixed use lot, seven park and open space lots containing parks and landscape corridors, four well lots, two school lots, and 30 miscellaneous lots.

Non-Participating Properties

The non-participating properties have historically been used for farming. All of the non-participating properties would be prezoned as Planned Development. The properties are currently designated for urban development, consisting of the following range of uses: Low Density Residential; Low-Medium Density Residential; Employment; and Commercial.

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.

City of Wheatland General Plan

The following are applicable General Plan goals and policies related to aesthetics.

Land Use and Community Character

Landscape and Streetscape

Goal 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 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 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 proposed Nichols Grove 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 damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- 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.

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 setting into a landscape characterized by proposed surface grading and mixed-use 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 would be considered sensitive to the visual and aesthetic alteration of the Nichols Grove project area.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Nichols Grove Tentative Map and non-participating properties), unless otherwise noted.

4.1-1 Impacts related to altering the existing agricultural character of the project site.

Nichols Grove Tentative Map and Non-Participating Properties

The project site currently has the appearance of being rural in nature. Implementation of the proposed project would replace the undeveloped, rural character of the project site with an urban Planned Development setting containing 1,609 dwelling units, one commercial mixed use lot, seven park and open space lots containing parks and landscape corridors, four well lots, two school lots, 30 miscellaneous lots, and prezoning of the non-participating properties to Planned Development. In addition, the future development of the non-participating properties would be consistent with the Wheatland General Plan land use designations for the site; therefore, the non-participating properties would include the development of commercial/mixed use structures, low and medium residential units. Because the project site currently provides open views from the adjacent roadways and surrounding properties, the change in the character of the site would be recognizable. The change in the site from a rural to urban environment would constitute a permanent alteration of the existing visual character of the project site.

However, as indicated in the Design Guidelines for the Nichols Grove Tentative Map project, the proposed planting concept within the proposed project would capture the character of the surrounding agrarian landscape. Accent trees, street trees, open space trees, shrubs, groundcover, lawn, perennials, and accent features are to be selected for shape and form, color and texture, seasonal interest, and would be used to reinforce the desired theme of the new Nichols Grove community. The guidelines also provide design standards for the project including: site development, building design, standardized setbacks, accents, and lighting. Design standards within the guidelines are intended to replicate the architecture and rural feel of Wheatland. The Design Guidelines require the

review and approval of the City of Wheatland decision-makers. In addition, as the non-participating properties would be prezoned to Planned Development, future development applications for the property would be required to include submittal of design guidelines, which would need to be approved by the City prior to development.

In addition, the proposed project would integrate the project drainage areas as open space and trails throughout the development in order to provide pedestrian connections between residential, school, park, and recreational uses. The open space and park areas would include a corridor of existing riparian woodlands, as well as, native plantings, which would act as a visual buffer. Furthermore, the type and intensity of development proposed for the project site is consistent with the residential areas to the south and the project would serve as a logical extension of the City of Wheatland.

According to the General Plan Land Use Diagram (See Figure 4.2-1 in the Land Use Chapter of this EIR), the proposed project site is designated as 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, Park, Public, and Employment. The proposed project is consistent with the General Plan Land Use Designations recently approved for the project site. Therefore, the aesthetic impacts of the project were previously considered in the Wheatland General Plan EIR.

The Wheatland General Plan EIR concludes that the implementation of the goals and policies would minimize impacts to the visual character of Wheatland but the impacts to 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 result in a ***significant*** impact regarding alterations of existing agricultural character.

Mitigation Measure(s)
Consistent with the conclusions of the Wheatland General Plan, feasible mitigation measures do not exist to reduce the above impact; therefore the impact would remain *significant and unavoidable.*

4.1-2 Impacts related to light and glare.

Nichols Grove Tentative Map and Non-Participating Properties

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 1,609 residential units, one commercial mixed use lot, seven park and open space lots containing parks and landscape corridors, four well lots, two school lots, and 30 miscellaneous lots would generate new sources of light and glare. In addition, buildout of the non-participating properties pursuant to existing General Plan land use designations would generate new sources of light and

glare. The introduction of street lighting throughout the residential and commercial development would alter the currently unlit conditions of the project area. Night lighting would be evident to neighboring properties to the south, which are not accustomed to development on the site; however, the type of lighting would be typical of residential and commercial uses. This level of light would represent a substantial change from the existing conditions; therefore, the impact would be considered ***potentially significant***.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

Nichols Grove Tentative Map

4.1-2(a) *A detailed lighting plan shall be submitted for the Nichols Grove Tentative Map site, for review and approval of the City Engineer in conjunction with the project improvement plans. In conjunction with development of the proposed project, the developer shall shield all on-site lighting, consistent with the lighting plan, so that lighting is directed within the project site and does not illuminate adjacent properties.*

Non-Participating Properties

4.1-2(b) *For any future development application(s) being processed for the non-participating properties, a conceptual lighting plan shall be submitted for review and approval of the City Engineer. The plan shall show proposed shielding of all on-site lighting, so that lighting is directed within the project site and does not illuminate adjacent properties.*

4.1-3 Impacts related to scenic vistas and visual resources.

Nichols Grove Tentative Map and Non-Participating Properties

The project site is located in a major agricultural region. Thus, the scenic views in the Wheatland area are predominantly those of agricultural lands. Additionally, the project site contains three distinct riparian corridors in the northern and central portions of the site. The corridors, more specifically known as Valley foothill riparian, occur on portions of Bear River, Dry Creek, Grasshopper Slough, and various irrigation canal systems throughout the General Plan Study Area.

The project proposes the construction of 1,609 new homes, a commercial mixed-use parcel, 70.5 acres of park and open space lots containing parks and detention basins, two school lots, and prezoning of the non-participating properties to Planned Development. The juxtaposition of the older and newer residential areas would present a visually contrasting appearance that could be aesthetically displeasing. Aside from the appearance of the houses, another contrast in appearance would be the relative lack of mature vegetation in the new development and the presence of mature trees and other vegetation

in the older residential area. However, the proposed landscaping would reduce the contrast in landscaping and housing appearances between the older and newer developments by integrating with surrounding community features. Important goals of landscape design as illustrated in the project Design Guidelines would be to provide a pleasant environment for residents.

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 principle aesthetic on-site resources have been largely incorporated into the project design (e.g., riparian tree corridors). Policy 8.C.3. of the Wheatland General Plan requires that new development preserve natural woodlands to the maximum extent possible. For a detailed discussion on tree impacts, refer to the Biological Resources chapter of this EIR. In addition, the Wheatland General Plan EIR concludes that with implementation of the goals and policies of the Wheatland General Plan, the impacts to scenic vistas and natural resources would be *less-than-significant*. Therefore, because the proposed project is consistent with the type and intensity of development anticipated for the project site in the General Plan, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

Cumulative Impacts and Mitigation Measures

4.1-4 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.

Nichols Grove Tentative Map and Non-Participating Properties

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 of the project site within an agricultural area, the larger cumulative context of the visual impact of the proposed project could be considered as within the City as a whole. The properties to the north, and east of the project site are currently agricultural lands and properties to the south are residential. The property to the west across SR 65 is currently a mix of residential and agricultural land. The Wheatland General Plan has designated areas to the east as Low Density Residential. In terms of the cumulative change to the visual character of the project area, development on the project site would be typical of what currently exists south of the project site, while development to the east and west are planned in the existing General Plan for urban uses. Development of the project, in addition to development in the General Plan Study Area, would contribute to a change in the visual character of the area.

The project site has been designated Low Density Residential, Low-Medium Residential, Medium Density Residential, High-Density Residential, Commercial, Park, Employment, and Public in the Wheatland General Plan. 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 General Plan EIR already analyzed the impacts that General Plan buildout would have on visual character and 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 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 General Plan*, July 11, 2006.
[2] *City of Wheatland General Plan EIR*, July 11, 2006.
[3] *Environmental Site Assessment, Nichols Ranch,* Wallace Kuhl & Associates, March 7, 2003.

4.2 LAND USE AND AGRICULTURAL RESOURCES

INTRODUCTION

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 the existing land uses on the project site, as well as the existing plans and policies that guide the development of the project site. The Land Use and Agricultural Resources chapter 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 would be identified as Prime Farmland. Documents utilized to prepare this chapter include the *City of Wheatland General Plan*,[1] the *City of Wheatland General Plan EIR*,[2] and the *USDA Natural Resources Conservation Service, Yuba County Soil Survey*.[3]

ENVIRONMENTAL SETTING

The proposed project is an existing agricultural site, which is buffered to the north by existing agricultural land and Dry Creek; to the east by existing agricultural land and rural residences; to the west by existing agricultural land, State Route 65, and the Union Pacific Railroad (UPRR) tracks; and to the south by an existing residential neighborhood. The project would act as a residential extension of the neighborhood located south of the site.

Current Yuba County General Plan Land Use Designation

The Yuba County General Plan designates the 596.2-acre project site (includes Tentative Map site and non-participating properties) as Valley Agriculture. The Valley Agriculture classification is used to identify areas within the valley floor located outside of community boundaries, which are suitable for commercial agricultural and where areas are desirable to retain agriculture as the primary land use; to protect the agricultural community from encroachment of unrelated agricultural uses, which by their nature, would be injurious to the 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 Natural Resources Conservation Service (NRCS).

Examples of uses that are considered appropriate under the Valley Agriculture 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 farm worker housing.

It should be noted that examples of uses that are allowable within the Wheatland Community Boundary include single-family residences, agricultural uses, and home occupations.

Current Yuba County Zoning Designation

The current Yuba County zoning for the 596.2-acre project site is Agricultural Exclusive, 10-acre minimum parcel (AE-10). For the AE-10 zoning designation, the Yuba County Zoning Ordinance allows one single-family dwelling unit for each ten acres in an AE-10 sub-zone. In addition, the following uses are allowed: 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; 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; and 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.

Current City of Wheatland General Plan Land Use Designations

In addition to the above Yuba County General Plan designations, because the project site is within the Wheatland General Plan Study Area, the City of Wheatland has also assigned land use designations to the project site. The City of Wheatland land use designations are presented below.

Existing Land Use Designations

The City of Wheatland General Plan designates the project site as Low Density Residential, Low-Medium Density Residential, Medium Density Residential, High Density Residential, Commercial, Employment, Public, and Park and Open Space.

Nichols Grove Tentative Map

The Nichols Grove Tentative Map site is designated Low Density Residential, Low-Medium Density Residential, Medium Density Residential, High Density Residential, Commercial, Public, and Park and Open Space.

The Wheatland General Plan defines the intent of the above land uses as follows:

Low Density Residential (LDR)

The Low Density Residential land use designation, which allows 3.0 to 4.0 dwelling units 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 (LMDR)

The Low-Medium Density Residential 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 (MDR)

The Medium Density Residential 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 (HDR)

The High Density Residential land use designation, which allows 8.1 to 18.0 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.

Commercial (COM)

The Commercial 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.

Public (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 (PARK)

The Park and Open Space 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.

Non-Participating Properties

The non-participating properties are designated Low Density Residential, Low-Medium Density Residential, Employment, and Commercial. With the exception of Employment, the land use designations are outlined above under Nichols Grove Tentative Map.

Employment (EMP)

The Employment 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.

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 prezoning proceedings as required by law.
(c) If a city has not prezoned territory which is annexed, it may adopt an interim ordinance pursuant to Section 65858.

The project includes a request to prezone the project site to Planned Development District (PD District). Initiated, in part, by the proposed project, the City of Wheatland has prepared a new Planned Development zoning district for the City of Wheatland, which will be adopted prior to the approval of the proposed project's entitlements. The new PD zoning district will replace the existing Planned Development Combining District included in the Wheatland Zoning Code as Section 18.51. The new PD zone will enable more flexibility in project design than currently provided by the City's PD Combining District. The purpose of the new PD zone is as follows:

> 18.51.010 Purpose of zone: The planned development (PD) zone provides the means for greater creativity and flexibility in the design of developments than is provided under the strict application of the zoning and subdivision ordinances, while at the same time protecting the public health, safety and welfare and property values. Various land uses may be combined in a planned development zone including combinations of residential, commercial, industrial, utility, institutional, educational, cultural, recreational and other uses, provided the combination of uses results in a balanced and stable environment. In amending this Title to apply the PD zoning district, the Council may permit any use within the PD district that is compatible with the purposes of this Title, the neighborhood and general vicinity of the proposed project, and consistent with the General Plan and any applicable specific plan or master plan.
>
> The specific purposes of the planned development zone are to:
>
> 1. Promote and encourage clustered development to avoid sensitive areas of the property;
> 2. Encourage creative and innovative designs by allowing flexibility in property development standards;
> 3. Encourage the preservation of open space;
> 4. Encourage compact, walkable development by allowing for the clustering of multiple uses;
> 5. Encourage the provision of multiple housing types within a single project;
> 6. Accommodate various types of large scale, complex and phased developments; and
> 7. Establish a procedure for the development of large tracts of land and oddly shaped parcels in order to reduce or eliminate the rigidity, delays, and conflicts that otherwise would result from application of zoning standards designed primarily for conventional lots.

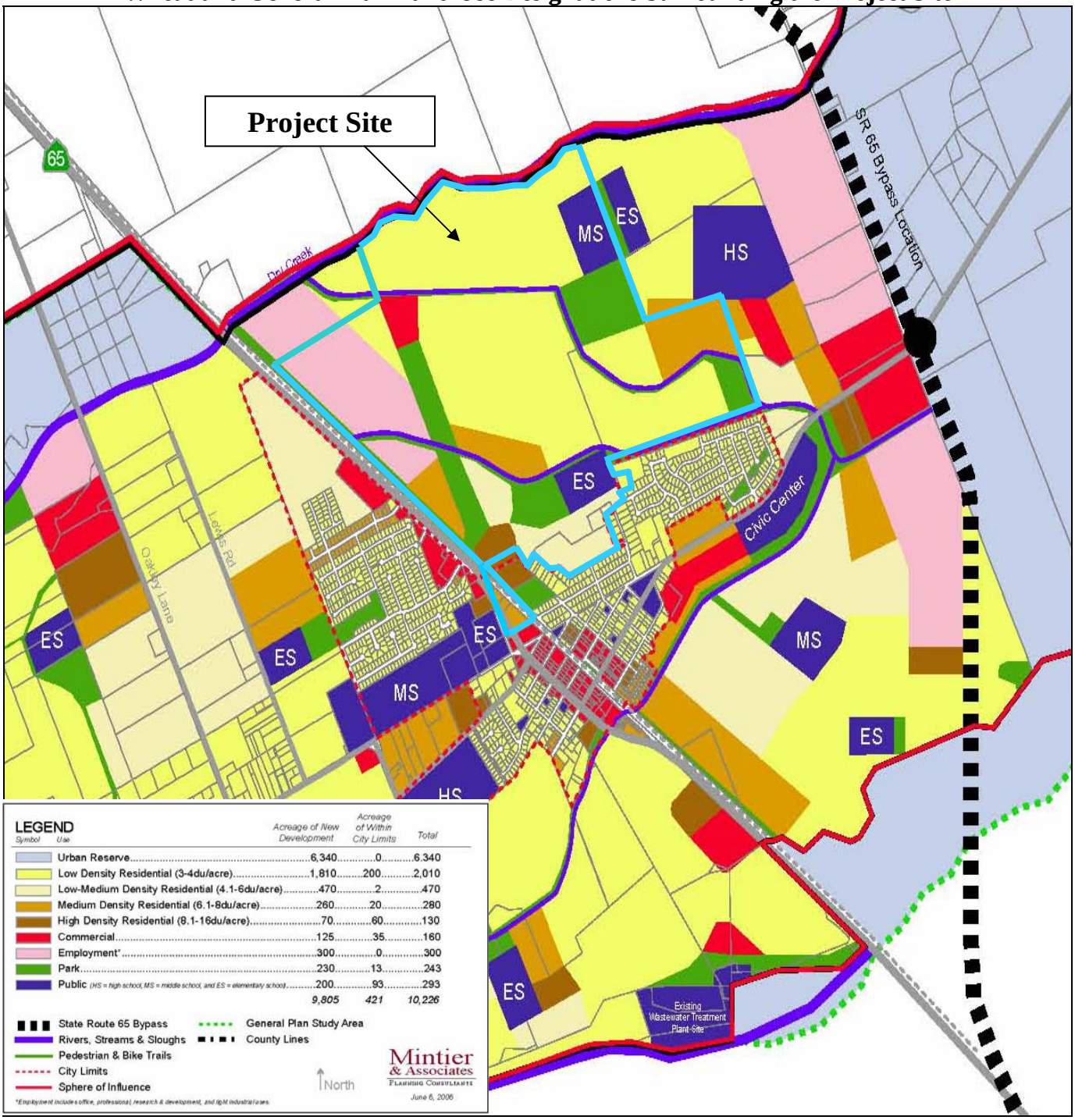
It should be noted that the new PD zone is included as Appendix K to the Draft EIR.

Surrounding Land Use Designations

The Wheatland General Plan designates the areas surrounding the project site (including non-participating annexation areas) with the following land use designations (See Figure 4.2-1).

North: Low Density Residential (3-4 du/ac), Medium Density Residential (6.1-8 du/ac), Park, and Employment.

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



South: Low Density Residential (3-4 du/ac), High-Density Residential (8.1-16 du/ac), and Commercial.

East: Low Density Residential (3-4 du/ac), Low-Medium Residential (4.1-6 du/ac), Medium Density Residential (6.1-8 du/ac), Park, and Public.

West: Low Density Residential (3-4 du/ac), Low-Medium Residential (4.1-6 du/ac), Commercial, and Public.

In addition, the area north of the Nichols Ranch property is currently in Yuba County and is designated as Valley Agriculture.

Surrounding Zoning Designations

The Yuba County Zoning Map designates the areas surrounding the project site with the following zoning (See Figure 4.2-2).

North: Areas north of the Powell property are zoned by Yuba County as AE-10, and areas north of the Nichols Ranch Property are zoned by Yuba County as AE-80.

East: Areas east of the project site are zoned by Yuba County as AE-10.

The Wheatland Zoning Map designates the areas to the south and west with the following zoning:

South: Residential Single-family (R-1), and Multifamily Residential-Limited (R-3).

West: Residential Single-family (R-1), Multifamily Residential-Limited (R-3), and Commercial (C-1).

Surrounding Land Use Types

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

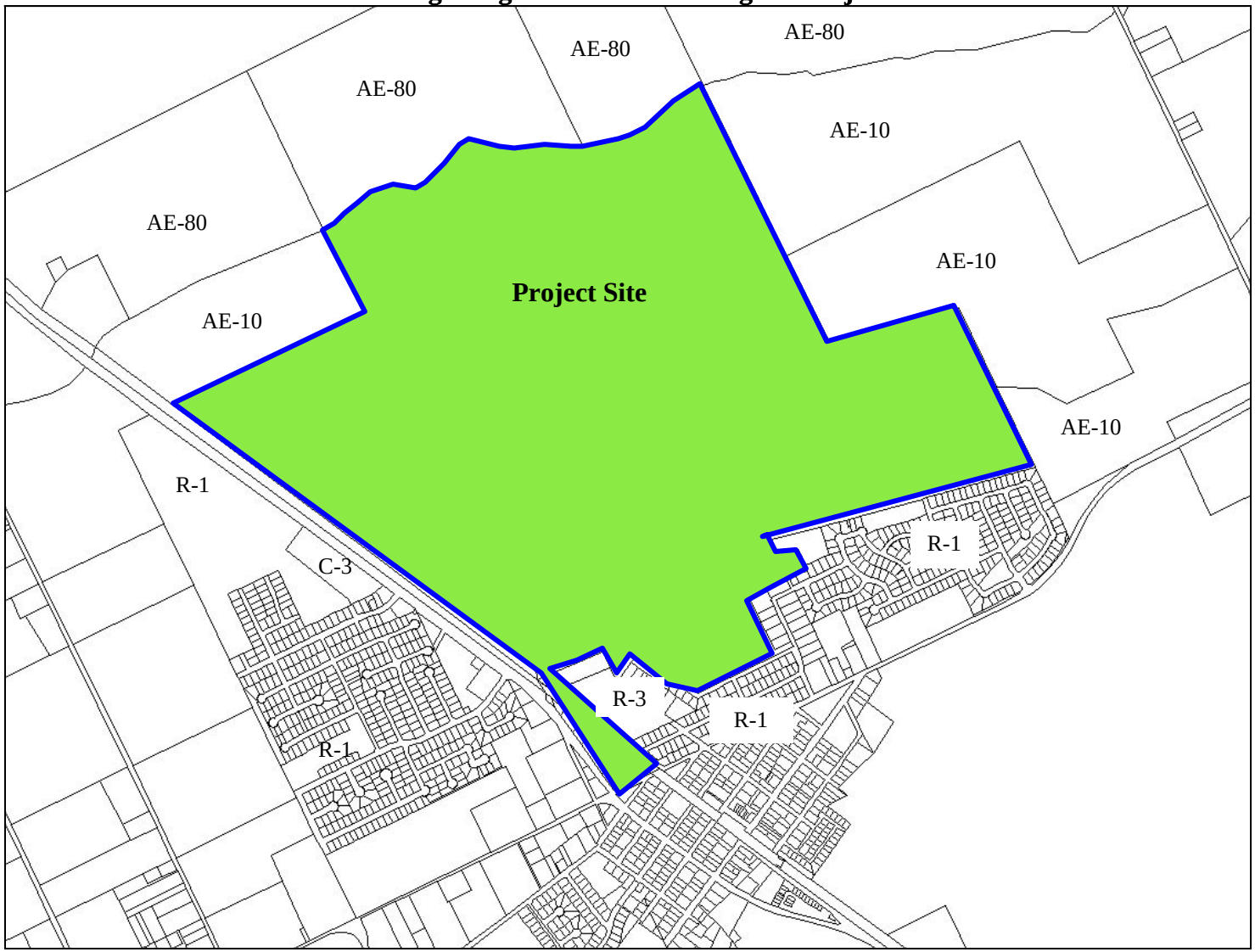
North: The project site is bordered to the north by existing agricultural land and Dry Creek.

South: The site is bordered to the south by the northern boundary of the Wheatland City limits and single-family residential development.

East: The project site is bordered to the east by existing agricultural land and rural residences.

West: The project site is bordered to the west by the northern boundary of Wheatland City limits, UPRR tracks, and State Route 65 (SR 65).

Figure 4.2-2
Zoning Designations Surrounding the Project Site



Agricultural Resources

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

Farmland Classifications

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (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, 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 4.2-1, Soil Capability Classification.

Table 4.2-1
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.

Source: USDA Soil Conservation Service, 1977.

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the U.S. Department of Agriculture, Soil Conservation Service (USDA-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. This land 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. This 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 Yuba County Soil Survey (See Figure 4.2-3), the project site is made up of the following soils:

141 Conejo loam, 0 to 2 percent slopes

The Conejo loam is a very deep, well-drained soil that is located on stream terraces. The soil is formed in alluvium derived from mixed sources. The vegetation in uncultivated areas would mainly consist of grasses, forbs, and valley oaks. The surface layer is typically brown loam that is about six inches thick. The upper eight inches of the subsoil is brown clay loam and the lower part to a depth of 65 inches is brown loam. The Conejo loam is well suited for irrigated and nonirrigated crops with few limitations.

185 Kimball loam, 0 to 1 percent slopes

The Kimball loam is a very deep, well-drained soil that is located on low fan terraces. The soil is formed in alluvium derived from mixed sources. The vegetation in uncultivated areas would mainly consist of annual grasses and forbs. The surface layer is typically light yellowish brown and pale brown loam about 16 inches thick. The upper 26 inches of the subsoil is light brown clay loam and the lower part to a depth of 60 inches is very pale brown loam and pale brown sandy clay loam. The areas that consist of this unit are mostly used for irrigated crops that would include rice, wheat, corn for silage, and prunes. In addition, water permeability is very slow and water applications should be regulated so that water does not stand on the surface and damage crops.

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.

Figure 4.2-3
Project Area Soil Map

Source: National Soil Conservation Service, Web Soil Survey.

214 San Joaquin loam, 0 to 1 percent slopes

The San Joaquin loam is moderately well drained soil that is located on low fan terraces, with a moderately deep hardpan. The vegetation in uncultivated areas would mainly consist of annual grasses and forbs. The surface layer is typically light brown loam about six inches thick. The upper 12 inches of the subsoil is strong brown loam and the lower nine inches is brown clay. An indurated hardpan is found at a depth of 25 inches. The soil is mainly used for rice and rangeland but could also be used for irrigated corn silage, irrigated pasture urban or home site development, and wildlife habitat. The permeability of the soil is very slow and the available water capacity is 2.5 to 3 inches.

The Yuba County Candidate Listing for Prime Farmland and Farmland of Statewide Importance[4] lists Conejo loam, 0 to 2 percent slopes and Kimball loam, 0 to 1 percent slopes as being soils that meet the criteria for Prime Farmland (if irrigated) and Farmland of Statewide Importance. Table 4.2-2 lists the characteristics of the soil types as determined in the Yuba County Soil Survey.

Table 4.2-2
Onsite Soil Characteristics

Soil Map Symbol and Name	Rating Factors				Storie Index Rating	Storie Index Grade
	A	B	C	X		
141 Conejo loam, 0 to 2 percent slopes	95	100	100	95	90	Grade 1 - Excellent
185 Kimball loam, 0 to 1 percent slopes	45	100	100	95x95	41	Grade 3 - Fair
208 Redding gravelly loam, 3 to 8 percent slopes	22	80	90	95x95	14	Grade 5 - Very Poor
214 San Joaquin loam, 0 to 1 percent slopes	25	100	100	95x95	23	Grade 4 - Poor

Source: Yuba County Soil Survey, California, 1998.

REGULATORY CONTEXT

Yuba County LAFCO

The Yuba County Local Agency Formation Commission (LAFCO) is a state mandated boundary commission responsible for coordinating logical and timely changes in local government boundaries. The Commission, in the consideration of proposals, has to observe 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.).

LAFCO General Policies and Standards

Yuba County LAFCO recently updated their policies and standards. The new Policies and Procedures were adopted on July 11, 2007. The following list of the currently adopted Yuba County LAFCO Policies and Standards is not exhaustive, and only lists goals and policies that pertain to the proposed Nichols Grove project. Information is provided from the Yuba County Local Agency Formation Commission 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 California Environmental Quality Act (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 and certify a Categorical Exemption, Negative Declaration or Environmental Impact Report (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.

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 (§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 (§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 (§56300, §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 prezoning, 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 (§56375, §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 (§56700, §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 (§56001, §56119, §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 or 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 sphere of influence 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 (§56001, §56425, §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 (§56741, §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 (§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 prezoning in the application to the Commission. (§56375)

g. The annexing city shall be the Lead Agency and LAFCO shall be the Responsible Agency, for environmental review of any prezoning 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 §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 §56826 and §56073 of the Cortese-Knox-Hertzberg Act and consistently with applicable SOI policies and any service review recommendations adopted by LAFCO.

Wheatland General Plan

The following are applicable General Plan goals related to land use and planning:

Land Use and Community Character

Citywide Growth and Development

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

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.4. The City shall manage residential growth to keep pace with planned facilities and services improvements.

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.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 and appropriate jobs-housing balance to ensure and 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: 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.4. The City shall encourage multi-family housing to be located throughout the community, but especially neat 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: 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 neighborhood 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.

Commercial Land Use

Goal: 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.

Policy1.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.

Employment

Goal: 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.4. The City shall promote the development of Business Park, and research and development uses in Wheatland.

Agriculture

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

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.

Impacts and Mitigation Measures

Standards of Significance

For the purposes of this Draft EIR, impacts are considered significant if implementation of the proposed 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 Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency;
- Conflict with existing zoning for agricultural use; and/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.

Methods 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

This 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 Nichols Grove proposed project (Nichols Grove Tentative Map and non-participating properties), unless otherwise noted.

4.2-1 Compatibility with surrounding land uses.

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.

Nichols Grove Tentative Map

Approval of the proposed project would result in the development of residential neighborhoods adjacent to agricultural fields and residential uses. Currently, existing agricultural fields surround the Tentative Map project site to the north across Dry Creek, and to the east and west. The proposed project residences, located within the eastern, western, southern, and northern portions of the project site, could potentially be affected by existing agricultural operations. Common disturbances associated with agricultural operations include harvesting, fertilization, pesticide use, land clearing, and agricultural production. Common approaches to minimize potential incompatibilities between agricultural operations and proposed residential development include the incorporation of setbacks in the project design. This approach is often carried out in developments that are on the periphery of the City's planned area for growth. In the case of the Nichols Grove Tentative Map site, the site is surrounded by areas planned for urban development in the General Plan. The agricultural fields located to the west are designated as Low Density Residential (3-4 du/ac), Medium Density Residential (6.1-8 du/ac), Park, and Employment; and areas to the east are designated as Low Density Residential (3-4 du/ac),

Low-Medium Residential (4.1-6 du/ac), Medium Density Residential (6.1-8 du/ac), Park, and Public. In addition, Dry Creek and the Dry Creek levee bound the project's northern boundary. This physical land feature would act as a buffer between the project's sensitive receptors and the agricultural operations to the north of Dry Creek.

Therefore, if setbacks were to be included in the Nichols Grove Tentative Map along the eastern and western boundaries, unnecessary separations would exist at such time the adjacent properties develop. In order to avoid this type of piece-meal development, the project has been carefully designed so as to not incorporate large, unnecessary setbacks from adjacent agricultural parcels. Until such time that the parcels located east and west of the Nichols Grove Tentative Map site are developed, 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 Yuba County has a right-to-farm ordinance, which seeks to retain and promote the agricultural industry within the County.

Potential conflicts could be created via the interface between the proposed residential areas of the project and the proposed 11.4-acre commercial parcel, located at the intersection of McDevitt Drive and the "ring" road. The residents adjacent to the commercial parcel could be adversely impacted by the future activities associated with commercial use, such as loading dock noise, parking lot noise, and truck deliveries. Lighting for the commercial use could also affect adjacent residences. According to the Design Guidelines for the project, the project would include buffers in the form of landscaping and/or fencing. In addition, potential impacts from light and glare are addressed in Chapter 4.1 and noise impacts are addressed in Chapter 4.4.

Non-Participating Properties

Development of the non-participating properties would not be expected to create incompatibilities with agricultural uses, except for the triangular parcel (APN 015-140-056) adjacent to the western border of the Nichols Grove Tentative Map site. The property north of this location is currently in agricultural use, and future development of this non-participating property could result in conflicts if residences were included in the northern portion of the site, as could occur under the requested Planned Development zoning designation. In addition, the land designated Medium Density Residential along the southwest boundary of the triangular parcel is located adjacent to the UPRR tracks and SR 65. Noise generated by the transportation uses could result in impacts to future residents of the non-participating property. Potential noise impacts are fully addressed in Chapter 4.4, Noise, of this Draft EIR.

Conclusion

Future development of the project site would be compatible with the existing residential developments located immediately adjacent to the southern boundaries of the project site. In addition, potential impacts from light and glare are addressed in Chapter 4.1, and noise impacts are addressed in Chapter 4.4. However, because development of the Nichols

Grove Tentative Map site and the non-participating property adjacent to the western border of the Nichols Grove Tentative Map site would occasionally subject project residents to temporary, short-term nuisances from adjacent agricultural operations, 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 operation; 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 General Plan area would replace the existing agricultural operations with urban uses which would not conflict with the proposed residents; therefore, under the long-term scenario impacts would be *less-than-significant*.

Nichols Grove Tentative Map, Non-Participating Property (APN 015-140-056)

4.2-1 *The 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. The language and format of such notification shall be reviewed and approved by the City Attorney prior to recording final map. Each disclosure statement shall be acknowledged with the signature of each prospective property owner.*

4.2-2 Consistency with the Wheatland General Plan.

Nichols Grove Tentative Map and Non-Participating Properties

The following discussion evaluates the consistency of the proposed project with the City of Wheatland General Plan goals, policies, and traffic circulation plans.

General Plan Land Use Designation Consistency Analysis

The Nichols Grove Tentative Map property currently consists of agricultural land. The City of Wheatland General Plan designates the project site as Low Density Residential (3-4 du/ac), Low-Medium Density Residential (4.1-6 du/ac), Medium Density Residential (6.1-8 du/ac), High Density Residential (8.1-16 du/ac), Commercial, Park, and Public (See Figure 4.2-1). The non-participating properties are designated as Low Density Residential, Low-Medium Density Residential, Commercial, and Employment. The proposed project would include single-family residential construction, as well as approval of lotting for multi-family residential, park, school, and commercial uses, and prezoning of the non-participating properties.

The proposed Nichols Grove Tentative Map includes 186.9 acres of land designated Low Density Residential with 607 total dwelling units, 125.7 acres of land designated Low-Medium Density Residential with 551 total dwelling units, 38.6 acres of land designated Medium Density Residential with 269 total dwelling units, and 5.7 acres of land designated High Density Residential with 91 total dwelling units. The General Plan provides allowed density ranges for each of these land use designations (see above). Multiplying the total acreages for the on-site land use designations by the density ranges allowed for each designation results in the following permissible residential unit range for the site: 1,452.2 units to 2,090.6 units. The proposed project includes 1,609 dwelling units and is therefore within the range of units allowed for the Tentative Map project site under the General Plan.

Therefore, the land uses included in the Nichols Grove Tentative Map project would be consistent with the existing City of Wheatland General Plan land use designations and allowable density ranges for the site. In addition, it is anticipated that future development of the non-participating properties would be consistent with the respective General Plan designations. Should an application be submitted that is inconsistent with current General Plan land use designations, additional environmental review will be required to determine resultant impacts, and the ultimate decision on the project will be made by the Wheatland City Council. As a result, the proposed project would not require a General Plan Amendment to the current land use designations for the project site. In addition, the High-Density residential component proposed for the project would include a total of 91 units on 5.7 acres with a density of 16 du/ac, which would be consistent with the current General Plan High Density Residential designation.

General Plan Goals and Policies Consistency Analysis

The following discussion evaluates the project in light of relevant Wheatland General Plan goals and policies.

Land Use and Community Character

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. The proposed project site is adjacent to both the existing City limits and existing residential development. Therefore, the proposed project can connect to, and extend, existing City public facilities and services. Therefore, the proposed project is consistent with Policy 1.A.2.

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. Because the proposed project includes varying residential densities, the project would allow an adequate mix of residential opportunities. In addition, the project would include an 11.4-acre commercial parcel, development of which would result in the creation of

jobs. The project is also located adjacent to a large parcel designated for employment uses, which would provide jobs for future residents.

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 City of Wheatland General Plan designates the project site as 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, Park, and Public. Although the uses proposed for the project would result in minor re-distribution of some of the land use designations, the overall acreages of these designations would remain the same. In addition, the densities proposed for the project are consistent with those allowed under the current General Plan. Therefore, the project is in substantial conformance with the Land Use Diagram.

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 a 5.7-acre High Density Residential lot that could accommodate up to 91 dwelling units, located near SR 65 in the southwestern portion of the project site. The proposed project would be consistent with said policy by including the High Density Residential component near SR 65 with access from the McDevitt Drive extension.

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 southern boundary is directly adjacent to Wheatland City limits. Although the project would extend into areas of agricultural land, the Wheatland General Plan has anticipated the development of the project site. The proposed project would be consistent with said policy, which discourages leapfrog development and peninsulas extending into agricultural lands. For discussion addressing the conversion of Prime Farmland, please refer to Impact 4.2-6.

Goal 1.C of the New Residential Neighborhoods section would provide for new residential development in planned neighborhoods that are designed to promote walking, bicycling, and transit use. The proposed project includes a variety of areas that promote alternative transportation. The open space areas within the project include a trail system, which provides pedestrian linkages throughout the development (See Figure 3-5 in Chapter 3, Project Description, of this Draft EIR). These pedestrian/bike trails would also connect to adjacent properties. In addition,

the project site would include a sidewalk system, within the internal street system that utilizes both attached and detached sidewalks.

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. The proposed Nichols Grove Tentative Map project would be broken down into 10 sub-regions, or "villages." The single-family residential units would be dispersed throughout the plan area by defined landforms, street systems, and other land uses. These uses would create cohesive neighborhoods and village edges would be configured to view parks and open spaces. The proposed project would be consistent with the policy that encourages well-defined neighborhoods. Similarly, as the non-participating properties are being prezoned to PD, applicants would be required to submit detailed design guidelines that meet the intent of Policy 1.C.2.

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 a commercial lot on the corner of the McDevitt Drive extension and the proposed "ring" road. The proposed location would provide Wheatland residents and visitors access to commercial uses. Therefore, the proposed project would be consistent with Policy 1.E.1.

Policy 1.G.4 of the Employment Use section states that the City shall promote the development of Business Park, and research and development uses in Wheatland. The proposed project includes a large portion of the non-participating property west of the Nichols Grove Tentative Map site, which was designated for Employment uses in the General Plan. The proposed project would include the prezoning of the property to Planned Development, which would not alter the potential use of the site for employment or business park uses. Therefore, by annexing into the City of Wheatland an area adequately sized to accommodate the development of a business park, the proposed project would be consistent with Policy 1.G.4.

General Plan Circulation Element Diagram Consistency Analysis

Figure 4 of the Wheatland General Plan (Circulation Diagram) shows a B Street extension, a C Street extension, and a Nichols Road extension through the proposed project site. However, the proposed project is not consistent with the Circulation Element of the General Plan Policy Document. Policy 2.A.1 of the Street and Roadway System section states that the City shall plan, design, and regulate the development of the City's street system in accordance with the functional classification system described in this chapter and reflected in the Circulation Diagram and the City's Street Standards and Specifications. The Tentative Map for the proposed project does not include the B Street

extension, and thus is not consistent with Figure 4: Circulation Diagram of the Wheatland General Plan. As a result of the proposed project's inconsistency with the Circulation Diagram figure, the proposed project includes a request for a General Plan Circulation Diagram Amendment to delete the proposed B Street Extension currently designated on the project site.

Summary

As outlined above, the proposed project is consistent with existing General Plan land use designations and policies. Future development of the non-participating properties is anticipated to be consistent with General Plan land use designations, and proposals found to be inconsistent would require additional environmental review and City Council approval. In addition, future development of the non-participating properties would require the submittal of detailed design guidelines to ensure consistency with General Plan policies. However, the tentative map, as proposed, is inconsistent with the Circulation Diagram of the General Plan. Accordingly, the project description includes an amendment of the General Plan to delete the B Street extension. Approval of the project is a discretionary action of the City Council; therefore, should the City Council approve the project, the requested General Plan Circulation Diagram Amendment would be approved concurrently. Therefore, an inconsistency would not occur upon approval of the proposed project, resulting in a ***less-than-significant*** impact.

Mitigation Measure(s)
None required.

4.2-3 Consistency with existing zoning.

Nichols Grove Tentative Map and Non-Participating Properties

The proposed project site is located in Yuba County and is zoned AE-10 by the County. However, the proposed project is located within Wheatland's Sphere of Influence and would involve the annexation of the property to the City, which includes prezoning of the project site to Planned Development District (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. The Planned Development District shall 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 Design Guidelines.

The non-participating properties would also be prezoned to PD District. Therefore, future development proposals will be required to submit a General Development Plan for review and approval of City staff and, ultimately, Wheatland City Council. The evaluation process will ensure the consistency of the proposed project(s) with the Planned Development District zone.

The proposed project site is currently zoned AE-10, according to Yuba County General Plan, and would not be consistent with the proposed zoning for the proposed project. 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 prezoning would be approved concurrently and an inconsistency would not occur. Therefore, a ***less-than-significant*** impact would result.

Mitigation Measure(s)
None required.

4.2-4 Consistency with Yuba County LAFCO Standards.

Nichols Grove Tentative Map and Non-Participating Properties

The project site is located within Yuba County and within the Wheatland Sphere of Influence. As a result, the project involves a request to annex the approximate 596.2-acre site to the City of Wheatland. Annexation of the project site will ultimately require approval by Yuba County LAFCO. The following discussion evaluates the project in light of relevant Yuba County LAFCO policies and standards regarding annexation.

Policy 2.7, Adequate Services, states that 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. In addition, an agency must provide satisfactory documentation of the agency's capacity to provide service to an annexed area within a reasonable amount of time. Mitigation measures were included in the Public Services and Utilities chapter of this Draft EIR (Chapter 4.11) that would ensure that City of Wheatland public services and utilities would have the ability to accommodate buildout of the proposed project. 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 4.11-2(b), which states that prior to occupancy of the development, adequate wastewater capacity must exist to accommodate the project. The chapter further notes that the City has initiated the process of designing a new WWTP consistent with the adopted policies of the Wheatland General Plan Update. 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.

Policy 2.10, Agriculture, states that development or use of land shall be guided away from prime agricultural lands towards areas containing non-prime agricultural lands unless that action would not promote the planned, orderly, efficient development of an area. In addition, Policy 2.10(d) states that development of vacant or prime agricultural lands for urban uses within the jurisdiction or Sphere of Influence 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 sphere of influence of any local agency. The proposed project is immediately adjacent to the existing southern boundary of the City of Wheatland, and is within the Wheatland Sphere of Influence. 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, and the Wheatland General Plan EIR found that development of the City would result in significant and unavoidable impacts to agriculture as a result of the conversion of prime farmland to urban uses. Large areas of non-prime soils are not available within the General Plan Study Area of the City of Wheatland; therefore, guiding projects away from prime soils is not possible within the City of Wheatland. Furthermore, development of the site would contribute to the planned, orderly, and efficient development of the City of Wheatland. As a result, the proposed annexation would be consistent with Policy 2.10 of LAFCO's General Standards.

Policy 7.1, General, states that annexations shall be logical and reasonable expansion to the annexing district. The proposed project is directly adjacent to Wheatland's northern City limits; therefore, the project would be consistent with Policy 7.1 of LAFCO's General Standards.

Policy 7.3, Annexation to a City, states that land may not be annexed to a city unless contiguous to the city or adjacent. In addition, the urban development and utility expansion plans should be coordinated among cities, special districts, and the County, in cooperation with LAFCO. The proposed project is directly adjacent to Wheatland's northern City limits and would be annexed as one contiguous property. Therefore, the proposed annexation would be consistent with Policy 7.3 of LAFCO's General Standards.

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. The project would have a ***less-than-significant*** impact.

Mitigation Measure(s)
None Required.

Cumulative Impacts – Land Use

4.2-5 Increases in the intensity of land uses in the region due to the proposed project and all other projects in the Wheatland area.

Nichols Grove Tentative Map and Non-Participating Properties

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 sections of this DEIR.

However, the project site is designated for development in the Wheatland General Plan and the project involves a request to prezone the project site to Planned Development District. In addition, the final authority for determination of General Plan consistency rests with the Wheatland City Council. 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 amendment to the General Plan would be approved concurrently and an inconsistency would not occur because the project would be found generally consistent. 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

4.2-6 Conversion of Prime Farmland to urban uses.

Nichols Grove Tentative Map and Non-Participating Properties

The proposed project site has historically been used for agricultural operations. The project site is designated as Valley Agriculture in the Yuba County General Plan. However, the proposed project site is planned for residential, commercial, and park uses in the Wheatland General Plan. The proposed Nichols Grove Tentative Map project is approximately 485.5 acres and includes the development of 1,609 residential units, one commercial mixed use lot, seven park and open space lots totaling 70.5 acres (approximately 14.5 percent of the total acreage), four well lots, two school lots totaling 30 acres, and 30 miscellaneous lots. In addition, the proposed project would include the prezoning of the non-participating properties to Planned Development District.

According to page 4.2-12 of the Wheatland General Plan EIR, the City's surrounding landscape is designated for buildout, as seen in the Land Use Map, which would result in a loss of agricultural resources. According to the USDA Natural Resources Conservation Service, Yuba County Soil Survey, the soil complexes found on the project site include Conejo loam, 0 to 2 percent slopes; Kimball loam, 0 to 1 percent slopes; Redding gravelly loam, 3 to 8 percent slopes; and San Joaquin loam, 0 to 1 percent slopes. The majority of the site is composed of Conejo loam, 0 to 2 percent slopes, with the remainder largely composed of Kimball loam, 0 to 1 percent slopes. Both of these soils are designated as Prime Farmland soils by the Yuba County Soil Survey, and are well suited to intensive uses for irrigated crops. A small area along southern boundary of the site is composed of Redding gravelly loam, 3 to 8 percent slopes and San Joaquin loam, 0

to 1 percent slopes, which are not well suited for agriculture, and are primarily used for range, pasture, and woodland.

The Wheatland General Plan EIR concludes that the implementation of the goals and policies in the General Plan would minimize impacts to agriculture but the impacts to agriculture would remain *significant and unavoidable* because the General Plan buildout would convert prime agricultural land to non-agricultural uses. While the proposed project is consistent with the General Plan, implementation of the proposed project would convert prime farmland and other agricultural lands to urban uses, thus a ***significant*** impact would occur to agricultural land.

Mitigation Measure(s)
Consistent with the General Plan EIR, feasible mitigation measures do not exist to reduce the above impact to less-than-significant. Therefore, the impact would remain *significant and unavoidable*.

Cumulative Impacts – Agricultural Resources

4.2-7 Cumulative loss of agricultural land.

Nichols Grove Tentative Map and Non-Participating Properties

The proposed project site has historically been used for agricultural operations and is currently being farmed. However, the project site is planned for residential development in the Wheatland General Plan. In addition, the project site is designated as Valley Agriculture in the Yuba County General Plan. The Nichols Grove Tentative Map site is approximately 485.5 acres and includes the development of 1,609 residential units, one commercial mixed use lot, seven park and open space lots containing parks and landscape corridors, four well lots, two school lots, and 30 miscellaneous lots. A total of 91 mixed use residential units and 91 high-density residential units are also included in the project, all of which would result in the conversion of agricultural land to an urban area. The non-participating properties would be prezoned Planned Development, which allows for the development of projects that include combinations of residential, commercial, and employment uses consistent with the underlying General Plan designations.

The Wheatland General Plan EIR incorporates goals and policies to reduce adverse impacts to prime agricultural land as a result of buildout of the General Plan. Although agricultural resources are not currently fragmented, the Wheatland General Plan EIR found that the General Plan accommodates agriculture while providing for the balanced needs of the City. However, the proposed project in conjunction with other development in the General Plan Study Area would have a significant impact related to the loss of agricultural land.

Therefore, the proposed project in conjunction with cumulative development within the Sphere of Influence resulting from the buildout of the General Plan would result in a

significant regional loss of prime agricultural land. Therefore, the project would have a ***significant*** impact related to the cumulative loss of farmland.

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 General Plan*, July 2006.
[2] *City of Wheatland General Plan EIR*, July 2006.
[3] *USDA Natural Resources Conservation Service*, July 2005.
[4] California Department of Conservation, Farmland Mapping and Monitoring Program, *Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance*, Yuba County, 1998.

4.3 TRANSPORTATION AND CIRCULATION

INTRODUCTION

The Transportation and Circulation chapter analyzes transportation impacts that would result from the implementation of the proposed Nichols Grove project. The information is based on traffic movement counts, traffic projections, and technical analyses conducted for this EIR by KDAnderson Transportation Engineers[1] (See Appendix D). Potential impacts to the off-site roadways, 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.

PROJECT LOCATION

The proposed project is located on the eastern edge of the northern Sacramento Valley, adjacent to the northern border of the City of Wheatland within Yuba County and within the Wheatland Sphere of Influence. The 485.5-acre Nichols Grove Tentative Map site consists of two Yuba County parcels identified as Assessor's Parcel Numbers 015-360-003 and 015-150-092. Parcel number 015-150-092 is identified as the Nichols Ranch property and parcel number 015-360-003 is identified as the Powell property. In addition, the proposed project site includes 10 non-participating properties totaling 110.67 acres, which are located adjacent to the Nichols Grove Tentative Map site.

The proposed project is an existing agricultural site, which is surrounded to the north by existing agricultural land and Dry Creek, to the east by existing agricultural land, to the west by existing agricultural land, State Route 65 (SR 65), and UPRR tracks, and to the south by the northern Wheatland City limits and an existing residential neighborhood. The project would serve as a residential extension of the neighborhood located south of the site.

ENVIRONMENTAL SETTING

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

Study Area

Eight existing intersections and associated roadway segments were identified for investigation during the study scoping process based on their location along the routes that would provide access to the site.

Intersections

- SR 65 / Evergreen Drive
- SR 65 / McDevitt Drive
- SR 65 / First Street
- Olive Street / C Street
- Olive Street / B Street
- Olive Street / Nichols Drive
- Spenceville Road (Camp Beal Highway) / McCurry Street
- SR 65 / Main Street

Roadway Segments

- SR 65 north of McDevitt Drive
- SR 65 from McDevitt Drive to 1st Street
- SR 65 from 1st Street to Main Street
- SR 65 from Main Street to Bear River
- C Street between the site and Main Street
- B Street between the site and Main Street
- Nichols Drive north of Olive Street
- Main Street east of SR 65

Existing Roadway Network

Traffic conditions on the street and highway system in Wheatland are influenced by local and regional commuter travel patterns, access to adjacent businesses, and agricultural traffic. The following section includes a description of the streets serving the study area.

State Route 65 / D Street (SR 65)

State Route 65 is a north-south highway that traverses Placer and Yuba Counties and links the City of Wheatland with the Roseville-Sacramento area to the south and with the Yuba City – Marysville area to the north. State Route 65 begins as a four-lane controlled access freeway at I-80 and continues to the signalized Sunset Boulevard intersection in Rocklin. State Route 65 continues northerly as a four-lane expressway with at-grade intersections, although a pending project will add an interchange at Sunset Blvd. The highway narrows to a two-lane section through Lincoln and remains a two-lane roadway through Sheridan and Wheatland. In Wheatland, SR 65 is also known as D Street and has been widened through the Main Street and Fourth Street intersections to provide left turn lanes, but turn lanes do not currently exist at the more northerly downtown intersections. North of Wheatland SR 65 becomes a four-lane controlled access freeway near Beale Air Force Base.

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 Annual Average Daily Traffic (AADT) volume of 20,100 vehicles per day at the Placer County – Yuba County line (2005). The volume remains at that level 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 north of Wheatland, with roughly 1/3 of that volume being four and five axel trucks.

Long-term plans for SR 65 involve creation of alternative routes around existing urban areas. The Lincoln Bypass has cleared environmental review and would 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. Long range plans for a bypass of Wheatland have existed for many years, and the City of Wheatland General Plan Circulation Diagram envisions creation of a route on the east side of the City that would be funded locally.

The Wheatland street system is in the general form of a grid with streets running parallel and perpendicular to SR 65 and the UPRR tracks.

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 Air Force Base. 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 this study in early 2007 indicated that Main Street carried 3,070 Average Daily Trips (ADT) immediately east of SR 65 and 3,535 ADT between State Street and C Street (i.e., across the UPPR).

Second Street, Third Street, and Fourth 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. Fourth Street is designated an arterial street in the General Plan. Current daily traffic volumes across the UPRR are estimated at 820 ADT, 520 ADT, and 2,000 ADT on Second, Third, and Fourth Street(s) respectively.

C Street and B Street

The downtown grid system features two collector streets that run parallel to SR 65 east of the UPRR. C Street is one block east of the railroad, beginning at an intersection with Webb Street south of Main Street and continues north through the downtown to the project limits. C Street has a

travel lane in each direction and parallel on-street parking is permitted. B Street is designated as a collector street in the General Plan circulation element, features two travel lanes, and on street parking is permitted.

New traffic counts conducted for this study indicated that C Street carried 513 ADT between Olive Street and Main Street, while B Street carried 166 ADT between Main Street and Fourth Street.

Olive Street

Olive Street is a local street that traverses the northern downtown area. The alignment of Olive Street to the north follows a true east-west bearing, and as a result the intersections linking Olive Street and the downtown grid are "skewed." Single-family residences front the street, and the width of Olive Street varies along its length, with two-way travel permitted in the area west of C Street to Second Street and east of B Street to Main Street. However, the narrow portion of Olive Street between C and B Street is limited to one-lane of eastbound only travel.

Traffic volumes on Olive Street are light, and based on the peak hour volumes observed at Olive Street intersections it is estimated that the road carries approximately 700 vehicles per day west of C Street, 150 ADT between C Street and 4th Street and 1,400 vehicles per day east of Fourth Street.

Nichols Road

Nichols Road is a collector street that extends north from Olive Street in the area between the Fourth Street intersection and Main Street. Single family residences exist along both sides of the street, and on street parking is permitted. Based on the peak hour volumes observed at Olive Street intersections, Nichols Road is estimated to carry approximately 750 vehicles per day north of Olive Street.

McCurry Street

The Wheatland Ranch subdivision on the east side of Wheatland lies immediately south of the Nichols Grove project and the east end of Nichols Grove will have access through Wheatland Ranch's streets. McCurry Street is a local street that links Spenceville Road with the proposed project via other local streets such as Hudson Way and Sullivan Way. Each of these streets accommodates two lanes of travel and on-street parking, and single-family residences front onto each street. Based on review of peak hour counts at the Spenceville Road intersection, McCurry Street is estimated to carry approximately 1,250 vehicles per day.

McDevitt Drive

McDevitt Drive is an existing Collector street that extends west from SR 65 in northern Wheatland. McDevitt Drive provides access to the existing residential neighborhoods west of SR 65, but also connects the highway with Wheatland Jr. High School and with Wheatland Road via Wheatland Park Drive. McDevitt Drive will also be access for the pending Settlers Village Shopping Center. McDevitt Drive is a two-lane road with on-street parking. Traffic counts conducted in 2003 indicated that McDevitt Drive carried 2,060 ADT west of SR 65.

Evergreen Drive

Evergreen Drive is a collector street that intersects SR 65 in northern Wheatland and provides access to an existing subdivision near the northern limits of the community. This two-lane road accommodates on street parking and residences front along both sides of the road. Locally, Evergreen Drive is connected to McDevitt Drive via Spruce Avenue.

Existing Planned 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.

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" were determined at study area intersections and on individual roadway segments. "Level of Service" (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 City of Wheatland General Plan Circulation Element establishes the allowable Level of Service standard for roadways and intersections, while Caltrans has also established goals for state highways. The City of Wheatland GP establishes LOS C as the applicable standard on city streets, while LOS D is the minimum for state highways and for locations within ¼ mile of a state highway.

Existing Conditions

Under existing conditions, the volume of traffic on SR 65 through Wheatland already exceeds the planning level threshold identified in the General Plan EIR for minimum Level of Service (i.e., LOS C on city streets and county roads and LOS D on state highways and at locations within ¼ mile of state highways through the City of Wheatland). Motorists waiting to turn onto SR 65 experience peak period delays that are indicative of Levels of Service in excess of these minimum standards. As shown in Figure 4.3-1, all of the study intersections are currently stop sign controlled; however, traffic signals are planned at the SR 65 / 1st Street and SR 65 / Main Street intersections.

Peak Hour Intersection Levels of Service

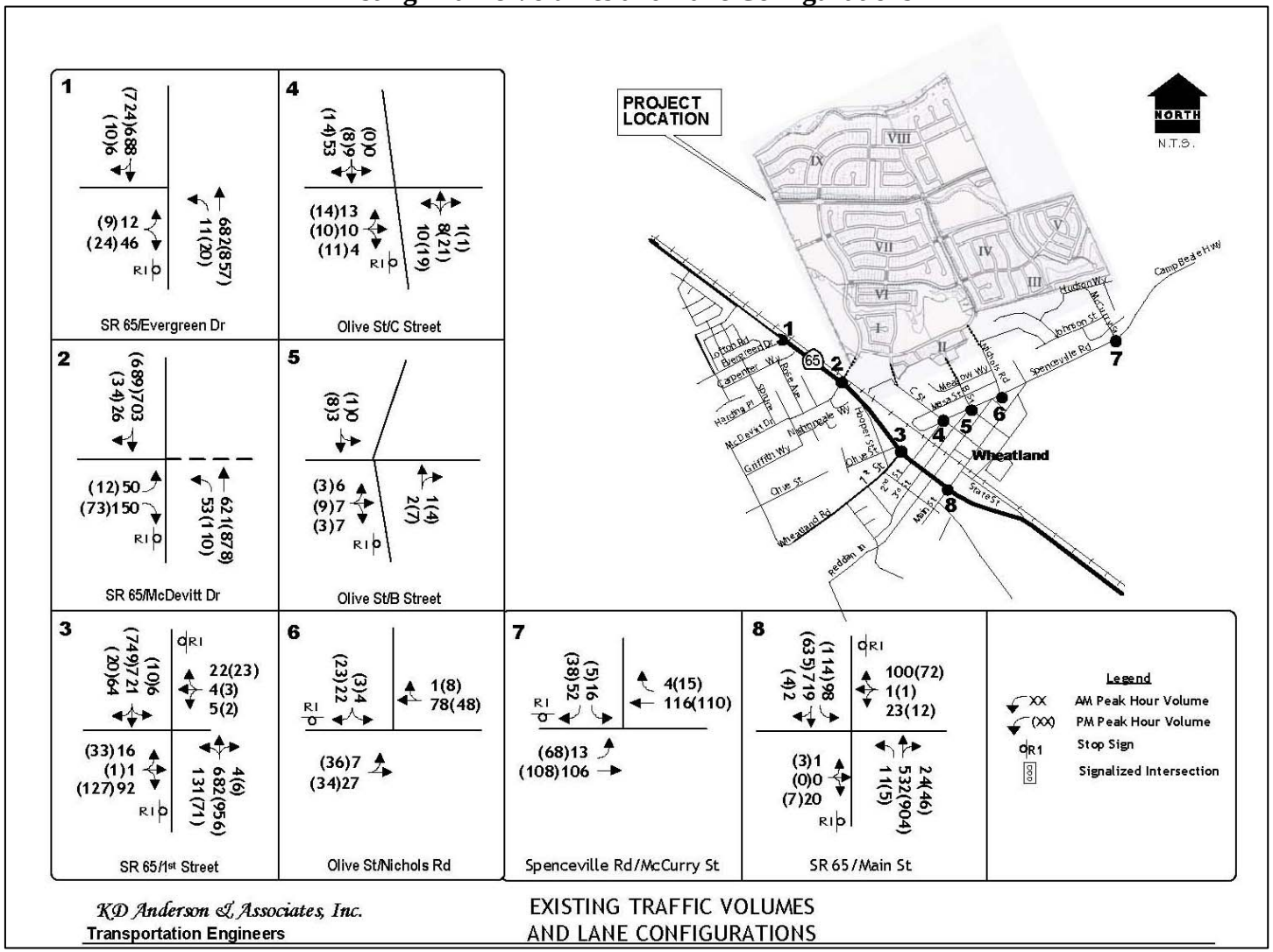
Current A.M. and P.M. peak hour Levels of Service were calculated at the study intersections (Refer to the Technical Appendix of the Traffic Impact Analysis for calculation worksheets) and are summarized in Table 4.3-2. Current Levels of Service were compared to adopted standards to determine whether existing conditions are satisfactory.

Table 4.3-1
Levels of Service Definitions

Level of Service	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.

Source: 2000 Highway Capacity Manual.

Figure 4.3-1
Existing Traffic Volumes and Lane Configurations



Source: KDAnderson & Associates, Inc., 2007

Table 4.3-2
Existing Levels of Service

Location	Control	Peak Hour Level of Service				Traffic Signal Warranted?
		AM Peak Hour		PM Peak Hour		
		Average Delay	LOS	Average Delay	LOS	
SR 65 / Evergreen Drive	EB Stop					
NB left turn		9.5 sec	A	9.8 sec	A	No
EB left+thru+right turn		22.1 sec	C	27.7 sec	D	
SR 65 / McDevitt Drive						
NB left turn	SB Stop	10.0 sec	B	10.2 sec	B	No
EB left turn		**67.3 sec**	**F**	**82.3 sec**	**F**	
EB right turn		20.6 sec	C	16.2 sec	C	
SR 65 (D Street) / First Street	EB / WB					
NB left turn	Stop	11.3 sec	B	10.2 sec	B	Yes
SB left turn		9.5 sec	A	10.8 sec	B	
EB left+thru+right turn		**136.4 sec**	**F**	**407.9 sec**	**F**	
WB left+thru+right turn		**81.0 sec**	**F**	**51.1 sec**	**F**	
	Signal	20.9 sec	C	21.4 sec	C	-
Olive Street / C Street						
NB left turn	EB Stop	7.4 sec	A	7.3 sec	A	No
EB left+thru+right turn		9.2 sec	A	9.1 sec	A	
Olive St / B Street						
SB left turn	EB Stop	-	-	7.2 sec	A	No
EB left+thru+right turn		8.7 sec	A	8.9 sec	A	
Olive Street / Nichols Drive						
EB left turn	SB Stop	7.4 sec	A	7.4 sec	A	No
SB left+right turn		8.9 sec	A	8.8 sec	A	
Spenceville Rd / McCurry St						
EB left turn	SB Stop	7.5 sec	A	7.6 sec	A	No
SB left turn		10.2 sec	B	11.2 sec	B	
SB right turn		9.2 sec	A	9.1 sec	A	
SR 65 / Main Street						
NB left turn	EB/WB	9.6 sec	A	9.2 sec	A	Yes
SB left turn	Stop	9.4 sec	A	12.1 sec	B	
EB left+thru+right turn		18.4 sec	C	**63.3 sec**	**F**	
WB left+thru+right turn		**44.9 sec**	**E**	**71.5 sec**	**F**	
	Signal	15.2 sec	C	19.4 sec	C	-

Note: **Bold** is LOS in excess of standard.
Source: KDAnderson & Associates, Inc., 2007

As noted, the delays experienced by motorists waiting to turn onto SR 65 in Wheatland are long enough to be indicative of Levels of Service in excess of the adopted standards (i.e., LOS D, E or F). The City of Wheatland and Caltrans have determined that traffic signal warrants are satisfied at

the SR 65 / First Street and SR 65 / Main Street intersection, and as a result, an improvement project to concurrently widen SR 65 and signalize these two intersections is being pursued. Planned improvements will include left turn lanes on SR 65 at downtown intersections, and the Main Street intersection will be configured to provide separate left turn lanes on the approaches to SR 65 as well. With signalization, the two intersections will operate with Levels of Service that meet minimum standards.

The delays experienced at the SR 65 / Evergreen Drive and SR 65 / McDevitt Drive intersection also exceed the City's LOS C standard. However, the volume of traffic occurring today at these intersections does not reach the level that satisfies peak hour traffic signal warrants. Thus, conditions at these locations would be judged to be satisfactory even though individual Levels of Service exceed the City's minimum.

Roadway Levels of Service

The current roadway segment Level of Service on study area roads is presented in Table 4.3-3. As shown, the Annual Average Daily Traffic (AADT) reported by Caltrans (20,100 AADT) is indicative of LOS F conditions. The volume of traffic on all other streets in Wheatland is indicative of LOS C or better conditions.

Table 4.3-3
Existing Average Daily Traffic Volumes and Resulting Levels of Service

Street	Location	Classification	ADT*	Lanes	LOS
SR 65	North of Evergreen Drive	Arterial	20,100	2	**F**
	Evergreen Drive to McDevitt Drive		20,100	2	**F**
	McDevitt Drive to First Street		20,100	2	**F**
	First Street to Main Street		20,100	2	**F**
	Main Street to State Street		20,100	2	**F**
	State Street to Bear River		20,100	2	**F**
C Street	Olive Street to Project limits	Collector	600	2	A
	Main Street to Olive Street		515	2	A
B Street	Olive Street to project limits	Collector	160	2	A
	Main Street to Olive Street		165	2	A
Nichols Rd	Olive Street to Project limits		750 (e)	2	A
Olive Street	West of C Street		700	2	A
	C Street to B Street (one way)		150	2	A
	B Street to Fourth Street		150	2	A
	Fourth Street to Nichols Rd		1,400	2	A
	Nichols Road to Spenceville Rd		900	2	A
Main Street	SR 65 to State Street		3,070	2	A
	State Street to C Street	Arterial	3,575	2	A
	C Street to B Street	Arterial	3,000 (e)	2	A
	B Street to Spenceville Road	Arterial	3,000 (e)	2	A
Spenceville Rd	Olive Street to McCurry St	Arterial	3,250	2	A

Note: **Bold** is condition in excess of minimum standard. * is Caltrans 2005 AADT. (e) is estimated volume.

Source: KDAnderson & Associates, Inc., 2007

UPRR Crossings

The Union Pacific Railroad (UPRR) runs through downtown Wheatland along an alignment that is roughly parallel to SR 65. The following four public at-grade crossings of the UPPR are located in downtown Wheatland:

- Second Street
- Third Street
- Fourth Street
- Main Street

All 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 at three locations:

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

Because the UPPR passes through the center of Wheatland, pedestrians cross the tracks at various times during the day. Most 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 UPPR as part of their walk to and from school. This pedestrian activity is concentrated at a guarded pedestrian crossing at the SR 65 / Second 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[2] school age children cross the highway in the morning and afternoon. Nearly all of this activity also occurs over the UPPR as well.

The Wheatland General Plan reveals 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 second Street and Third Street crossings will be closed. Funding for these crossings will be accumulated as part of the City's updated traffic impact mitigation fee program.

Safety Deficiencies

The extent to which the study area circulation system meets minimum standards for safety has been evaluated with regard to sight distance standards and the potential for automobile / pedestrian conflicts. Two locations are noteworthy. The Spenceville Road / McCurry Street intersection is

located at the beginning of a curve on Spenceville Road. A sound wall was constructed as the Wheatland Ranch subdivision was built and, as a result, the sight distance looking east from McCurry Street is limited. An all-way stop could be considered at this location.

The existing downtown street system is comprised of wide two-lane streets. A few portions of the existing downtown street system do not meet current City standards for sidewalk, etc., and in some cases the condition of pavement is poor.

REGULATORY CONTEXT

Existing transportation polices, 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. State Route 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 this chapter 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.

Impacts and Mitigation Measures

Standards of Significance

A traffic impact would be significant if any of the following conditions, or potential thereof, would result from implementation of the proposed project.

- Cause an intersection or roadway segment operating at an acceptable LOS (A, B, C, or D with one-quarter mile of state highways) to deteriorate to an unacceptable LOS (LOS D or LOS E on state highways);

- Add an appreciable amount of traffic to a facility operating at an unacceptable LOS:

    1. For roadway segments, an "appreciable" traffic volume increase is two percent of the roadway capacity.
    2. For signalized intersections, an "appreciable" volume increase results in a 5.0 second or greater increase in average delay during the peak hour.
    3. At unsignalized intersections, an "appreciable" volume increase results in the satisfaction of peak hour warrants as a result of the increase.
    4. At unignalized intersections already meeting warrants, an "appreciable" volume increase results in a 5.0 second or greater increase in side street delay.

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans or program supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Methods of Analysis

The traffic impact report for the Nichols Grove project dated September 19, 2007, was prepared by KDAnderson Transportation Engineers. The report analyzes the traffic impacts associated with development of the 485.5-acre Nichols Grove Tentative Map project. The Nichols Grove Tentative Map project consists of 1,609 residential units, two school sites, parks, and an approximately 12-acre mixed-use commercial site. Impacts of the project were considered within the context of existing traffic conditions, future traffic conditions occurring from General Plan build out, as well as cumulative impacts.

At the direction of City and Caltrans staff, this analysis considers six (6) scenarios:

1. **Existing Plus Nichols Grove Conditions:** Existing traffic plus trips generated by the proposed project with those elements of the local system proposed with the project;
2. **Five Year Existing Plus Approved Projects Conditions:** Existing traffic plus the trips generated by other approved projects with the mitigation measures required of those projects, and background through traffic growth on SR 65;
3. **Five Year Existing Plus Approved Projects Plus Nichols Grove Conditions:** Conditions occurring five years in the futures with the addition of Nichols Grove;
4. **Year 2025 Conditions under Adopted Wheatland General Plan:** The new Wheatland General Plan includes development of the land uses contained in Nichols Grove and development of the Wheatland Bypass; and
5. **Year 2025 Conditions with Nichols Grove:** While the land uses in Nichols Grove are consistent with the General Plan, the Nichols Grove plan proposed elimination of one segment of collector street identified in the General Plan Circulation diagram. This scenario addresses the long-term ramifications of circulation system changes contained in the plan for Nichols Grove. This scenario provides information regarding traffic conditions at internal intersections under General Plan buildout conditions.

Levels of Service

As previously mentioned, a Level of Service may be calculated on a street or roadway segment. In urban areas general roadway LOS can suggest probable peak hour conditions based on application of typical peak hour/daily traffic relationships.

Levels of Service is calculated for different intersection control types using the applicable methodology contained in the *Highway Capacity Manual*, while Level of Service can also be generally determined based on daily traffic volumes.

Signalized Intersections

Procedures used for calculating Levels of Service at signalized intersections are as presented in the *Highway Capacity Manual, 2000 edition*. 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.

Unsignalized Intersections

The procedure for calculating the Level of Service 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 Level of Service grade, a Level of Service is calculated for the intersection but can also be calculated for each movement yielding the right-of-way to others. Levels of Service 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).

Level of Service Based on Daily Traffic Volumes on Roadway Segments

In urban areas, level of service thresholds have been used which suggest the volume of daily traffic that would normally produce the respective peak hour levels of service, assuming the installation of typical traffic control devices (i.e., traffic signals, stop signs). Table 4.3-4 presents the daily traffic volume thresholds associated with each LOS grade in the City of Wheatland GPU EIR.

Table 4.3-4
Daily Traffic Volume Level of Service Thresholds

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	
Urban Street						
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	28,300	31,900	31,900	35,900	35,900	39,900
Rural Roads						
2 lane - Level - Typical Existing	3,675	6,000	6,000	10,500	10,500	17,500

Source: KD Anderson & Associates, Inc., 2007

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, peak hour rates presented in the 7th Edition of the ITE publication *Trip Generation* were consulted. Applicable rates are indicated in Table 4.3-5.

Table 4.3-5
Trip Generation Rates

Land Use	Unit	Daily Trip Rate	AM Peak Hour			PM Peak Hour Rate		
			In	Out	Total	In	Out	Total
Single Family Residence	Dwelling unit	9.60	0.19	0.56	0.75	0.65	0.36	1.01
Multiple Family Residence	Dwelling unit	6.62	0.10	0.41	0.51	0.40	0.22	0.62
Neighborhood Commercial	ksf	61.95	0.86	0.55	1.41	2.75	2.98	5.72
Middle School	Student	1.62	0.29	0.24	0.53	0.08	0.07	0.15
Elementary School	Student	1.29	0.23	0.19	0.42	0.05	0.05	0.10

Source: KDAnderson & Associates, Inc., 2007

Table 4.3-6 presents estimated site trip generation under the current proposal. As indicated, the project is expected to generate a gross total of 25,186 daily trip ends. Of this total, 2,075 trip ends are expected during the A.M. peak hour and 2,494 trip ends are expected to occur during the P.M. peak hour.

Table 4.3-6
Trip Generation Estimate

Land Use	Quantity	Daily Trips	AM Peak Hour			PM Peak Hour Rate		
			In	Out	Total	In	Out	Total
Single Family Residence	1,427 dwelling units	13,700	271	799	1,070	928	514	1,442
Multiple Family Residence	182 dwelling units	1,200	18	75	93	73	40	113
Neighborhood Commercial	130.0 ksf	8,054	112	71	183	357	387	744
Middle School	900 students	1,458	261	216	477	72	63	135
Elementary School	600 students	774	138	114	252	30	30	60
Gross Total		25,186	800	1,275	2,075	1,460	1,034	2,494

Source: KDAnderson & Associates, Inc., 2007

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 the northern Placer County/southern Yuba County. To quantify the project trip distribution, information developed from other recent traffic studies and from the City's General Plan Update traffic model was reviewed. The relative scale of the project's non-residential uses was also considered with regard to internal trip "matching." After accounting for both "internal trip interaction" (See Table 4.3-7) and retail "pass-by trips," the project's regional external trip distribution was identified, as indicated in Table 4.3-8. Figure 4.3-2 depicts the project-only assignment of trips through the study intersections.

Table 4.3-7
Project Internal / External Trip Split Estimate

Land Use	Quantity	Daily Trips	AM Peak Hour			PM Peak Hour Rate		
			In	Out	Total	In	Out	Total
Residential	1,609 dwelling units							
Single Family Residence	1,427 dwelling units	13,700	271	799	1,070	928	514	1,442
Multiple Family Residence	182 dwelling units	1,200	18	75	93	73	40	113
Residential Subtotal		14,900	289	864	1,163	1,001	554	1,555
<Match to Schools>		<745>	<29>	<86>	<115>	<0>	<0>	<0>
<Match to Commercial>		<1,490>	<29>	<86>	<115>	<100>	<56>	<156>
External To Site		12,665	231	692	923	901	498	1,399
Neighborhood Commercial	130.0 ksf	8,054	112	71	183	357	387	744
< "Pass by" (15% am, 30% pm, 30% daily)>		<2,416>	<17>	<11>	<27>	<107>	<116>	<223>
"New Trips"		5,638	95	60	155	250	271	521
<Match to Residential>		<1,490>	<86>	<29>	<115>	<56>	<100>	<156>
External to Site		4,148	9	41	50	194	171	365
Middle School	900 students	1,458	261	216	477	72	63	135
<Match to Residential>		<373>	<43>	<15>	<58>	<0>	<0>	<0>
<"Link Diverted">		<210>	<44>	<57>	<101>	<72>	<63>	<135>
External to Site (66.7% in a.m., 60% Daily)		875	174	144	318	0	0	0
Elementary School	600 students	774	138	114	252	30	30	60
<Match to Residential>		<242>	<43>	<15>	<58>	<0>	<0>	<0>
<"Link Diverted">		<300>	<43>	<56>	<99>	<30>	<30>	<60>
External to Site (37.5% a.m., 30% daily)		232	52	43	95	0	0	0
Gross Total		25,186	800	1,275	2,075	1,460	1,034	2,494
<Internal>		<7,266>	<334>	<355>	<688>	<365>	<365>	<730>
External to site		17,920	466	920	1,387	1,095	669	1,764

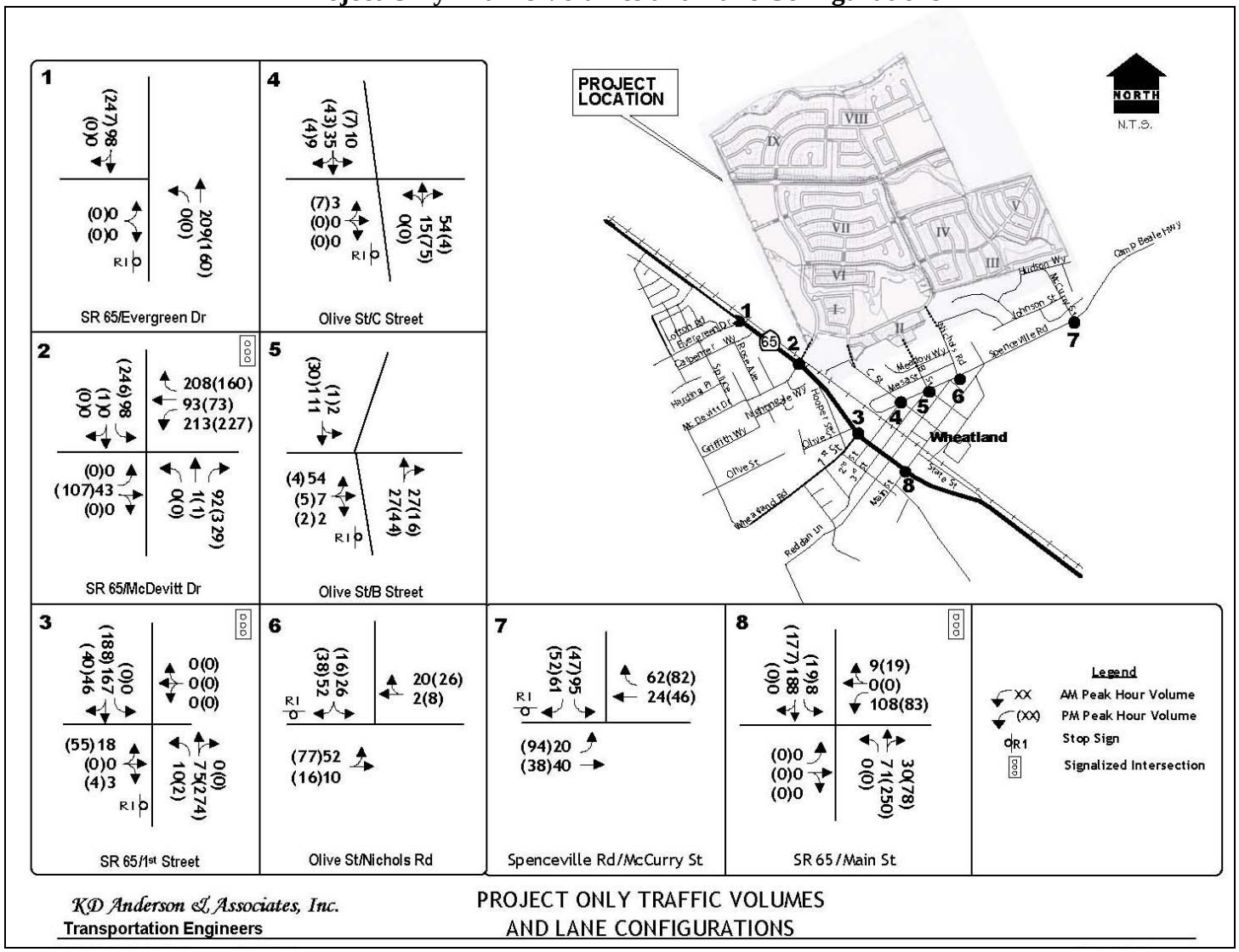
Source: KDAnderson & Associates, Inc., 2007

Table 4.3-8
Directional Trip Distribution for Nichols Grove Tentative Map

Land Use	Daily Trips		AM Peak Hour				PM Peak Hour Rate			
			In	Out	Total	Percent	In	Out	Total	Percent
Residential	100%	14,900	289	864	1,163	100%	1,001	554	1,555	100%
Internal to Site	15%	2,235	58	172	230	20%	100	56	156	10%
Within Wheatland	10%	1,490	29	86	115	10%	100	56	156	10%
North on SR 65 beyond Evergreen Dr	20%	2,980	58	172	230	20%	200	112	312	20%
South on SR 65 beyond Bear River	35%	5,215	87	258	345	30%	400	224	624	40%
East on Spenceville Road	5%	745	29	86	115	10%	100	56	156	10%
West on Wheatland Road	5%	745	29	86	115	10%	100	56	156	10%
Neighborhood Commercial	100%	5,638	95	60	155	100%	250	271	521	100%
Internal to Site	26.6%	1,500	86	29	115	71.8%	194	171	365	29.2%
Within Wheatland	14.8%	834	2	8	10	5.6%	11	20	31	14.0%
North on SR 65 beyond Evergreen Dr	18.4%	1,037	3	13	16	7.1%	14	25	39	17.7%
South on SR 65 beyond Bear River	14.7%	829	2	7	9	5.6%	11	20	31	14.2%
East on Spenceville Road	10.9%	615	2	6	8	4.3%	9	15	24	10.7%
West on Wheatland Road	14.6%	823	2	7	9	5.6%	11	20	31	14.2%
Middle School	100%	1,458	261	216	477	100%	72	63	135	100%
Internal to Site	40%	583	87	72	159	33.3%	72	63	135	100%
Within Wheatland	25%	365	70	58	128	26.7%	0	0	0	0%
North on SR 65 beyond Evergreen Dr	10%	146	26	22	48	10%	0	0	0	0%
South on SR 65 beyond Bear River	10%	146	26	22	48	10%	0	0	0	0%
East on Spenceville Road	10%	146	39	33	72	15%	0	0	0	0%
West on Wheatland Road	5%	73	13	11	24	5%	0	0	0	0%
Elementary School	100%	774	138	114	252	100%	30	30	60	100%
Internal to Site	70%	232	52	43	95	62.5%	30	30	60	100%
Within Wheatland	15%	116	24	20	44	17.5%	0	0	0	0
North on SR 65 Beyond Evergreen Dr	2.5%	19	7	6	13	5.0%	0	0	0	0
South on SR 65 Beyond Bear River	2.5%	19	7	6	13	5.0%	0	0	0	0
East on Spenceville Road	10.0%	77	14	11	25	10.0%	0	0	0	0
West on Wheatland Road	0.0%	0	0	0	0	0.0%	0	0	0	0

Source: KDAnderson & Associates, Inc., 2007

Figure 4.3-2
Project Only Traffic Volumes and Lane Configurations



Source: KDAnderson & Associates, Inc., 2007

Existing Plus Nichols Grove Tentative Map Analysis

Using the trip generation and distribution described above, project generated automobile trips were superimposed on current background traffic, as indicated in Figure 4.3-3. Resulting "Existing Plus Project" Levels of Service were calculated for the study intersections under these conditions (See Table 4.3-9).

Five Year Existing Plus Approved Projects With and Without Nichols Grove

Assumptions

The traffic study considers the potential impacts of the proposed project within the context of development of other known projects and short-term background traffic growth on SR 65. Standard Caltrans direction for this scenario involves identification of conditions occurring five years in the future.

Approved Development

Traffic volumes on streets in Wheatland would increase in the near-term as approved projects are developed and occupied. Based on input from the City of Wheatland Staff, the traffic analysis assumes the following projects would be completed within five years:

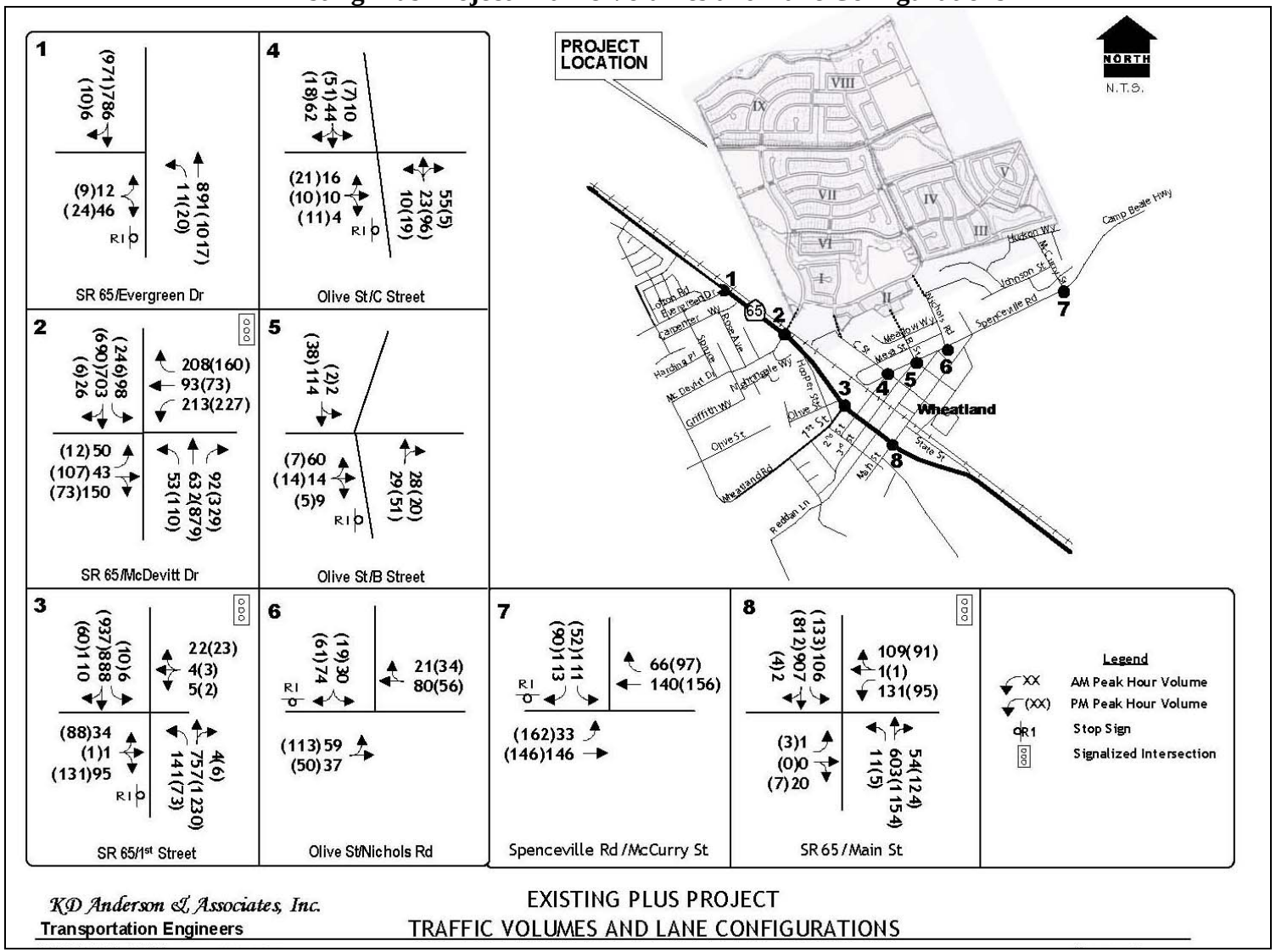
- Jones Ranch: 552 single-family residences, a small commercial center and elementary school on Wheatland Road west of the High School.
- Heritage Oaks: 604 single family residences, plus a shopping center and mini-storage located on the west side of SR 65 south of the developed area of the City and north of the Bear River Bridge.
- Almond Estates: 169 single-family residences located on the west side of SR 65 north of Evergreen Drive.
- Settlers Village: a retail center on the northwest corner of the SR 65 / McDevitt Drive intersection totaling 45 ksf.

Each of these projects has already been the subject of site-specific traffic studies that documented assumptions relating to trip generation and assignment. These assumptions have been employed to assign new trips from each use to the portion of the Wheatland circulation system addressed in this analysis.

Through Traffic Growth on SR 65

The volume of traffic on SR 65 through Wheatland will continue to increase in the future regardless of development in Wheatland. For example, Yuba County development in the Plumas Lake and East Linda areas will result in new residents who are likely to have jobs in the Placer County area.

Figure 4.3-3
Existing Plus Project Traffic Volumes and Lane Configurations



Source: KDAnderson & Associates, Inc., 2007

Table 4.3-9
Existing Plus Project Levels of Service

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warranted?
		Existing		Existing Plus		Existing		Existing Plus		
		Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	
SR 65 / Evergreen Drive	EB Stop									
NB left turn		9.5 sec	A	10.0 sec	B	9.8 sec	A	11.1 sec	B	No
EB left+thru+right turn		22.1 sec	C	31.3 sec	D	**27.7 sec**	D	52.3 sec	F	
SR 65 / McDevitt Drive										
NB left turn	EB / WB	10.0 sec	B			10.2 sec	B			N.A
SB left turn	Stop	-	-			-	-			
EB left turn		**67.3 sec**	**F**			**82.3 sec**	**F**			
EB thru+right turn		20.6 sec	C			16.2 sec	C			
WB left turn		-	-			-	-			
WB thru		-	-			-	-			
WB right turn		-	-			-	-			
	Signal	-	-	35.9 sec	D	-	-	75.4 sec	**E**	
SR 65 (S Street) / 1st St	Signal	20.9 sec	C	43.0 sec	D	21.4 sec	C	**64.5 sec**	**E**	
Olive Street / C Street										
SB left turn	EB Stop	-	-	7.5 sec	A	-	-	7.4 sec	A	No
NB left turn		7.4 sec	A	7.4 sec	A	7.3 sec	A	7.4 sec	A	
EB left+thru+right turn		9.2 sec	A	9.9 sec	A	9.1 sec	A	10.0 sec	B	
Olive St / B Street										
SB left turn	EB Stop	-	-	7.3 sec	A	7.2 sec	A	7.4 sec	A	No
EB left+thru+right turn		8.7 sec	A	10.1 sec	B	8.9 sec	A	9.5 sec	A	
Olive Street / Nichols Drive										
EB left turn	SB Stop	7.4 sec	A	7.5 sec	A	7.4 sec	A	7.6 sec	A	No
SB left+right turn		8.9 sec	A	9.8 sec	A	8.8 sec	A	9.8 sec	A	
Spenceville Rd / McCurry St										
EB left turn	SB Stop	7.5 sec	A	7.8 sec	A	7.6 sec	A	8.3 sec	A	No
SB left turn		10.2 sec	B	12.5 sec	B	11.2 sec	B	16.7 sec	C	
SB right turn		9.2 sec	A	9.7 sec	A	9.1 sec	A	9.7 sec	B	
SR 65 / Main Street	Signal	15.2 sec	C	21.5 sec	C	19.4 sec	C	**72.4 sec**	**E**	

Note: **Bold** is LOS in excess of standard.
Source: KDAnderson & Associates, Inc., 2007.

For this analysis, the assumption has been made that "through" traffic on SR 65 through Wheatland will continue to increase at the rate implied from comparison of recent traffic counts. Assuming that traffic entering or leaving SR 65 at Wheatland intersections is not "through," turning movement counts at intersections along SR 65 were reviewed to identify the share of current traffic that is "local" versus the portion that is "through." As shown in Table 4.3-10, through traffic represents approximately 80 percent of the northbound traffic on SR 65 during the A.M. and P.M. peak hours. In the southbound direction through traffic is between 60 percent and 65 percent of the total. The difference is likely the result of Wheatland schools that are located on the west side of SR 65 and attract considerable southbound traffic. On a daily basis, 70 percent of the reported daily traffic is estimated to be "through" traffic, or 14,000 ADT.

Table 4.3-10
Through Traffic on SR 65 in Wheatland

	Percentage "Through" Traffic			
	A.M. Peak Hour		P.M. Peak Hour	
Direction	Percentage	Current Vph	Percentage	Current Vph
Northbound on SR 65	81.7%	470	76.5%	730
Southbound on SR 65	63.1%	500	62.5%	435

Source: KDAnderson & Associates, Inc., 2007.

Review of Caltrans traffic counts indicates that the total volume of traffic on SR 65 has been increasing at a rate of approximately 6.5% annually over the last 10 years. This would suggest an increase in through traffic of 38% over the next 5 years. This factor was applied to the current through traffic volume during each time period. On a daily basis this assumption would suggest another 5,300 ADT on SR 65 that is not related to development in Wheatland.

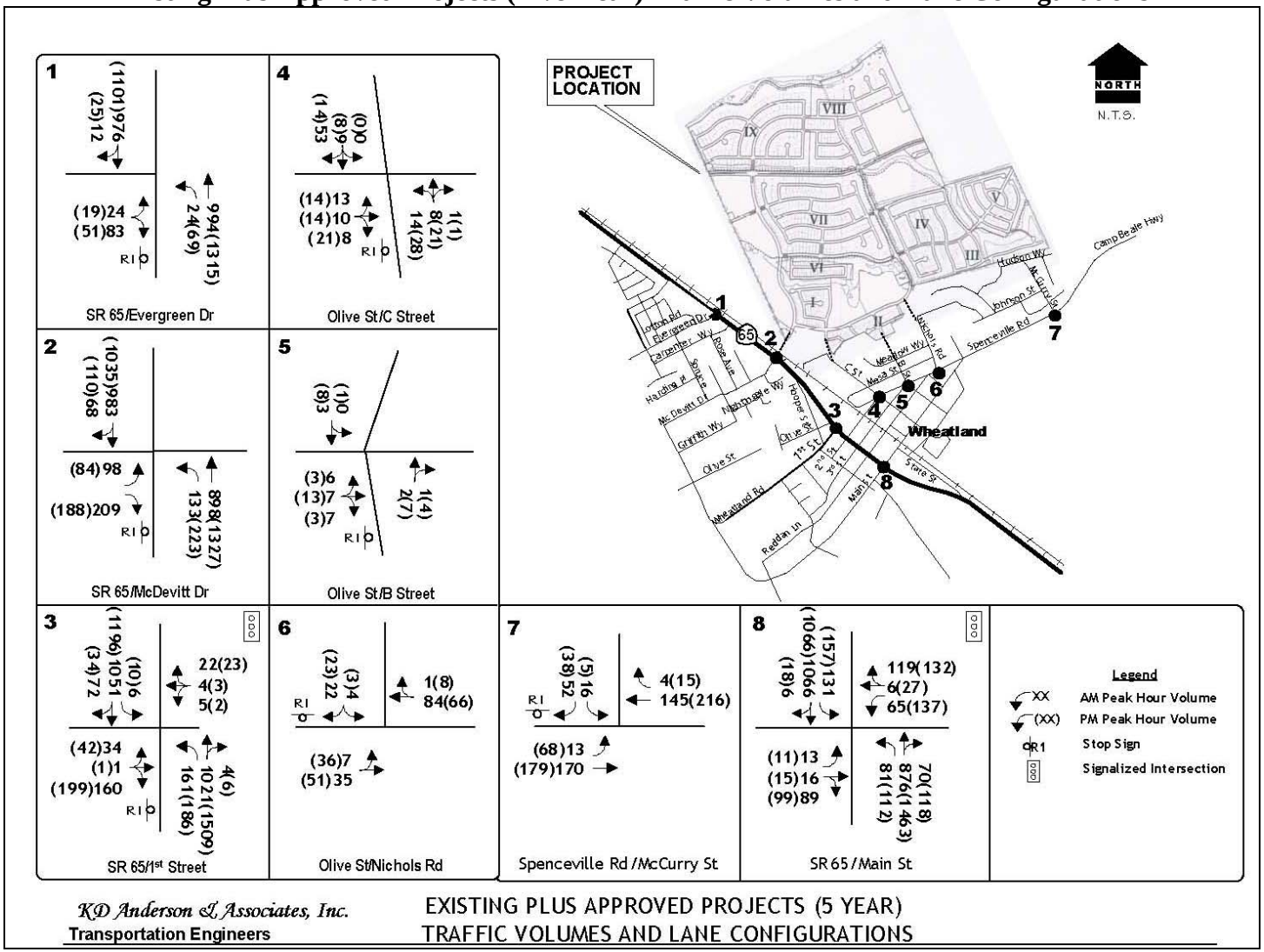
Recent and Planned Improvements

Improvements to the study area circulation system will accompany development occurring in Wheatland over the next five years. The recent and planned improvements include the already completed signalization of the 1st Street/SR 65 intersection; as well as, the Main Street traffic signal and mainline SR 65 improvements planned by the City and Caltrans. In addition, the Jones Ranch project is conditioned to extend Main Street west from SR 65 along the south side of Wheatland High School to intersect a southerly extension of Wheatland Park Drive. Wheatland Park Drive would provide an alternative to First Street for west side circulation, and is also assumed to be in place. While the approved Heritage Oaks project is currently processing an encroachment permit for improvements to SR 65, this work is located south of the study area.

Traffic Volume Forecasts

Figure 4.3-4 displays the resulting A.M. and P.M. peak hour traffic forecasts at the study intersections for the Five Year Existing Plus Approved Projects base condition.

Figure 4.3-4
Existing Plus Approved Projects (Five-Year) Traffic Volumes and Lane Configurations



Source: KDAnderson & Associates, Inc., 2007.

The process employed to create "Five Year Plus Project" traffic volume forecasts was similar to that employed to create "Existing Plus Project" volumes. However, the introduction of new commercial uses in Wheatland (i.e., Settlers Village, Heritage Oaks Retail and Jones Ranch Retail) resulted in slightly different distribution patterns for Nichols Grove's residentially generated trips. Similarly, the creation of new residences in approved projects had the effect of slightly modifying the distribution assumptions for the trips generated by the Nichols Grove Tentative Map mixed-use area. Five Year Plus Nichols Grove traffic volumes are presented in Figure 4.3-5.

Future Cumulative Traffic Conditions (Year 2025) With and Without Project

The relative impacts of Nichols Grove Tentative Map and non-participating properties were addressed under the long-term (2025) conditions considered in the recent City of Wheatland General Plan Update EIR. The document included a traffic impact analysis that evaluated traffic conditions occurring with build out of the GPU land use map along with the implementation of the GP Circulation diagram. Daily and p.m. peak hour traffic volume forecasts were made using a version of the Caltrans' Tri-County regional travel demand forecasting model that had been modified to provide greater detail in Wheatland and to incorporate land use circulation system changes.

Year 2025 Traffic Volume Forecasts

The GPU EIR considered traffic conditions occurring with buildout of the City of Wheatland General Plan. Because the adopted General Plan and uses differ slightly from those assumed in the DEIR, the future traffic volumes presented herein are based on new long-term traffic volume forecasts made using the GPU EIR traffic model.

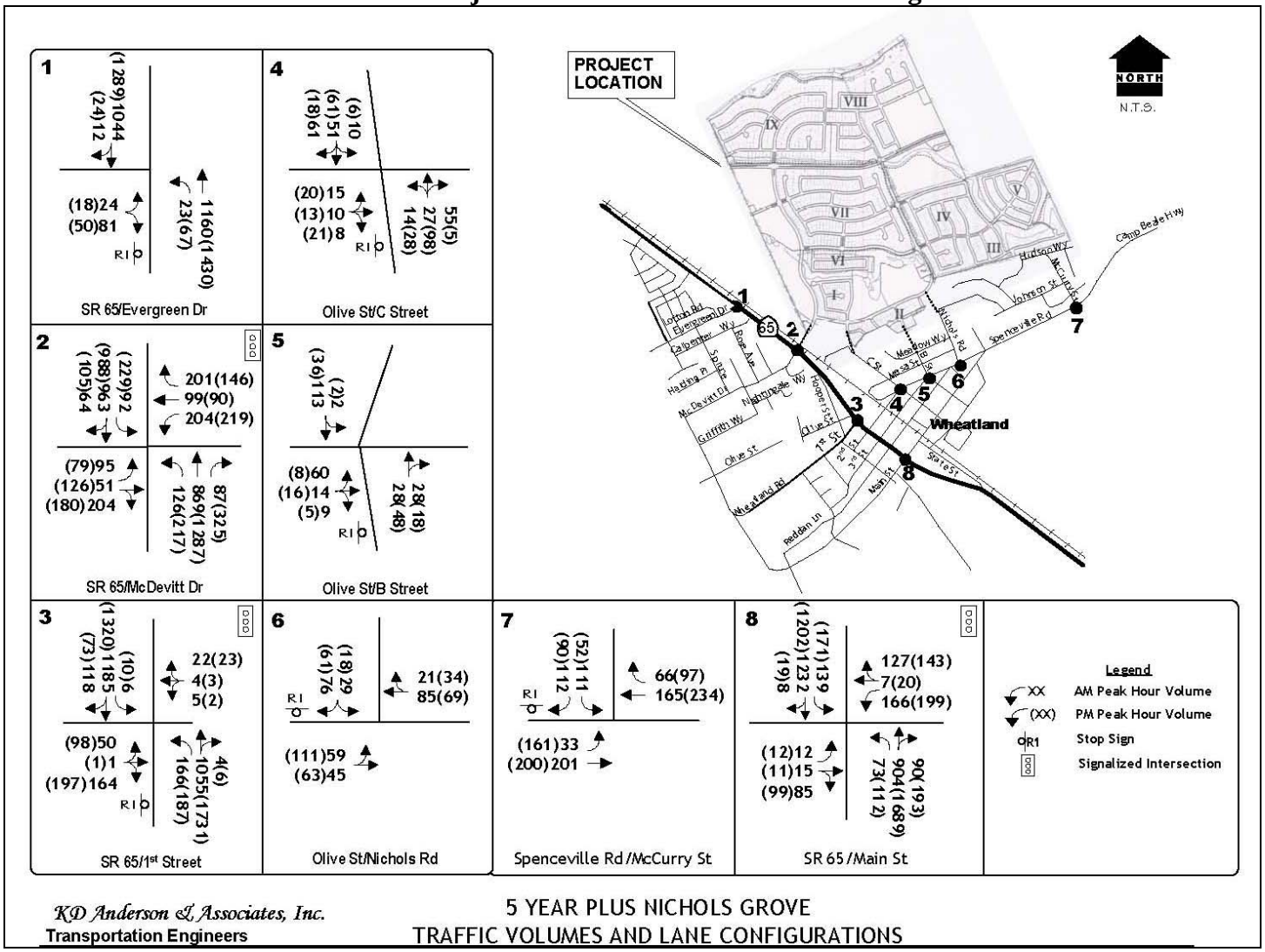
Planned Circulation System Improvements

The future traffic scenarios addressed herein assumes both area-wide development and implementation of the circulation system inherent to the City of Wheatland GP Circulation Element. The GP Circulation Diagram identifies several new streets that will carry traffic through the community and provide access to new growth areas, including Ring Road and collector streets on the east side of the City.

Ring Road

New development in Wheatland will be served by a four-lane Ring Road that generally circles the community and crosses over the UPRR and SR 65 at locations both north and south of the developed downtown area. The GP Circulation Diagram indicates that the Ring Road will intersect Spenceville Road in the area of the planned Wheatland Bypass Interchange. The Ring Road will also extend west from the southern UPRR / SR 65 crossing to Oakley Lane.

Figure 4.3-5
Five-Year Plus Project Traffic Volumes and Lane Configurations



Source: KDAnderson & Associates, Inc., 2007.

East Side Collectors

The GP indicates that new development east of SR 65 will be served by northerly collector street extensions from the existing downtown area. The GP Circulation Diagram indicates that B Street, C Street and Nichols Road are to extend north to the Ring Road. However, the current Nichols Grove plan proposes that the B Street extension be terminated in the center of a project area, rather than extending all the way to the Ring Road. As a result, the project includes a General Plan Amendment to delete this extension from the General Plan Circulation Diagram (See Section 4.1, Land Use and Agricultural Resources, for further discussion).

Traffic Model Forecasts

The traffic volume forecasts were made of the baseline General Plan condition (Adopted Circulation Diagram) and for the "Plus Nichols Grove" scenario. For this analysis, the model was employed to identify A.M. and P.M. peak hour turning movement volumes at study intersections, and the model was also used to forecast daily traffic volumes on study area streets.

Peak Hour Intersection Volumes

A.M. and P.M. peak hour traffic volumes accompanying buildout of the adopted Wheatland GP are presented in Figure 4.3-6. Figure 4.3-7 presents peak hour volumes at study intersections assuming implementation of the circulation diagram change planned within Nichols Grove. Figure 4.3-8 shows internal volumes in Nichols Grove.

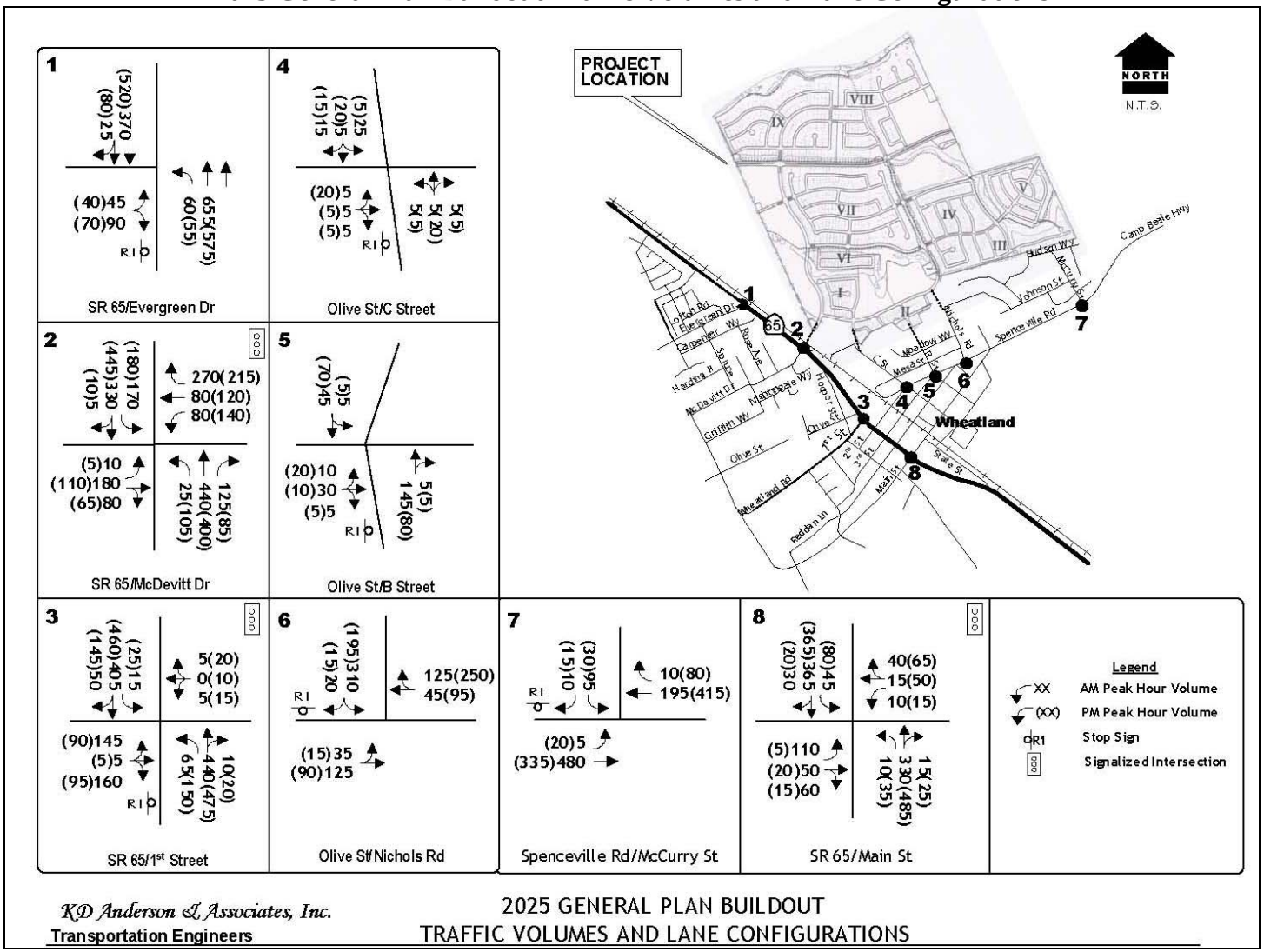
Project-Specific Impacts and Mitigation Measures

For the project-specific intersection and roadway segment impact analyses, only potential impacts resulting from development of the Nichols Grove Tentative Map project are considered, as the non-participating properties would not be developed during the scenario.

4.3-1 Impacts to study intersections.

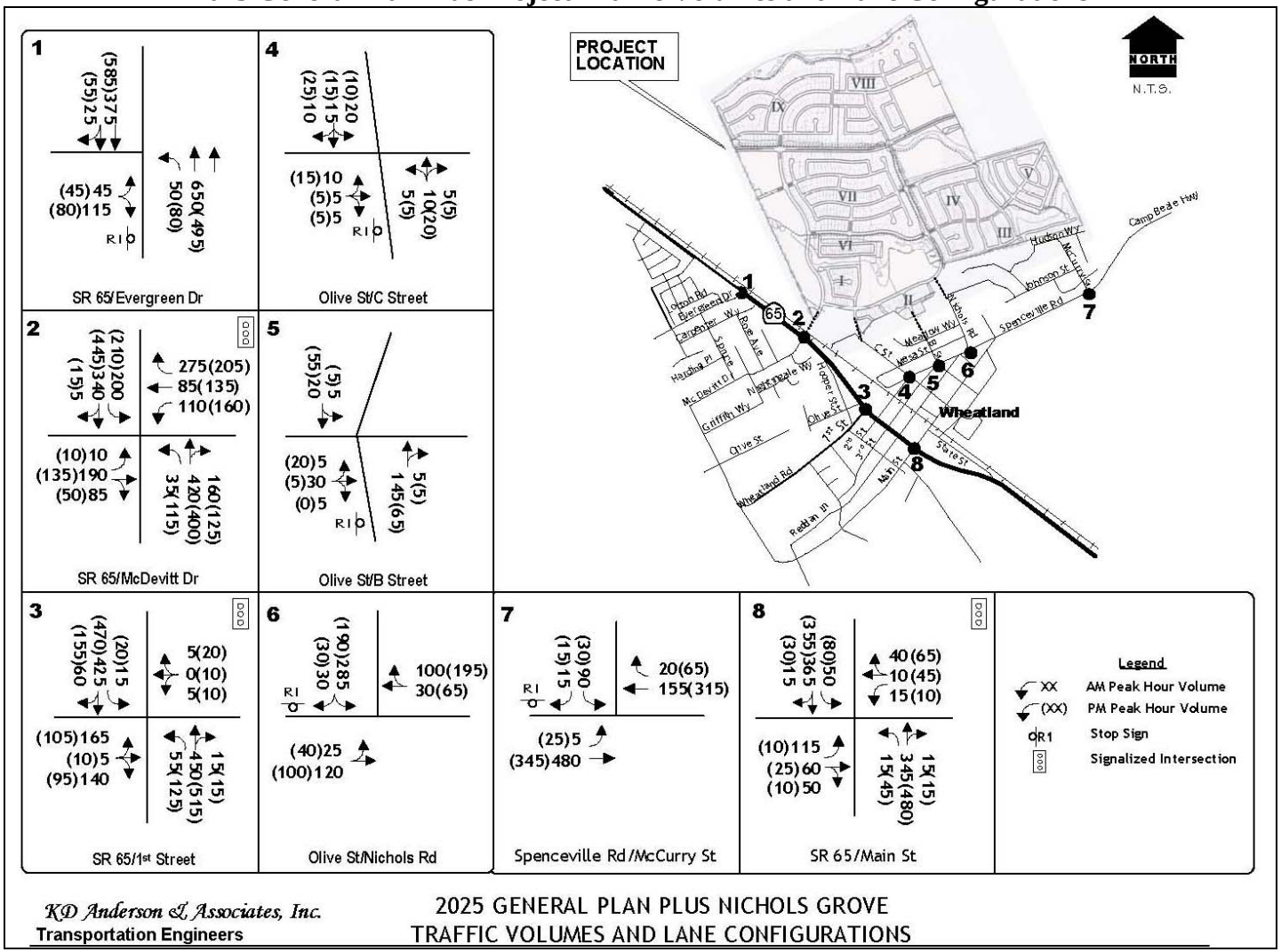
The proposed project would result in the generation of 25,186 vehicle trips onto the surrounding roadway network. The addition of trips generated by the proposed project would incrementally increase the length of delays experienced at study area intersections (See Table 4.3-10). The intersection of SR 65 / First Street is anticipated to operate at LOS E during the P.M. peak hour with buildout of the Nichols Grove Tentative Map project. Similarly, following completion of the planned signalization, the SR 65 / Main Street intersection would operate at LOS E during the P.M. peak hour with buildout of the Nichols Grove Tentative Map project. The SR 65 / McDevitt Drive intersection would operate at LOS E during the P.M peak hour with the installation of a traffic signal, which is part of the project improvements in order to enable access to the project site from the extension of McDevitt Drive. Because LOS D is the minimum acceptable LOS for signalized intersections along the State highway, project impacts to SR 65 / First Street, SR 65 / Main Street, and SR 65 / McDevitt Drive would be considered ***significant***.

Figure 4.3-6
2025 General Plan Buildout Traffic Volumes and Lane Configurations



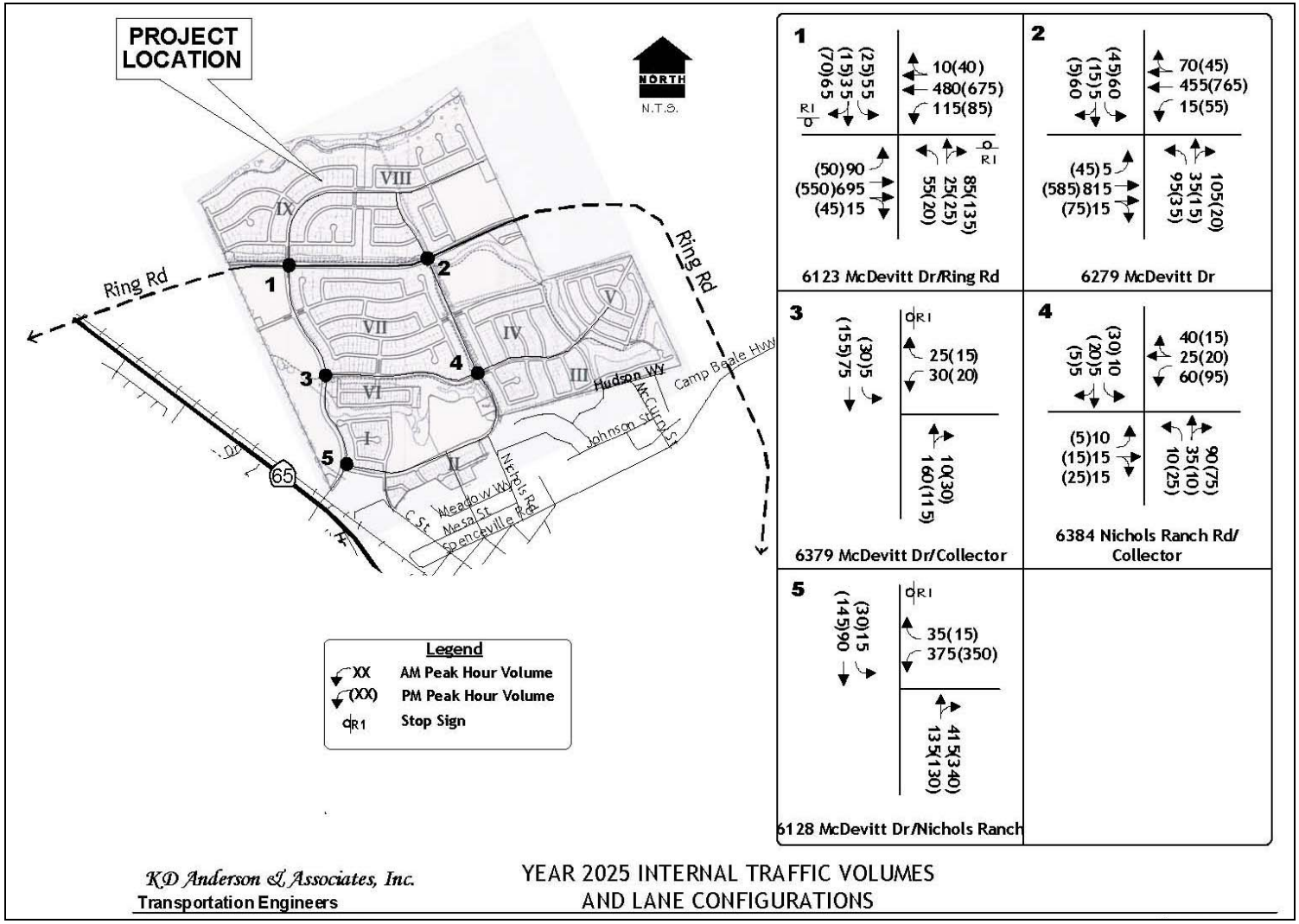
Source: KDAnderson & Associates, Inc., 2007.

Figure 4.3-7
2025 General Plan Plus Project Traffic Volumes and Lane Configurations



Source: KDAnderson & Associates, Inc., 2007.

Figure 4.3-8
Year 2025 Internal Traffic Volumes and Lane Configurations



Source: KDAnderson & Associates, Inc., 2007

Mitigation Measure(s)

To mitigate the specific impacts of the proposed project, implementation of portions of the circulation system ultimately envisioned under the City of Wheatland General Plan would be necessary. However, implementation of major projects, such as the SR 65 Bypass or Ring Road with the SR 65 / UPRR grade separation, is beyond the financial capability of individual development proposals such as the proposed project. The discussion of "Existing Plus Approved Projects Plus Nichols Grove" impacts (Impact Statement 4.3-7, below) identifies a stage of improvements that if implemented would help reduce project impacts, though not to a less-than-significant level.

While the project proponent would participate in the cost of overall citywide improvements through the City's fee program, and would be responsible for lesser roadway improvements, resulting "Existing Plus Project" traffic impacts would remain *significant and unavoidable.*

Nichols Grove Tentative Map

4.3-1 *The applicant shall pay the City of Wheatland's Traffic Development Impact Fees prior to issuance of building permits in accordance with applicable City requirements.*

4.3-2 Impacts to roadway segments.

The relative impact of the proposed project on study area roads can be understood from comparison of daily traffic volumes with and without the proposed project. As shown in Table 4.3-11, the addition of project trips alone would increase the volume on SR 65 through Wheatland, and LOS F conditions would remain. The incremental traffic volume increase caused on SR 65 by the Nichols Grove project ranges from 4,200 to 6,275 ADT. The increase represents approximately 28 percent of the capacity of SR 65 north of Wheatland, 23 percent of the capacity on the three-lane section between First Street and Main Street, and 42 percent of the capacity south of Wheatland. Therefore, the potential increases would exceed the two percent threshold for impacts to a roadway segment. The three streets providing secondary access to downtown Wheatland (i.e., C Street, B Street, and Nichols Road) would each carry an additional 1,500 to 2,000 vehicles per day as a result of Nichols Grove; however, the level of service on these streets would remain within the City's minimum standards. Because the proposed project would cause an increase in traffic that exceeds the City's standard of significance, the proposed project would result in a ***significant*** impact to roadway segments.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the project's impact to roadway segments, but not to a less-than-significant level. Although the mitigation measure requires the applicant to pay a fair share toward the installation of traffic improvements identified in the City's traffic improvement list, the major improvements needed to alleviate traffic impacts to roadway segments (See Impact 4.3-1 for further discussion) are beyond the financial capability of the project applicant and, in many

Table 4.3-11
Existing Plus Project Average Daily Traffic Volumes and Resulting Levels of Service

Street	Location	Classification	Existing			Existing Plus Project ADT		
			ADT*	Lanes	LOS	Project Only	Total	LOS
SR 65	North of Evergreen Drive	Arterial	20,100	2	**F**	4,220	24,320	**F**
	Evergreen Drive to McDevitt Drive		20,100	2	**F**	4,220	24,320	**F**
	McDevitt Drive to 1st Street		20,100	2	**F**	5,380	25,480	**F**
	1st Street to Main Street		20,100	2	**F**	4,660	24,760	**F**
	Main Street to State Street		20,100	2	**F**	5,480	25,580	**F**
	State Street to Bear River		20,100	2	**F**	6,275	26,325	**F**
McDevitt Dr	SR 65 to Nichols Grove Rd	Arterial	0	2	-	10,940	10,940	C
C Street	Olive Street to Project limits	Collector	600	2	A	1,635	2,235	A
	Main Street to Olive Street		515	2	A	1,635	2,150	A
B Street	Olive Street to project limits	Collector	160	2	A	1,440	1,600	A
	Main Street to Olive Street		165	2	A	1,440	1,605	A
Nichols Rd	Olive Street to Project limits		750	2	A	1,775	2,525	A
Olive Street	West of C Street		700	2	A	130	830	A
	C Street to B Street (one way)		150	2	A	295	445	A
	B Street to4th Street		150	2	A	245	395	A
	4th Street to Nichols Rd		1,400	2	A	1,700	3,100	A
	Nichols Road to Spenceville Rd		900	2	A	655	1,555	A
Main Street	SR 65 to State Street		3,070	2	A	1,995	5,065	A
	State Street to C Street	Arterial	3,575	2	A	2,785	6,360	A
	C Street to B Street	Arterial	3,000	2	A	2,885	5,885	A
	B Street to Spenceville Road	Arterial	3,000	2	A	1,530	4,530	A
Spenceville Rd	Olive Street to McCurry St	Arterial	3,250	2	A	2,185	5,435	A

Note: **Bold** is condition in excess of minimum standard. * is Caltrans 2005 AADT.

Source: KDAnderson & Associates, Inc., 2007.

cases, the improvements would only reduce the magnitude of traffic improvements, rather than reducing impacts to a less-than-significant level (See Impact 4.3-7). Therefore, the impact would remain *significant and unavoidable.*

Nichols Grove Tentative Map

4.3-2 Implement Mitigation Measure 4.3-1.

4.3-3 Impacts related to transit.

Nichols Grove Tentative Map and Non-Participating Properties

The proposed project would create an incremental additional demand for transit services in the Wheatland area. However, development of the proposed project alone would not result in a significant impact that would necessitate changing current "B-line" operations. To be consistent with the Wheatland General Plan, a bus pullout could be incorporated into the plans in order to improve SR 65 frontage by accommodating future transit expansion. Should the project not include infrastructure to accommodate future transit use, a ***potentially significant*** impact to transit could occur.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

Nichols Grove Tentative Map, Non-Participating Properties

4.3-3 Prior to the approval of final maps, the project shall include facilities to accommodate future transit use (i.e., bus pull outs on arterial streets), for the review and approval of the City Engineer.

4.3-4 Impacts related to existing and proposed railroad crossings.

Nichols Grove Tentative Map and Non-Participating Properties

Implementation of the proposed project would result in an increase in pedestrian and bicycle traffic crossing SR 65 between the project site and schools and other amenities in downtown Wheatland. In addition, development of the project would extend McDevitt Drive to the east and result in a new public at-grade road crossing on the UPRR. An existing private crossing in the same area would be closed, as would the existing Second Street and Third Street crossings. Because of the crossing's location relative to the balance of the City, the crossing would attract pedestrians who may travel between Nichols Grove and the existing new commercial areas along SR 65. Until such time as on-site schools are constructed, school age pedestrians would use the crossing to reach Wheatland High School, the middle school, and the elementary school. The number of pedestrians using the crossing would be dependent on the level of development that occurs prior to construction of the new schools east of the railroad. Extensive

use of at-grade railroad crossings has the potential to result in adverse impacts to pedestrian safety.

Caltrans, UPRR, and the Public Utilities Commission (PUC) will require measures to ensure the maximum safety of the new crossing at the time the roadway is extended. In addition, a traffic signal will be installed concurrent with the crossing. To ensure that westbound traffic approaching SR 65 does not create a queue that reaches the railroad when trains approach, the traffic signal will be wired to be coordinated with the operation of the railroad's crossing arms. Planned improvements to SR 65 at this location also include a long northbound right-turn lane and a southbound left-turn lane.

The General Plan Circulation Element acknowledges the eventual need to close some existing UPRR crossings as new grade separations are available. The existing crossings at Second Street and Third Street are identified in the General Plan and will be closed concurrent with the operations of the new McDevitt crossing. With the closure of the Second Street and Third Street crossings and the installation of a traffic signal with interconnect to crossing controls designed to the satisfaction of Caltrans, PUC, and UPPR, implementation of the railroad crossing would result in a ***less-than-significant*** impact to railroad crossings.

Mitigation Measure(s)
None required.

4.3-5 Impacts related to pedestrian/bicycle activity.

Nichols Grove Tentative Map and Non-Participating Properties

Upon completion of the proposed project, some new pedestrian and bicycle activity may occur between the site and schools, shopping, etc. in the City of Wheatland. In addition to the pedestrian and bicycle activity expected on McDevitt Drive, travel would also occur between Nichols Grove and the existing downtown Wheatland core via C Street, B Street, and Nichols Road. Development of the proposed project would create the need for safe pedestrian routes along the above-mentioned streets. Sidewalks currently exist along the streets, and the proposed project would be required to include sidewalks as part of the project improvements. Therefore, the impact would be ***less-than-significant***.

Mitigation Measure(s)
None required.

4.3-6 Impacts from construction traffic.

Nichols Grove Tentative Map and Non-Participating Properties

Trips to the site during construction would be necessary for delivery of materials and hauling of excavated materials. The project sponsor has not provided information detailing the amount of construction traffic that would access the site during each phase of

construction. Excess construction traffic could create traffic impacts on the surrounding roadway network, which would be considered ***potentially significant***.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce this impact to *less-than-significant*.

Nichols Grove Tentative Map, Non-Participating Properties

4.3-6 *Prior to any construction taking place on the site, the project applicant shall prepare a Construction Traffic Management Plan for review and approval by the City Engineer. The plan should include all plans for temporary traffic control, temporary signage and striping, location points for ingress and egress of construction vehicles, staging areas, and timing of construction activity which appropriately limits hours during which large construction equipment may be brought on or off the site.*

Five Year Existing Plus Approved Projects Plus Nichols Grove Tentative Map

The proposed project would occur in the context of the development of approved/pending projects rather than existing conditions. Therefore, this EIR includes the Five Year Plus Project scenario to capture the interim cumulative impacts of recently approved projects that have not yet been built, and are therefore not included in the existing setting.

4.3-7 Impacts to intersections under the Five Year Plus Project scenario.

As shown in Table 4.3-12, without major regional traffic improvements, traffic conditions at signalized intersections on SR 65 through Wheatland would be poor, and motorists waiting to cross SR 65 at unsignalized intersections would experience long delays. LOS F conditions are projected at the signalized SR 65 / First Street and SR 65 / Main Street intersections with and without the Nichols Grove project and the incremental increase in delays accompanying the project is significant. The signalized SR 65 / McDevitt Drive intersection would operate at LOS F during the P.M. peak hour, which would be considered a significant impact. Side-street delays at the SR 65 / Evergreen Drive intersection would reach LOS F, and traffic signal warrants would be met at this intersection with and without the proposed Nichols Grove Tentative Map project. Therefore, the project would result in a ***significant*** impact, during interim five-year conditions, to several study intersections.

Mitigation Measure(s)
Given the magnitude of the overall traffic volume increase accompanying through traffic, other projects and Nichols Grove would not result in less-than-significant traffic conditions at signalized intersections on SR 65 (LOS D) until the SR 65 Bypass is constructed.

While it is recognized that the volume of traffic on SR 65 through Wheatland will continue to exceed the LOS D threshold until such time as the Wheatland Bypass is constructed, a

Table 4.3-12
Existing Plus Approved Projects (Five-Year) Plus Proposed Project Levels of Service

Location	Control	Peak Hour Level of Service								Traffic Signal Warranted?
		AM Peak Hour				PM Peak Hour				
		Existing Plus Approved Projects Base		Base Plus Nichols Grove		Existing Plus Approved Projects Base		Base Plus Nichols Grove		
		Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	
SR 65 / Evergreen Drive	EB Stop									
NB left turn		11.2 sec	B	11.6 sec	B	12.9 sec	B	14.8 sec	B	Yes
EB left+thru+right turn		**135.7 sec**	**F**	**262.4 sec**	**F**	**444.8 sec**	**F**	**884.5 sec**	**F**	
SR 65 / McDevitt Drive										
NB left turn	EB / WB	13.5 sec	B			18.1 sec	B			N.A.
SB left turn	Stop	-	-			-	-			
EB left turn		**>999 sec**	**F**			**>999 sec**	**F**			
EB thru+right turn		**72.5 sec**	**F**			**71.7 sec**	**F**			
WB left turn		-	-			-	-			
WB thru		-	-			-	-			
WB right turn		-	-			-	-			
	Signal			**91.4 sec**	**F**			**192.3 sec**	**F**	
SR 65 (D Street) / 1st St	Signal	**81.2 sec**	**F**	**127.9 sec**	**F**	**154.3 sec**	**F**	**240.0 sec**	**F**	
Olive Street / C Street										
SB left turn	EB Stop	-	-	7.5 sec	A	-	-	7.4 sec	A	No
NB left turn		7.4 sec	A	7.4 sec	A	7.3 sec	A	7.5 sec	A	
EB left+thru+right turn		9.2 sec	A	9.9 sec	A	9.2 sec	A	10.1 sec	B	
Olive St / B Street										
SB left turn	EB Stop	-	-	7.3 sec	A	7.2 sec	A	7.4 sec	A	No
EB left+thru+right turn		8.7 sec	A	10.1 sec	B	9.0 sec	A	9.5 sec	A	
Olive Street / Nichols Drive										
EB left turn	SB Stop	7.4 sec	A	7.6 sec	A	7.4 sec	A	7.7 sec	A	No
SB left+right turn		8.9 sec	A	9.9 sec	A	10.6 sec	B	9.9 sec	A	
Spenceville Rd/McCurry St										
EB left turn	SB Stop	7.6 sec	A	7.8 sec	A	7.9 sec	A	8.6 sec	A	No
SB left turn		11.0 sec	B	13.8 sec	B	13.1 sec	B	20.0 sec	C	
SB right turn		9.4 sec	A	9.9 sec	A	9.8 sec	A	10.3 sec	B	
SR 65 / Main Street	Signal	46.1 sec	D	**89.6 sec**	**F**	**172.8 sec**	**F**	**264.7 sec**	**F**	

Note: **Bold** is LOS in excess of standard.
Source: KDAnderson & Associates, Inc., 2007.

schedule of occupancy of Nichols Grove has been outlined based on completion of identified traffic improvements discussed below.

It should be noted that the Traffic Study (Appendix D of this Draft EIR) includes a table (Table 17) and associated discussion that gives consideration to what extent traffic impacts may be further reduced if some combination of the approved projects is built out, rather than all projects being fully built out. However, even with consideration of the various development scenarios presented in Table 17 of the Traffic Study, traffic impacts would still be considered *significant and unavoidable*.

Because projected mainline traffic conditions on SR 65 already are projected to exceed adopted standards, a "permissible" incremental increase in traffic volume has to be selected. This analysis assumes that a two percent increase in mainline volume would represent the limit of an acceptable increase where volumes in excess of standard exist.

Stage 1 **State Street improvements with initial Nichols Grove development prior to McDevitt Drive extension.** State Street should be improved to facilitate access to Nichols Grove through existing downtown streets. Under the distribution assumptions made in this report, about 40 percent of the traffic generated by each residence uses some portion of SR 65. The development of 100 dwellings would result in an additional 400 ADT on SR 65 south of Wheatland. This would represent a two percent increase in the current volume.

Stage 2 **Construct McDevitt Drive Extension.** The McDevitt Drive extension reduces the daily traffic volume on SR 65 through the 1st Street intersection in Wheatland by approximately 4,000 ADT, although the benefit south of the Main Street intersection is not appreciable. Therefore, while the reduction in traffic near 1st Street might typically suggest that capacity has been created for another 900 Nichols Grove residences, a practical limit of one-third of that amount, or **300 additional dwellings** would be reasonable. This would bring the total development to 400 dwelling units.

Stage 3 **Construct Oakley Lane - Ring Road.** The availability of an alternative route will create capacity that could be used by other development. Assuming that this route pulls 4,400 ADT from SR 65, this would be the equivalent of 1,100 new east side dwellings. Assuming that after completion of this route approximately 20 percent of the traffic accompanying each west side residence still uses some portion of SR 65 through downtown Wheatland, this diversion could create the capacity for twice that number of residences west of SR 65. Assuming that the Heritage Oaks and Jones Ranch projects (1,150 dwelling units) both proceed, they would use 2,300 ADT, leaving 2,100 ADT for Nichols Grove. This would be equivalent to an **additional 525 dwellings**. This level of improvement would raise the permissible development level to 925 dwellings.

Stage 4 **Construct SE Ring Road**. Adding the SE Ring Road crossing over the UPRR dramatically shifts traffic patterns through Wheatland. This action would drop the volume on SR 65 immediately south of Main Street by 3,600 ADT, although measured south of the Main Street intersection, the volume on SR 65 is relatively unchanged. Thus, implementing this improvement would only create the capacity for **another 185 dwellings**. This would bring the total new Nichols Grove dwelling unit count to 1,110 dwellings.

While it may be possible to link circulation system improvements to specific occupancy levels that reduce incremental impacts of portions of Nichols Grove, resulting Levels of Service are not expected to meet City of Wheatland minimum standards until the Wheatland Bypass is constructed. Because delivery of the Wheatland Bypass prior to full occupancy of Nichols Grove and other adopted projects is not certain, the overall impact of Nichols Grove under the Five Year Plus Project scenario remains *significant and unavoidable*.

Nichols Grove Tentative Map

4.3-7(a) Prior to the issuance of building permits for each stage of development, the project applicant shall pay the project's fair share of the applicable traffic improvements associated with the particular stage of development being pursued, and which have been identified in the General Plan and included in the City's Traffic Development Impact Fees. The fair-share fee shall be satisfied by paying the appropriate City Traffic Development Impact Fees, as determined by the City Engineer. The fees shall be paid prior to issuance of building permits for the following stages of improvements:

1. *State Street improvements between Main Street and SR 65.*
2. *McDevitt extension and completion of project streets to downtown Wheatland.*
3. *Oakley Lane extension to SR 65.*
4. *South Ring Road and connection to SR 65 via grade-separation.*

In the event that the improvement is not included in the approved City of Wheatland Capital Improvement Project list, the applicant shall construct the improvements, and shall subsequently be eligible for reimbursement from future fair-share payments.

4.3-7(b) Prior to the issuance of building permits for each subsequent stage of development after completion of Stage 1, a traffic impact study shall be conducted at the discretion of the City Planning Director and City Engineer to validate that the improvements identified in this traffic study for subsequent Stages 2 through 4 still remain appropriate, and that the corresponding number of units that could be developed for each phase remain consistent with the numbers outlined in this EIR for Stages 2 through 4. If the improvements are not sufficient to accommodate the particular stage of development, the

number of housing units shall be reduced to an appropriate level, or additional traffic improvements shall be required, as determined by the City Engineer.

4.3-8 Impacts to roadways under the Five Year Plus Project scenario.

Table 4.3-13 compares daily traffic volumes on study area streets under the "Existing Plus Approved Projects" base condition with and without Nichols Grove. Because the assignment of trips generated by new development differs slightly with and without the project, the Nichols Grove "increment" is the difference in total volume under the two scenarios, instead of a specific project trip count.

As shown in Table 4.3-13, without regional improvements the volume of traffic on SR 65 would increase appreciably. Daily traffic volumes in the range of 36,000 ADT would be expected through Wheatland. As a result, the practical capacity of SR 65 would be exceeded. Therefore, a ***significant*** impact would occur to this roadway segment.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce project impacts, but not to a less-than-significant level. Therefore, project impacts to roadways under the Five Year Plus Project scenario would remain *significant and unavoidable*.

4.3-8 Implement Mitigation Measure 4.3-7(a) and 4.3-7(b).

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Nichols Grove Tentative Map and non-participating properties), unless otherwise noted.

4.3-9 Impacts to intersections in long-term (2025) cumulative conditions.

Nichols Grove Tentative Map, Non-Participating Properties

As indicated in Table 4.3-14, the addition of trips generated by future development in Wheatland would result in Levels of Service that are within adopted standards as long as the network of streets envisioned under the General Plan Circulation Diagram is also available. Levels of Service at the intersections on Old SR 65 would be within the LOS D standard, primarily due to implementation of the Wheatland Bypass, but also due to the development of alternative routes parallel to and west of Old SR 65. Levels of Service at intersections in the north downtown area would also remain satisfactory.

Under General Plan buildout plus Nichols Grove Tentative Map conditions, improvements will be needed at three intersections within Nichols Grove. At the McDevitt Drive / Nichols Grove Drive intersection LOS F conditions are projected on the side-street approach. Because forecast volumes fall below warrants for signalization, an all-way stop or roundabout will be needed to deliver satisfactory Level of Service. To ensure that the

Table 4.3-13
Existing Approved Projects Plus Proposed Project (Five-Year) Average Daily Traffic Volumes and Resulting Levels of Service

Street	Location	Classification	Existing Plus Approved Projects					Existing Plus Approved Projects Plus Nichols Grove		
			Daily Traffic Volume					ADT		
			Existing	Approved and Growth	Total	Lanes	LOS	Project Only	Total	LOS
SR 65	North of Evergreen Drive	Arterial	20,100	9,840	29,940	2	**F**	3,205	33,145	**F**
	Evergreen Drive to McDevitt Dr		20,100	10,725	30,825	2	**F**	2,795	33,620	**F**
	McDevitt Drive to 1st Street		20,100	11,710	31,810	2	**F**	4,060	35,870	**F**
	1st Street to Main Street		20,100	13,350	33,450	2	**F**	3,185	36,635	**F**
	Main Street to State Street		20,100	15,375	35,475	2	**F**	4,175	39,650	**F**
	State Street to Bear River		20,100	15,895	35,995	2	**F**	4,960	40,955	**F**
McDevitt Dr	SR 65 to Nichols Grove Rd	Arterial	0	0	0	2	-	10,770	10,770	C
C Street	Olive Street to Project limits	Collector	600	0	600	2	A	1,625	2,225	A
	Main Street to Olive Street		515	225	740	2	A	1,515	2,255	A
B Street	Olive Street to project limits	Collector	160	0	160	2	A	900	1,060	A
	Main Street to Olive Street		165	0	165	2	A	0	165	A
Nichols Rd	Olive Street to Project limits	Collector	750	0	750	2	A	1,485	2,235	A
Olive Street	West of C Street	Local	700	260	960	2	A	155	1,115	A
	C Street to B Street (one way)		150	40	190	2	A	125	315	A
	B Street to4th Street		150	40	190	2	A	150	340	A
	4th Street to Nichols Rd		1,400	370	1,770	2	A	1,350	3,120	A
	Nichols Road to Spenceville Rd		900	370	1,270	2	A	435	1,705	A
Main Street	SR 65 to State Street	Arterial	3,070	3,685	6,755	2	A	2,015	8,770	A
	State Street to C Street		3,575	4,200	4,775	2	A	2,880	10,655	C
	C Street to B Street		3,000	3,315	6,315	2	A	2,585	8,900	A
	B Street to Spenceville Road		3,000	1,450	4,450	2	A	800	5,250	A
Spenceville Rd	Olive Street to McCurry St	Arterial	3,250	1,800	5,050	2	A	1,250	6,300	A

Note: **Bold** is condition in excess of minimum standard.

Source: KDAnderson & Associates, Inc., 2007.

Table 4.3-14
General Plan Buildout (2025) Intersection Levels of Service

Location	Control	Peak Hour Level of Service								Traffic Signal Warranted?
		AM Peak Hour				PM Peak Hour				
		Approved General Plan		GP Plus Nichols Grove Circulation		Approved General Plan		GP Plus Nichols Grove Circulation		
		Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	
SR 65 / Evergreen Drive										
NB left turn	EB Stop	8.4 sec	A	8.4 sec	A	9.2 sec	A	9.5 sec	A	No
EB left+thru+right turn		16.4 sec	C	15.9 sec	C	19.6 sec	C	23.1 sec	C	
SR 65 / McDevitt Drive	Signal	24.3 sec	C	26.1 sec	C	25.5 sec	C	26.3 sec	C	N/A
SR 65 (S Street) / 1st St	Signal	22.4 sec	C	20.0 sec	C	18.9 sec	C	18.9 sec	B	N/A
Olive Street / C Street										
SB left turn	EB Stop	7.3 sec	A	7.3 sec	A	7.3 sec	A	7.3 sec	A	No
NB left turn		7.3 sec	A	7.3 sec	A	7.3 sec	A	7.3 sec	A	
EB left+thru+right turn		9.1 sec	A	9.1 sec	A	9.1 sec	A	9.1 sec	A	
Olive St / B Street										
SB left turn	EB Stop	7.6 sec	A	7.6 sec	A	7.4 sec	A	7.4 sec	A	No
EB left+thru+right turn		10.4 sec	B	10.2 sec	B	9.8 sec	A	9.5 sec	A	
Olive Street / Nichols Drive										
EB left turn	SB Stop	7.7 sec	A	7.6 sec	A	8.1 sec	A	7.9 sec	A	No
SB left+right turn		17.0 sec	C	14.6 sec	A	14.1 sec	B	14.3 sec	B	
Spenceville Rd/McCurry St										
EB left turn	SB Stop	7.7 sec	A	7.6 sec	A	8.6 sec	A	8.2 sec	A	No
SB left turn		18.5 sec	C	17.2 sec	C	17.9 sec	B	16.3 sec	C	
SB right turn		9.4 sec	A	9.2 sec	A	11.2 sec	B	10.3 sec	B	
SR 65 / Main Street	Signal	17.3 sec	B	17.8 sec	B	15.1 sec	B	15.5 sec	B	N/A
McDevitt Dr / Ring Road	NB/SB Stop									
EB left turn				8.9 sec	A			9.7 sec	A	Yes
WB left turn				10.1 sec	B			9.3 sec	A	
NB left+thru+right turn				**281.3 sec**	**F**			**39.0 sec**	**E**	
SB left+thru+right turn				**185.6 sec**	**F**			**54.2 sec**	**F**	
	Signal			19.9 sec	B			18.1 sec	B	

Table 4.3-14
General Plan Buildout (2025) Intersection Levels of Service

Location	Control	Peak Hour Level of Service								Traffic Signal Warranted?
		AM Peak Hour				PM Peak Hour				
		Approved General Plan		GP Plus Nichols Grove Circulation		Approved General Plan		GP Plus Nichols Grove Circulation		
		Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	
Ring Rd / Nichols Grove Rd										
EB left turn	NB / SB Stop			8.7 sec	A			10.1 sec	B	Yes
WB left turn				10.0 sec	B			9.5 sec	A	
NB left+thru+right turn				**285.0 sec**	**F**			**113.8 sec**	**F**	
SB left+thru+right turn				**80.6 sec**	**F**			**209.7 sec**	**F**	
	Signal			14.3 sec	B			9.8 sec	A	
McDevitt Dr / Collector										
SB left turn	WB Stop			7.6 sec	A			7.6 sec	A	No
WB left+right turn				10.1 sec	B			10.4 sec	B	
McDevitt Dr / Nichols Grove										
SB left turn	WB Stop			8.8 sec	A			8.6 sec	A	No
WB left+right turn				**42.1 sec**	**E**			**40.5 sec**	**E**	
	All-Way Stop			27.7 sec	D			19.2 sec	C	
	Roundabout			5.7 sec	A			5.1 sec	A	
Nichols Grove Dr/ Collector										
NB left turn	EB/WB Stop			7.3 sec	A			7.3 sec	A	No
SB left turn				7.5 sec	A			7.5 sec	A	
EB left+thru+right turn				9.6 sec	A			9.6 sec	A	
WB left+thru+right turn				9.8 sec	A			10.9 sec	B	

Note: **Bold** is LOS in excess of standard.

Source: KDAnderson & Associates, Inc., 2007.

operation of this intersection does not interfere with the adjoining UPRR crossing, the Nichols Grove intersection should be at least 700 feet from the railroad crossing.

On the Ring Road, the volume of traffic at the McDevitt Drive / Ring Road and Nichols Grove Drive / Ring Road intersections will result in side-street Levels of Service that reach LOS F. This conclusion is primarily due to the development of retail uses near the McDevitt Drive intersection and the construction of a middle school near the Nichols Grove Drive intersection. Traffic signals would eventually be needed at both intersections. Therefore, a ***potentially significant*** impact would occur.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce project impacts to a *less-than-significant* level.

Nichols Grove Tentative Map

4.3-9(a) *Implement Mitigation Measures 4.3-1, 4.3-7(a), and 4.3-7(b).*

4.3-9(b) *The installation of traffic signals at the following intersections shall be indicated on improvement plans containing the affected intersections, and shall be installed concurrent with the completion of the roadways.*

- *McDevitt Drive/Nichols Grove Drive*
- *McDevitt Drive / Ring Road*
- *Nichols Grove Drive / Ring Road*

The final improvement selected shall be determined by the City Engineer.

4.3-9(c) *The site plan design shall provide at least 700 feet from the McDevitt Drive railroad crossing to the center of the McDevitt Drive / Nichols Grove intersection for the review and approval of the City Engineer.*

Non-Participating Properties

4.3-9(d) *In conjunction with submittal of an application for any of the non-participating properties, the applicant shall provide a traffic study, at the discretion of the Planning Director, analyzing any potential on- and off-site traffic impacts resulting from the proposed project. The traffic study shall recommend mitigation measures and the applicant shall be required to adhere to the mitigation measures recommended in the study, ensuring that adverse impacts are reduced to the maximum extent feasible.*

4.3-9(e) *The project applicant(s) shall pay City's Traffic Development Impact fees prior to issuance of building permits for the review and approval of the City Engineer.*

4.3-10 Impacts to roadway segments in long-term (2025) cumulative conditions.

Nichols Grove Tentative Map, Non-Participating Properties

Table 4.3-15 identifies daily traffic volumes on study area roads under General Plan build out conditions. The baseline condition assumes implementation of the Circulation Diagram presented in the adopted General Plan. The "Plus Nichols Grove" scenario assumes implementation of the street network inherent to the proposed project. Figure 4.3-9 shows volumes on internal Nichols Grove streets.

With the elimination of the B Street extension beyond Nichols Grove Drive, it is appropriate to review the volume of traffic forecast for downtown collector streets to determine if an appreciable change is expected in this area. Under the baseline GP condition, C Street, B Street and Nichols Road will carry a total of 8,075 ADT at the project boundary. With the development of the Wheatland Bypass with access via Spenceville Road, more than half of that total would use Nichols Road. With implementation of the changes inherent to Nichols Grove, the total volume on the three streets would be slightly lower (7,850 ADT), but Nichols Road would carry more traffic (i.e., 5,275 ADT). While this traffic volume would not exceed the City's minimum Level of Service, the forecast volume would be noticeable to residents living along this street.

As shown, the daily traffic volumes on major streets do not vary appreciably as a result of the change in circulation system. The street classifications and number of lanes planned under the adopted General Plan remain valid. The incremental change in traffic volume resulting from the project would be less than two percent of the roadway capacity. In addition, the City's minimum Level of Service would not be exceeded. Therefore, implementation of the proposed project would result in a ***less-than-significant*** cumulative impact to roadway segments.

Mitigation Measure(s)
None required.

4.3-11 Cumulative conditions (General Plan buildout) plus additional anticipated growth within the Wheatland Sphere of Influence.

Nichols Grove Tentative Map, Non-Participating Properties

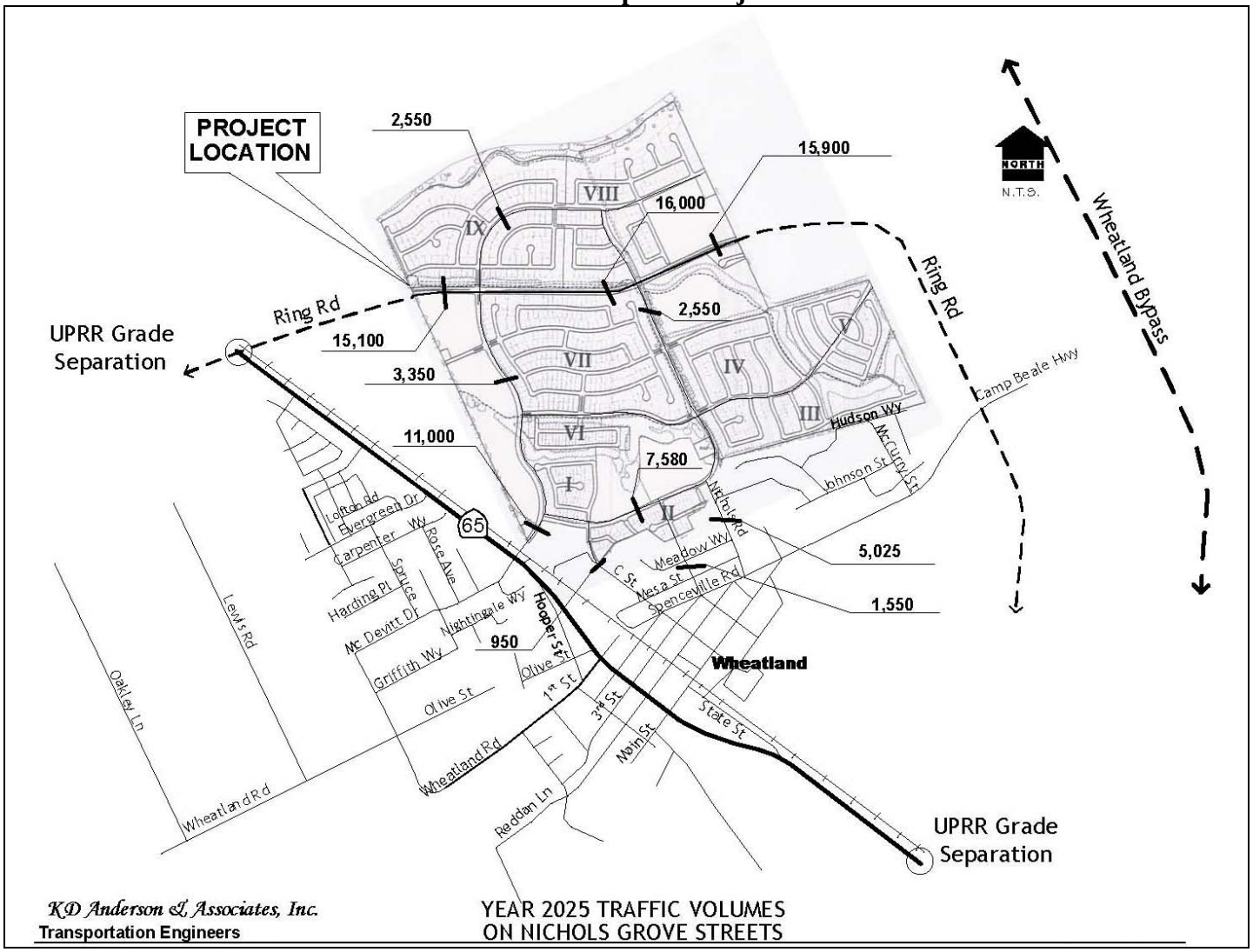
The Cumulative (2025) buildout analysis discussed above assumed buildout of the adopted Wheatland General Plan and background regional development anticipated by the Sacramento Area Council of Governments (SACOG) when the basic Tri-County traffic model was developed. However, the City of Wheatland has received requests to consider additional development beyond the current growth area boundary, and Yuba County is currently in the process of completing environmental review on several projects.

Table 4.3-15
General Plan Buildout (2025) Average Daily Traffic Volumes and Resulting Levels of Service

Street	Location	Classification	Existing Volume	Adopted General Plan			GP Plus Nichols Grove Circulation		
							ADT		
				Daily Volume	Lanes	LOS	Daily Volume	Change	LOS
Old SR 65	North of Evergreen Drive	Arterial	20,100	13,225	4	A	12,700	-525	A
	Evergreen Drive to McDevitt Dr		20,100	14,150	4	A	13,925	-225	A
	McDevitt Drive to 1st Street		20,100	13,500	4	A	13,900	400	A
	1st Street to Main Street		20,100	12,800	2	D	12,675	-125	D
	Main Street to State Street		20,100	9,250	2	B	9,250	0	B
	State Street to Ring Road		20,100	9,350	4	A	9,350	0	A
	Ring Road to Bear River		20,100	14,175	4	A	14,050	-125	A
McDevitt Dr	SR 65 to Nichols Grove Rd	Arterial	0	9,450	2	B	11,000	1,550	C
	Nichols Grove Dr to Ring Road		0	5,100	2	A	3,350	-1,750	A
Nichols Grove Dr	McDevitt Drive to C Street	Collector	0	-	-	-	8,700	-	A
	C Street to B Street		0	7,475	2	A	7,580	105	A
	B Street to Nichols Road		0	5,245	2	A	5,635	390	A
Ring Road	SR 65 (north) to McDevitt Dr	Arterial	0	21,725	4	C	19,900	-1,825	B
	McDevitt Dr to Nichols Road		0	17,280	4	A	15,875	-1,405	A
C Street	Olive Street to Project limits	Collector	600	925	2	A	925	0	A
	Main Street to Olive Street		515	625	2	A	525	-100	A
B Street	Olive Street to project limits	Collector	160	2,200	2	A	1,650	-550	A
	Main Street to Olive Street		165	2,050	2	A	2,025	-25	A
Nichols Rd	Olive Street to Project limits	Collector	750	4,950	2	A	5,025	75	A
Olive Street	West of C Street	Local	700	350	2	A	350	5	A
	C Street to B Street (one way)		150	150	2	A	150	5	A
	B Street to4th Street		150	275	2	A	275	0	A
	4th Street to Nichols Rd		1,400	2,300	2	A	2,500	200	A
	Nichols Road to Spenceville Rd		900	7,250	2	A	6,500	-750	A
Main Street	SR 65 to State Street	Arterial	3,070	2,450	2	A	2,800	350	A
	State Street to C Street		3,575	2,025	2	A	2,350	325	A
	C Street to B Street		3,000	2,200	2	A	2,450	250	A
	B Street to Spenceville Road		3,000	2,950	2	A	3,250	300	A
Spenceville Rd	Olive Street to McCurry St	Arterial	3,250	8,425	2	A	7,775	-650	A

Source: KDAnderson & Associates, Inc., 2007.

Figure 4.3-9
2025 Traffic Volumes on Proposed Project Internal Streets



Source: KDAnderson & Associates, Inc., 2007.

The City of Wheatland has received inquiries from property owners that would like to expand the City to the east, and build approximately 9,500 homes east of the planned Wheatland Bypass route. Yuba County is currently evaluating the Feather Creek Specific Plan and the Woodbury Specific Plan, both plan areas are located north of Wheatland along the SR 65-70 corridor.

While the assessment of cumulative impacts is not intended to address the countywide issues associated with major projects throughout Yuba County, it is important to consider the extent to which additional growth in Wheatland could have an effect on streets in Wheatland. Table 4.3-16 compares Wheatland General Plan buildout daily traffic volumes under the scenario that assumes development of Nichols Grove with an alternative scenario that adds 9,500 additional residences east of the Wheatland Bypass.

Comparison of the respective volumes indicates that while appreciable increases in daily traffic could be expected on the Wheatland Bypass and in the area of the Spenceville Road connection to the Bypass, the change in volume on the street system within the Ring Road is not significant near the proposed project. Therefore, while land use decisions in the City of Wheatland and elsewhere in Yuba County will result in additional traffic on the regional circulation system, and additional improvements beyond those anticipated in the current General Plan circulation diagram will be required, the cumulative impacts would be ***less-than-significant*** in the area of the proposed project.

Mitigation Measure(s)
None required.

Table 4.3-16
General Plan Buildout (2025) Plus Additional Growth
Average Daily Traffic Volumes and Resulting Levels of Service

Street	Location	Classification	Existing Volume	General Plan Plus Nichols Grove			General Plan Plus Nichols Gove Plus 9,500 dwelling units		
				Daily Volume	Lanes	LOS	ADT Daily Volume	ADT Change	LOS
Old SR 65	North of Evergreen Drive	Arterial	20,100	12,700	4	A	13,600	900	A
	Evergreen Drive to McDevitt Dr		20,100	13,950	4	A	15,290	1,340	A
	McDevitt Drive to 1st Street		20,100	13,900	4	A	14,400	540	A
	1st Street to Main Street		20,100	12,675	2	D	14,600	1,925	D
	Main Street to State Street		20,100	9,250	2	B	11,500	2,250	B
	State Street to Ring Road		20,100	9,350	4	A	11,900	2,550	A
	Ring Road to Bear River		20,100	14,050	4	A	19,260	5,210	A
McDevitt Dr	SR 65 to Nichols Grove Rd	Arterial	0	11,000	2	B	12,570	1,570	C
	Nichols Grove Dr to Ring Road		0	3,350	2	A	3,600	-1,750	A
Nichols Grove Dr	McDevitt Drive to C Street	Collector	0	8,700	2	A	10,250	1,550	B
	C Street to B Street		0	7,580	2	A	9,200	1,620	A
	B Street to Nichols Road		0	5,025	2	A	6,900	1,875	A
Ring Road	SR 65 (north) to McDevitt Dr	Arterial	0	19,900	4	A	22,830	2,930	A
	McDevitt Dr to Nichols Road		0	15,975	4	A	19,400	3,425	A
C Street	Olive Street to Project limits	Collector	600	925	2	A	950	25	A
	Main Street to Olive Street		515	525	2	A	675	150	A
B Street	Olive Street to project limits	Collector	160	1,650	2	A	2,010	360	A
	Main Street to Olive Street		165	2,025	2	A	2,450	225	A
Nichols Rd	Olive Street to Project limits	Collector	750	5,275	2	A	7,050	1,775	A
Olive Street	West of C Street	Local	700	350	2	A	250	-100	A
	C Street to B Street (one way)		150	150	2	A	165	15	A
	B Street to4th Street		150	275	2	A	370	95	A
	4th Street to Nichols Rd		1,400	2,500	2	A	4,100	1,600	A
	Nichols Road to Spenceville Rd		900	6,500	2	A	9,050	3,550	A
Main Street	SR 65 to State Street	Arterial	3,070	2,800	2	A	2,890	90	A
	State Street to C Street		3,575	2,350	2	A	3,050	700	A
	C Street to B Street		3,000	2,450	2	A	3,140	690	A

Table 4.3-16
General Plan Buildout (2025) Plus Additional Growth
Average Daily Traffic Volumes and Resulting Levels of Service

Street	Location	Classification	Existing Volume	General Plan Plus Nichols Grove			General Plan Plus Nichols Gove Plus 9,500 dwelling units		
				Daily Volume	Lanes	LOS	ADT Daily Volume	ADT Change	LOS
	B Street to Spenceville Road		3,000	3,250	2	A	3,960	710	A
Spenceville Rd	Olive Street to McCurry St	Arterial	3,250	7,775	2	B	11,930	4,155	C
	McCurry Street to Ring Road	Arterial	3,000	8,500	2	A	12,990	4,490	D
	Ring Road to Wheatland Bypass	Arterial	3,000	28,675	6	C	42,580	13,905	**F**
	Over Wheatland Bypass	Arterial	3,000	13,250	4	A	44,800	31,550	**F**
	East of Wheatland Bypass	Arterial	3,000	7,100	2	A	56,750	49,650	**F**
Wheatland Bypass	South of Spenceville Road	Expressway	0	48,600	4	-	54,300	5,700	-
	North of Spenceville Road		0	37,500	4	-	45,400	7,900	-

Source: KDAnderson & Associates, Inc., 2007.

Endnotes

[1] KDAnderson Transportation Engineers, *Traffic Impact Analysis*, September 19, 2007 and October 5, 2007.
[2] KDAnderson Transportation Engineers, *Traffic Analysis Report for Improvements to SR 65 from Main Street to Olive Street*, March 14, 2002.

4.4 NOISE

INTRODUCTION

The Noise chapter 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 *City of Wheatland General Plan*,[1] the *City of Wheatland General Plan EIR*,[2] as well as the *Environmental Noise Assessment* prepared specifically for the Nichols Grove Tentative Map site by Bollard Acoustical Consultants, Inc. [3]

ENVIRONMENTAL SETTING

Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur at least 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).

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 the 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 on 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 the A-weighing network. A strong correlation exists between A-weighted sound levels (expressed as dBA) and the way the human ear perceives noise. 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.

Existing Land Uses in the Project Vicinity

The project site consists of agricultural land, containing fields and orchards, and rural farming residences. Surrounding land uses include agricultural lands and rural residences to the east and west, as well as State Route 65 (SR 65) west of the adjacent property; to the north the site is bordered by Dry Creek and agricultural lands beyond the creek; and to the south by the northern 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.

Existing Noise Environment

Because of the size of the project site (578.5 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; while the existing ambient noise in the eastern portion is primarily from Beale Air Force Base.

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 four locations on the Nichols Grove Tentative Map site on January 2, 2007. In addition, continuous noise monitoring was conducted at two locations over a seven day period near SR 65 and the UPRR tracks (Site A), and at a position removed from those sources (Site B) to specifically quantify single event noise levels associated with railroad passages and aircraft overflights. The noise measurement locations (Sites 1-4) are shown in Figure 4.4-1.

The noise level meters were programmed to record the maximum and average noise level at each site during the survey. The maximum value, denoted Lmax, represents the highest noise level measured. The average value, denoted Leq, represents the energy average of all of the noise received by the sound level meter microphone 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 4.4-1.

The ambient noise survey results indicate that the measured daytime ambient noise levels within the Nichols Grove Tentative Map site vary depending on the proximity to SR 65 and the UPRR tracks. Specifically, noise levels in the vicinity of SR 65 and the UPRR tracks (Site A, and Sites 1 and 3) registered higher ambient noise levels, whereas sites more removed from those areas (Site B and Sites 2 and 4) registered relatively lower ambient noise levels. Site B, which was used to quantify single event noise levels for Beale AFB, registered low ambient noise conditions. Similarly, the noise levels on the adjacent non-participating properties would vary depending on their proximity to SR 65 and the UPRR tracks. The ambient conditions in the proposed project area are consistent with those expected in smaller towns, which contain a major traffic or railroad corridor.

Figure 4.4-1
Ambient Noise Measurement Sites

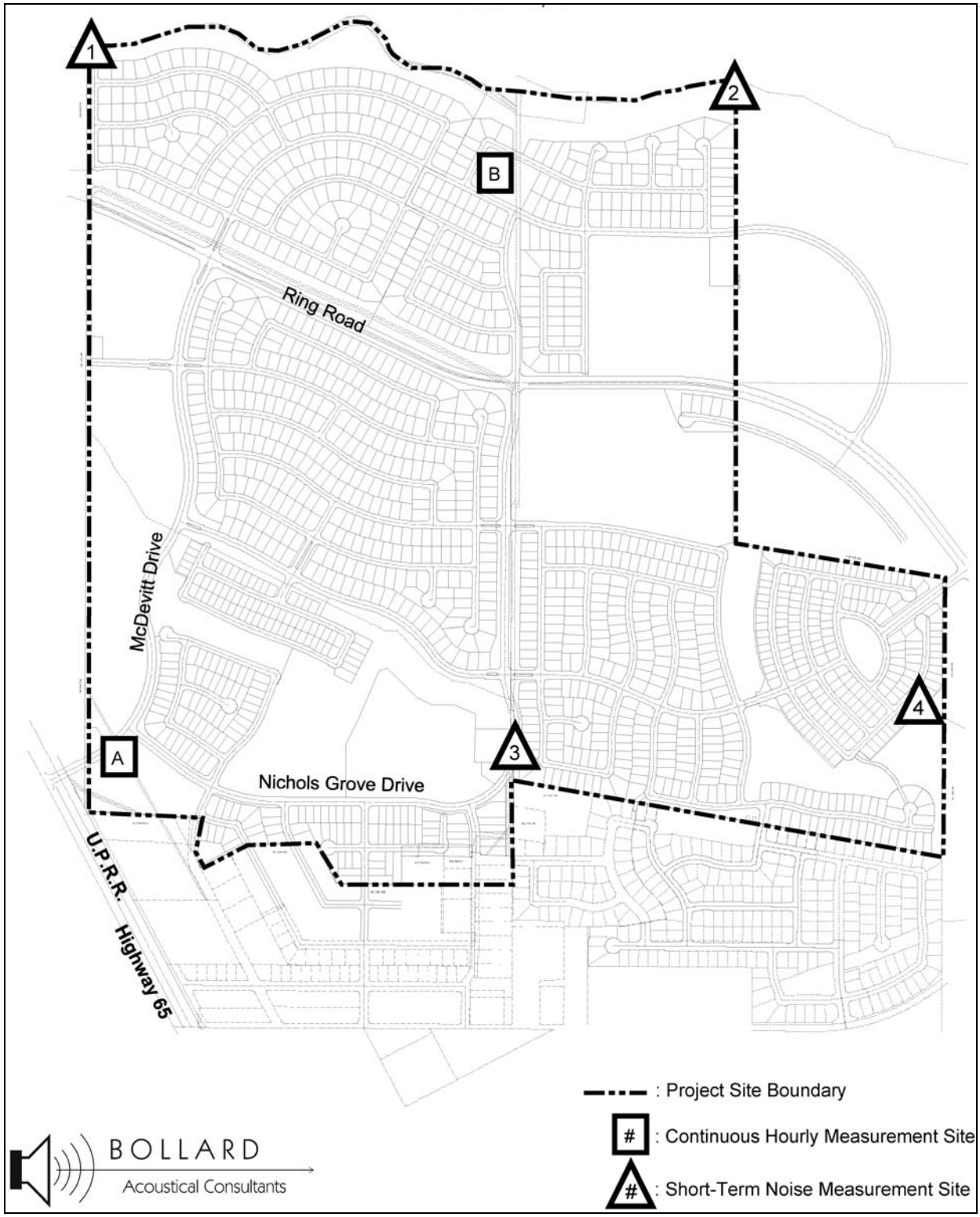


Table 4.4-1
Ambient Noise Monitoring Results for
Nichols Grove Project – January 2-5, 2007

Site[a]	Location[b]	Average (L_{eq})	Maximum (L_{max})
1	Northwest corner of Nichols Grove site	44	58
2	Northeast corner of Nichols Grove site	37	55
3	Southern end of Nichols Grove site near Nichols Road	47	57
4	Most easterly portion of Nichols Grove site	42	49
A	Southwestern portion of Nichols Grove site	64 day / 63 night	57-104
B	Northern central portion of Nichols Grove site	48 day / 43 night	43-83

Notes:
a. Sites 1-4 were monitored on a short-term basis (10-minute samples), whereas sites A & B were monitored continuously for a 24-hour period.
b. Noise measurement locations are shown on Figure 4.4-1.

Source: Bollard Acoustical Consultants, Inc., 2007.

Traffic Noise Levels

To predict existing noise levels from traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used by Bollard Acoustical Consultants, Inc. Traffic volumes for existing conditions were obtained from the Traffic Impact Study prepared for the project by KD Anderson and Associates (October 5, 2007). The data provided from the traffic report are segment volumes. Truck usage on the local area roadways were estimated from field observations and from information obtained from Caltrans. Table 4.4-2 shows the existing traffic noise levels in terms of day and night average sound level (L_{dn}) at a reference distance of 100 feet from the centerlines of the existing roadways in the site vicinity. Data collected are considered to be the baseline conditions. Table 4.4-2 shows the distances to existing traffic noise contours.

Railroad Noise Levels

On January 2, 2007 to January 8 2007, Bollard Acoustical Consultants, Inc. conducted noise level measurements of UPRR operations along the western boundary of the Nichols Grove Tentative Map site. The noise level measurements were conducted at a distance of approximately 240 feet from the railroad track centerline (Site A). The sound level meter was programmed to collect hourly average (Leq), hourly maximum (Lmax) and other statistical noise level data. In addition, the sound level meter was programmed to collect single noise events exceeding 65 dB for a period of more than 10 seconds, which would be data associated with train operations. Figure 4.4-1, above, shows the location of the noise measurement sites.

Table 4.4-2
Existing Traffic Noise Levels and Distances to Contours for Nichols Grove Project, Wheatland, California

Segment	Roadway	Segment Description	Leq/L_{dn} @ 100 Feet	Distance to Contours (feet)	
				60 dB	65 dB
1	SR 65	North of Evergreen Drive	73	691	321
2	SR 65	Evergreen Drive to McDevitt Dr.	71	571	265
3	SR 65	McDevitt Drive to 1st Street	70	459	213
4	SR 65	1st Street to Main Street	70	459	213
5	SR 65	Main Street to State Street	70	459	213
6	SR 65	State Street to Bear River	70	459	213
7	McDevitt Dr.	SR 65 to Nichols Grove Rd	NA	NA	NA
8	C Street	Olive Street to Project limits	46	11	5
9	C Street	Main Street to Olive Street	45	10	5
10	B Street	Olive Street to project limits	40	5	2
11	B Street	Main Street to Olive Street	40	5	2
12	Nichols Rd.	Olive Street to Project limits	47	13	6
13	Olive Street	West of C Street	46	12	6
14	Olive Street	C Street to B Street (one way)	40	4	2
15	Olive Street	B Street to4th Street	40	4	2
16	Olive Street	4th Street to Nichols Rd	49	19	9
17	Olive Street	Nichols Road to Spenceville Rd	47	14	7
18	Main Street	SR 65 to State Street	53	33	15
19	Main Street	State Street to C Street	53	36	17
20	Main Street	C Street to B Street	53	32	15
21	Main Street	B Street to Spenceville Road	53	32	15
22	Spenceville Rd.	Olive Street to McCurry St	58	75	35

Source: FHWA-RD-77-108 with inputs from KD Anderson & Associates, Inc., Bollard Acoustical Consultants, Inc., and Caltrans.

The results of the noise level measurements indicated that the typical train operations resulted in an average sound exposure level (SEL) of 101 dB at a distance of 240 feet from the railroad track centerline. Based upon file data collected in the area of the project site, approximately 14 trains per day operate along the track, with an estimated 36 percent of the trains operating during nighttime hours (10 p.m. to 7 a.m.) and 64 percent of the trains operating during daytime hours (7 a.m. to 10 p.m.). Maximum noise levels due to trains passing by ranged between 66 dB and 103 dB. Using accepted noise prediction methodology to account for attenuation over distance, the railroad operation noise level contours were determined by Bollard Acoustical Consultants, Inc. and are shown in Table 4.4-3.

Table 4.4-3
Existing Railroad Noise Environment for
Nichols Grove Project, Wheatland, California

Distance to L_{dn} Contours* (feet)		
60 dB L_{dn}	**65 dB L_{dn}**	**L_{dn} at 240 feet from Railroad Centerline**
955 feet	440 feet	69 dB

* Predicted distances to noise level contours are from the railroad track centerline.

Source: Bollard Acoustical Consultants, Inc., 2007.

Aircraft Noise Levels

Beale Air Force Base (AFB) is located approximately three miles north of the proposed project. Figure 4.4-2 is an illustration of the hypothetical Community Noise Exposure Level (CNEL) noise contours from the Air Installation Compatibility Zone (AICUZ) Study conducted for Beale AFB in 2005. CNEL measures the loudness of a single noise event, in this case the loudness of aircraft at Beale AFB. As indicated on Figure 4.4-2, both the Nichols Grove Tentative Map project site and the adjacent non-participating properties are located well outside of the 60 dB CNEL contours predicted for Beale AFB.

The Noise Assessment also studied the single event noise levels associated with Beale AFB overflights, by single event logging at continuous noise measurement site B, identified on Figure 4.4-1. Individual event records were logged at this location over a six-day period from May 3 to May 8, 2007. During the noise measurement period, a total of 471 separate single events were logged, with the Sound Exposure Level (SEL) distributed as follows: 33 events with an SEL of less than 60 dB, 221 events with an SEL between 60 and 70 dB, 189 events with an SEL between 70 and 80 dB, 27 events with an SEL between 80 and 90 dB, and one event where the SEL exceeded 90 dB (that event was logged at 91 dB SEL). The significance of the ranges of SEL values is discussed later in this chapter.

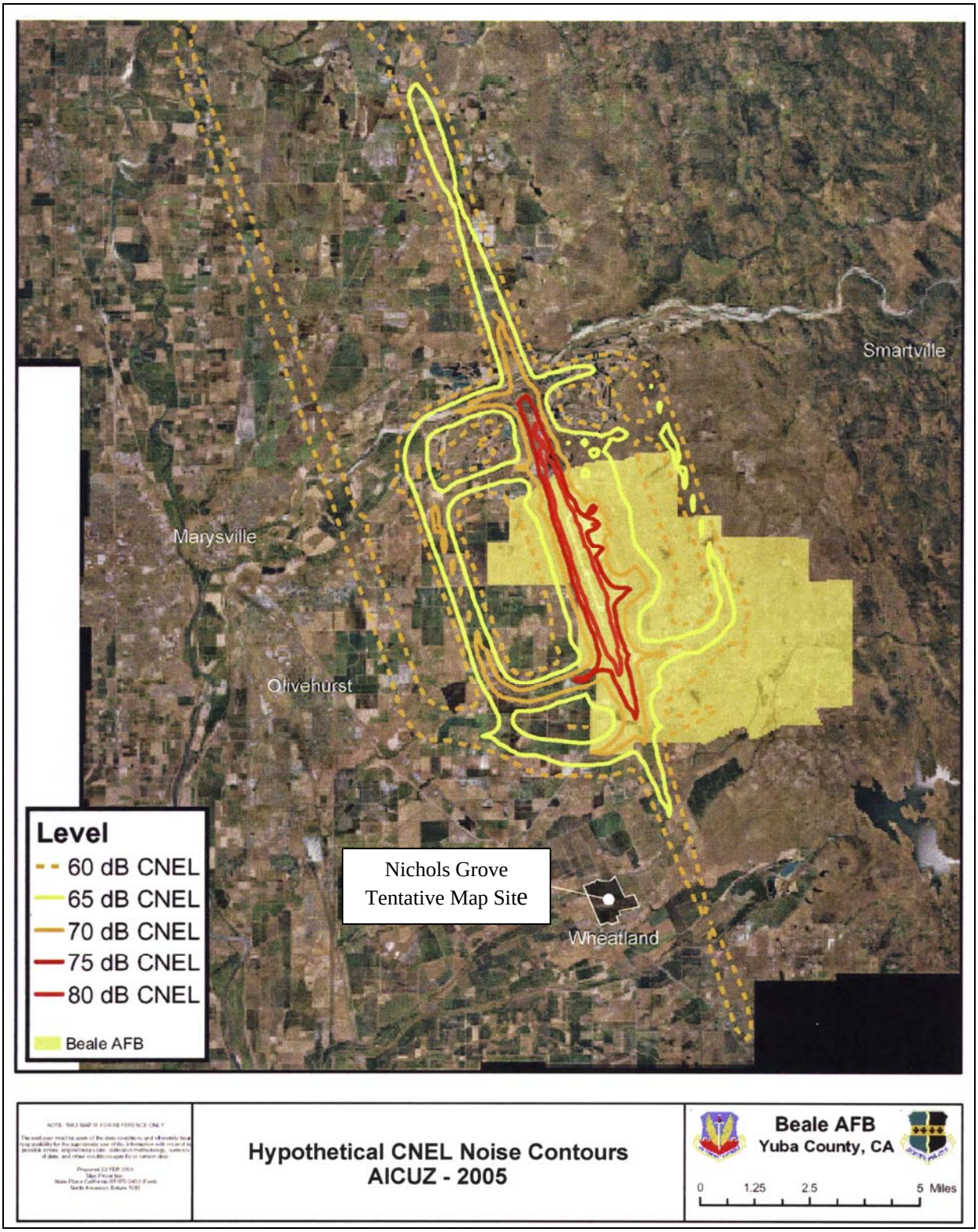
REGULATORY CONTEXT

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.

Figure 4.4-2
Relationship of Nichols Grove Site to Beale Air Force Base Noise Contours



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 L_{dn} 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 close, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

Local

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 4.4-4.

Table 4.4-4
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

Source: Wheatland General Plan EIR, 2006.

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.4. The City shall prohibit new development of noise-sensitive land uses in areas exposed to existing pr 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 4.4-5 at outdoor activity areas or interior spaces of existing noise-sensitive land uses.

Table 4.4-5
Maximum Allowable Noise Exposure Transportation Noise Sources

Land Use	Outdoor Activity Areas[1] L_{eq}/CNEL dB	Interior Spaces	
		L_{eq}/CNEL dB	L_{eq},dB[2]
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	-	-

Notes: 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.

Source: Wheatland General Plan, 2007.

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 L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant;

b. Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses,

a +3 dB L_{dn} 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 L_{dn} at the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant.

Policy 9.G.7. An increase of 3 dB L_{dn} 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 4.4-5.

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. For this analysis, noise impacts associated with the proposed project would be considered significant if the following were to occur:

- An increase of 3 dB L_{dn} 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 L_{dn} 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 an meeting halls;
- For a project located within an airport land use plan or, where such a plan has not be 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 60 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 L_{dn} 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 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 a more conservative interior SEL criteria of 60 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.

Methods of Analysis

A Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used for the noise level measurement survey. The meter was 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 Nichols Grove 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 Analysis Methodology

Traffic noise impacts are identified where existing or future traffic noise levels within the project would significantly exceed existing or future traffic noise levels without the project, respectively. In addition, traffic noise impacts are identified if traffic on local roadways would cause noise levels to exceed the City of Wheatland noise level standards at exterior or interior areas of the types of uses proposed within this development (residential).

Project-related changes in existing and future traffic noise levels, as well as future traffic noise levels, were analyzed using the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108).

Existing and future, project and no-project traffic forecast data were obtained from the *Traffic Impact Analysis for Nichols Grove* prepared by KDAnderson & Associates, Inc. Traffic data was provided in the form of average daily traffic (ADT) volumes. Bollard Acoustical Consultants assessed traffic noise impacts under three scenarios that were addressed in the traffic study. Specifically, for the existing baseline conditions assessment, Bollard Acoustical Consultants used "Existing Plus Approved Projects (5 Year Future)." For cumulative conditions, noise impacts were assessed under the "2025 General Plan Buildout" scenario and the "2025 General Plan Buildout Plus Additional Growth" scenario. To determine the relative differences between project and no-project conditions, the predicted traffic noise levels at a standardized distance of 100 feet from each roadway centerline was computed using the data contained in the appendices.

In order to determine future traffic noise levels at proposed outdoor activity areas along the major interior roadways of the Nichols Grove Tentative Map development, the FHWA model was used with the "2025 General Plan Buildout Plus Nichols Ranch" traffic data from the Nichols Grove traffic study. A complete listing of the FHWA model inputs is presented in Appendix D of this Draft EIR.

Railroad Noise Impact Analysis Methodology

Railroad noise impacts are identified where railroad operations along the project site would cause noise levels to exceed the City of Wheatland noise level standards at exterior or interior areas of the types of uses proposed within this development. In addition, railroad noise impacts are considered potentially significant where interior SEL values would exceed 60 dB during train passages.

Bollard Acoustical Consultants, Inc. used typical barrier performance analysis methodology to determine the insertion loss and resulting noise level provided by different barrier heights at the first rows of lots affected by railroad noise. The analysis assumed that pad elevations would be at grade with roadway elevations. Based upon field observations, the barrier analysis assumes that the project site is four-feet below the railroad bed elevation.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Nichols Grove Tentative Map and non-participating properties), unless otherwise noted.

4.4-1 Increase in Traffic Noise Levels.

Nichols Grove Tentative Map

Development of the project site would result in changes in 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 Nichols Grove Tentative Map site would increase trip generation and noise levels, varying with the proximity to the roadways. Relative to existing traffic noise levels, the

increases in traffic noise levels on City of Wheatland roadways are predicted to range from zero to eight dB, as indicated in Table 4.4-6.

Table 4.4-6
Baseline Existing Traffic Noise Levels and Existing Plus Project Noise Levels
Nichols Grove Roadways

Segment	Roadway	Segment Description	L_{dn} (dBA) at 100 feet		
			Baseline Existing	Existing Plus Project	Change
1	SR 65	North of Evergreen Drive	74	75	1
2	SR 65	Evergreen Drive to McDevitt Dr.	73	74	1
3	SR 65	McDevitt Drive to 1st Street	72	72	0
4	SR 65	1st Street to Main Street	72	73	1
5	SR 65	Main Street to State Street	72	73	1
6	SR 65	State Street to Bear River	72	73	1
7	McDevitt Dr	SR 65 to Nichols Grove Rd	NA	58	NA
8	C Street	Olive Street to Project limits	46	51	5
9	C Street	Main Street to Olive Street	46	51	5
10	B Street	Olive Street to project limits	40	48	8
11	B Street	Main Street to Olive Street	40	40	0
12	Nichols Rd	Olive Street to Project limits	47	51	4
13	Olive Street	West of C Street	48	48	0
14	Olive Street	C Street to B Street (one way)	41	43	2
15	Olive Street	B Street to4th Street	41	43	2
16	Olive Street	4th Street to Nichols Rd	50	53	3
17	Olive Street	Nichols Road to Spenceville Rd	49	50	1
18	Main Street	SR 65 to State Street	56	57	1
19	Main Street	State Street to C Street	55	58	3
20	Main Street	C Street to B Street	56	57	1
21	Main Street	B Street to Spenceville Road	54	55	1
22	Spenceville Rd	Olive Street to McCurry St	60	61	1

Note: "Existing Plus Approved Projects 5 Year" data used for Baseline conditions.

Source: FHWA-RD-77-108 with inputs from KD Anderson and Associates and Bollard Acoustical Consultants, Inc.

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. An increase in traffic noise levels of 3 dB, or greater, would occur along several roadway segments as evidenced in Table 4.4-6. However, the resultant noise levels would not exceed the City's exterior residential noise level threshold of 60 dB. Those segments with exterior noise levels of 60 dB and above would not experience an increase in noise levels over 1 dB. Therefore, the Nichols Grove Tentative Map project would not result in an adverse impact to exterior noise levels.

Non-Participating Properties

One of the non-participating properties is located directly adjacent to SR 65, and the other non-participating properties are located off of Nichols Grove Drive. Development of the non-participating properties would result in changes in traffic on the existing roadway network in the City of Wheatland, and the immediate vicinity. Future development of the non-participating properties would add to the overall trip increase on the surrounding roadways, and as a result traffic noise levels would be increased and could result in increases of 3 dB or greater with resultant noise levels exceeding applicable exterior thresholds.

Conclusion

Development of the Nichols Grove Tentative Map site and the non-participating properties would increase traffic on nearby City of Wheatland roadways. The traffic increases associated with the Nichols Grove Tentative Map would result in increases in the ambient noise levels along roadway segments below the City of Wheatland standards of significance. Future development associated with non-participating properties would also increase traffic noise levels in surrounding roadways. The noise level increase associated with buildout of the non-participating properties is not known at this time and the possibility exists that increases could be 3 dB or greater and resultant noise levels could exceed applicable Wheatland standards. Therefore, the proposed project would result in a ***potentially significant*** impact to ambient noise levels.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impacts related to the non-participating properties to a *less-than-significant* level.

Non-Participating Properties

4.4-1 *In conjunction with submittal of a development application and at the discretion of the City Engineer, the applicant shall submit a noise assessment, which determines the noise levels due to and upon the proposed project. The assessment shall determine if noise level exposure to sensitive receptors exceeds established Wheatland thresholds, as a result of development of the project. If noise levels are determined to exceed standards, the noise assessment shall include mitigation to reduce exterior and interior noise levels to below the City's standards, which the applicant shall be required to comply with, for the review and approval of the City Engineer.*

4.4-2 Train Noise Impacts on Project Site.

Nichols Grove Tentative Map

Based on Table 4.4-3 data (page 4.4-4), railroad noise levels at the nearest proposed residential uses within the project site are predicted to be approximately 63 dB L_{dn}. Therefore, exterior noise levels associated with railroad activity at the nearest outdoor activity areas of the project site would exceed the City of Wheatland 60 dB L_{dn} exterior noise level criterion. In addition, SEL values at the residences located nearest to the railroad tracks were computed to be 95 dB. To achieve interior noise levels of 60 dB SEL or less, a building facade noise level reduction of 35 dB would be required. Normal building facade noise attenuation for new residential uses is typically 25-30 dB. As a result, building facade upgrades would be required to reduce the potential for sleep disturbance within residences.

The noise analysis evaluated the noise attenuation that would result from including noise barriers along the property line. Table 4.4-7 shows the results of the barrier analysis. The barrier heights are relative to the building pad elevation. Inclusion of noise barriers in excess of six feet in height would reduce noise levels to an acceptable level.

Table 4.4-7
Predicted Railroad Noise Levels at First Row of Outdoor Activity Areas with Varying Barrier Heights

Barrier Location	Railroad Noise Level Without Barrier	Barrier Height	Railroad Noise Level With Barrier
Nearest Proposed Residential Property Line	63	6 feet	58 dB L_{dn}
		7 feet	57 dB L_{dn}
		8 feet	56 dB L_{dn}
		9 feet	55 dB L_{dn}

Note: Noise reduction from barriers is only at first floor receivers.

Source: Bollard Acoustical Consultants, Inc.

However, should the project not include noise barriers, the Nichols Grove Tentative Map project residences nearest to the tracks would be exposed to future railroad noise, exceeding the City of Wheatland 60 dB L_{dn} noise level standard applicable to new residential land uses. In addition, interior SEL values could exceed 60 dB during train passages, thereby increasing the potential for sleep disturbance during nighttime train passages.

Non-Participating Properties

The non-participating properties would be subject to UPRR noise. Road noise levels at the time of future development of the properties would likely be in excess of existing conditions, which could result in adverse impacts to future residents or workers.

Conclusion

Implementation of the proposed project could expose future residents and workers to noise levels from UPRR operations in excess of the City of Wheatland standards. Therefore, the proposed project would result in a ***potentially significant*** impact related to train noise.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce the above impacts to a *less-than-significant* level.

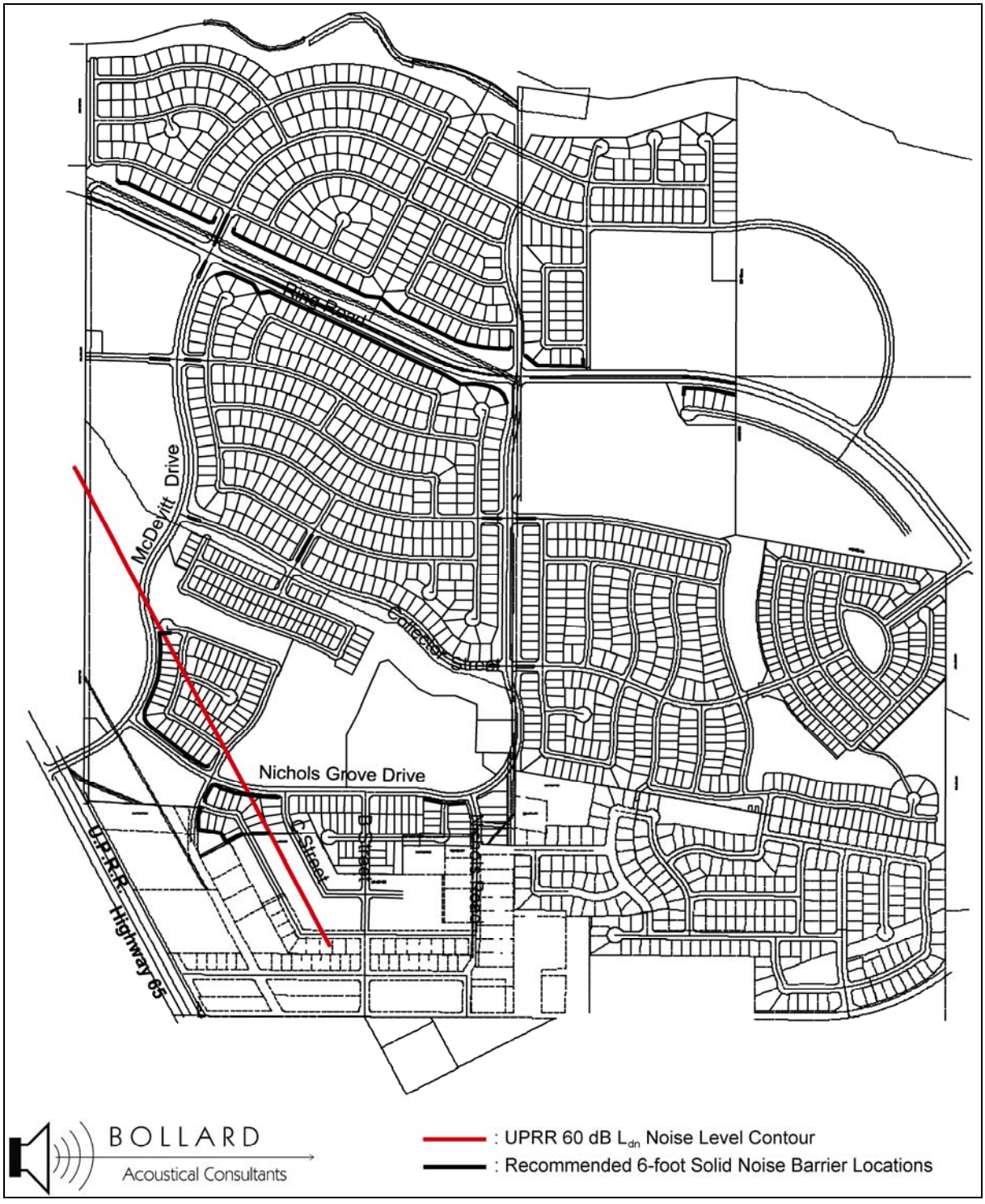
Nichols Grove Tentative Map

4.4-2(a) *Prior to the issuance of building permits, site plans that include noise barriers shall be submitted for the review and approval of the City Engineer. Noise barriers shall be constructed along the boundaries of the residences proposed adjacent to the railroad tracks, at the locations shown on Figure 4.4-3. Table 4.4-7 shows the predicted noise levels for barriers of various heights. The results shown in Table 4.4-7 indicate that a barrier six feet in height (relative to back yard elevation) would be required to reduce future railroad noise levels to 60 dB L_{dn} or less at the nearest backyards proposed adjacent to the railroad tracks. Barriers could take the form of earthen berms, solid walls, or a combination of the two. Appropriate materials for noise walls include precast concrete or masonry block. Other materials may be acceptable provide they have a density of approximately four pounds per square foot.*

4.4-2(b) *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 reductions with windows open. Because future railroad noise levels are not predicted to exceed 70 dB L_{dn} at the building facades of the residences proposed nearest to the railroad tracks, standard construction practices would be sufficient to achieve compliance with the City of Wheatland 45 dB L_{dn} interior noise level standard, provided that windows could be closed.*

Therefore, mechanical ventilation (air conditioning) shall be provided for all residences constructed within this development adjacent to the railroad tracks to allow occupants to close doors and windows as desired for additional acoustic isolation. Although standard construction would be acceptable to achieve satisfaction with the City's 45 dB L_{dn} interior noise level standard, an additional five dB of building facade noise level reduction would be required to reduce interior SEL values to 60 dB. Prior to issuance of building permits, the project applicant shall have a detailed noise analysis of proposed floor plans and construction materials

Figure 4.4-3
Noise Level Contours and Barrier Locations



conducted by a qualified acoustical consultant selected by the City Engineer, to ensure that exterior windows and wall assemblies provide adequate noise insulation. The analysis shall be submitted to the City Engineer along with proposed site plans prior to the issuance of building permits.

Non-Participating Properties

4.4-2(c) *Implement Mitigation Measure 4.4-1. The assessment shall provide a detailed acoustical analysis that shall determine the exterior and interior noise levels experienced at non-participating properties as a result of UPRR train operations. The assessment shall also identify appropriate mitigation measures to reduce the exterior and interior noise levels at sensitive receptors to be consistent with City of Wheatland General Plan Noise standards if applicable. These mitigation measures may include, but are not limited to: use of setbacks; use of barriers; site design guidelines, and building location and orientation guidelines. The applicant shall be required to incorporate noise-related mitigation measures into the site design for review and approval of the City Engineer prior to the approval of tentative map(s).*

4.4-3 Aircraft Noise Impacts on Project Site.

Nichols Grove Tentative Map and Non-Participating Properties

Aircraft noise impacts are considered significant if they either exceed 60 dB L_{dn}/CNEL at the project site, or if indoor SEL values during aircraft overflights would exceed 60 dB. As noted in the Setting section, the project site is located well beyond the 60 dB CNEL noise contour for Beale Air Force Base. As a result, the project site is not considered to be adversely affected by aircraft noise relative to the 24-hour average noise assessment metrics (L_{dn} and CNEL).

As noted previously, during the ambient noise measurement period, a total of 471 separate single events were logged at Site B, with the Sound Exposure Level (SEL) distributed as follows: 33 events with an SEL of less than 60 dB, 221 events with an SEL between 60 and 70 dB, 189 events with an SEL between 70 and 80 dB, 27 events with an SEL between 80 and 90 dB, and one event where the SEL exceeded 90 dB (that event was logged at 91 dB SEL). Because single event noise did not typically exceed 90 dB SEL at the measurement site, a building facade noise level reduction of 30 dB would ensure that interior SEL values do not typically exceed 60 dB SEL.

The project site is located outside the projected future 60 and 65 dB CNEL noise contours for Beale Air Force Base. Aircraft noise levels are not expected to exceed the City of Wheatland noise standards applicable to the proposed uses within the project. However, interior SEL values could exceed 60 dB during aircraft overflights. As a result, this impact is considered to be ***potentially significant***.

Mitigation Measure(s)
Implementation of the following mitigation measure would mitigate potential impacts to a *less-than-significant* level.

Nichols Grove Tentative Map, Non-Participating Properties

4.4-3 Implement Mitigation Measure 4.4-2(b).

4.4-4 Interior Noise Levels Within the Project Site.

Nichols Grove Tentative Map

As shown in Figure 4.4-3, the exterior facades of residences within the southwestern portion of Nichols Grove Tentative Map would be subject to noise levels in excess of 60 dB. 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. Based on the information contained in Impact Statements 4.4-1 to 4.4-3, railroad traffic would be the primary noise generator in the project area. Because future railroad noise levels are not predicted to exceed 70 dB L_{dn} at the building facades of the residences proposed nearest to the railroad tracks, standard construction practices would be sufficient to achieve compliance with the City of Wheatland 45 dB L_{dn} interior noise level standard, provided that windows could be closed. However, should project residences not include air conditioning equipment that would allow residents to keep their windows shut train noise would cause an adverse impact.

Non-Participating Properties

Several of the non-participating properties would be located adjacent to SR 65 and/or the UPPR tracks. Therefore, exterior noise levels have the potential to be substantially higher than 60 dB L_{dn}. As a result, standard construction practices may not be sufficient to reduce interior noise levels to below the City of Wheatland standard of 45 dB L_{dn}. Should interior noise levels exceed 45 dB L_{dn} an adverse impact would occur.

Conclusion

Significant noise generators in the project vicinity include both SR 65 and the UPRR. Noise generated by these sources has the potential to result in exterior noise levels that exceed 60 dB L_{dn}, and, subsequently, interior noise levels that exceed 45 dB L_{dn}. The exceedence of interior noise levels standards would result in a ***potentially significant*** impact.

Mitigation Measure(s)
Implementation of the following mitigation measures would ensure that interior noise levels do not exceed 45 dB L_{dn}, thereby reducing the impact to a *less-than-significant*

level. In addition, the impact to non-participating properties would be reduced to a *less-than-significant* level with implementation of the following mitigation measures.

Nichols Grove Tentative Map

4.4-4(a) Implement Mitigation Measure(s) 4.4-2(a) and 4.4-2(b).

Non-Participating Properties

4.4-4(b) Implement Mitigation Measure 4.4-2(c).

4.4-5 Construction Noise.

Nichols Grove Tentative Map and Non-Participating Properties

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 4.4-8, ranging from 85 to 90 dB at a distance of 50 feet.

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.

Table 4.4-8
Construction Equipment Noise

Type of Equipment	Maximum Level, dB at 50 feet
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

Source: Environmental Noise Pollution, Patrick R. Cunniff, 1977.

The construction of the proposed project would temporarily increase noise levels in the project site. Noise impacts resulting from construction would vary based upon the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, as well as the distance between the construction noise sources and the noise sensitive receptors.

Existing residences nearest to the proposed project site are located south and west of the project and are currently exposed to high levels of noise generated from the UPRR. Construction on the project site would not be anticipated to generate noise levels in excess of railroad noise. Activities associated with construction would result in elevated

noise levels, with maximum noise levels ranging from 85-90 dB at 100 feet. 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 mitigate potential impacts to a *less-than-significant* level.

Nichols Grove Tentative Map, Non-Participating Properties

4.4-5 *The project applicant shall place a note on the improvement plans and within construction contracts that requires:*

- *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; and*
- *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.*

The note and improvement plans shall be reviewed and approved by the City Engineer prior to initiation of ground disturbance activities.

Cumulative Impacts and Mitigation Measures

4.4-6 Cumulative impacts of traffic noise levels on proposed residences.

Buildout of the Nichols Grove Tentative Map site, the non-participating properties, and the General Plan Study Area is assumed under the General Plan Buildout cumulative scenario. In addition, an application has been submitted to the City for a 3,371 acre, 4,500-unit project within the Urban Reserve Area of the General Plan. 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. The 5,000 dwelling unit Plumas Lake Specific Plan located north of Beale Air Force Base is also being considered by Yuba County. As a result, the cumulative evaluation also includes analysis of an additional growth scenario.

General Plan Buildout

Nichols Grove Tentative Map and Non-Participating Properties

As shown in Table 4.4-9, development of the proposed project would not result in a substantial increase in the ambient noise level beyond that which is expected as a result

Table 4.4-9
Cumulative Plus Project Traffic Noise Levels
Nichols Grove Roadways

Segment	Roadway	Segment Description	L_{dn} (dBA) at 100 feet		
			2025 General Plan Buildout	2025 GP Buildout Plus Project	Change
1	Old SR 65	North of Evergreen Drive	71	71	0
2	Old SR 65	Evergreen Drive to McDevitt Dr	70	70	0
3	Old SR 65	McDevitt Drive to 1st Street	68	68	0
4	Old SR 65	1st Street to Main Street	68	68	0
5	Old SR 65	Main Street to State Street	67	67	0
6	Old SR 65	State Street to Ring Road	67	67	0
7	Old SR 65	Ring Road to Bear River	59	59	0
8	McDevitt Dr	SR 65 to Nichols Grove Rd	58	58	0
9	McDevitt Dr	Nichols Grove Dr to Ring Road	55	53	-2
10	Nichols Grove Dr	McDevitt Drive to C Street	NA	57	NA
11	Nichols Grove Dr	C Street to B Street	57	57	0
12	Nichols Grove Dr	B Street to Nichols Road	55	55	0
13	Ring Road	SR 65 (north) to McDevitt Dr	61	61	0
14	Ring Road	McDevitt Dr to Nichols Road	60	60	0
15	C Street	Olive Street to Project limits	47	47	0
16	C Street	Main Street to Olive Street	46	45	-1
17	B Street	Olive Street to project limits	51	50	-1
18	B Street	Main Street to Olive Street	51	51	0
19	Nichols Rd	Olive Street to Project limits	55	55	0
20	Olive Street	West of C Street	43	43	0
21	Olive Street	C Street to B Street (one way)	40	40	0
22	Olive Street	B Street to 4th Street	42	42	0
23	Olive Street	4th Street to Nichols Rd	51	52	1
24	Olive Street	Nichols Road to Spenceville Rd	56	56	0
25	Main Street	SR 65 to State Street	52	52	0
26	Main Street	State Street to C Street	63	63	0
27	Main Street	C Street to B Street	62	62	0
28	Main Street	B Street to Spenceville Road	62	62	0
29	Spenceville Rd	Olive Street to McCurry St	66	66	0

Source: FHWA-RD-77-108 with inputs from KD Anderson & Associates, Inc., Bollard Acoustical Consultants, Inc., and Caltrans.

of buildout of the Wheatland General Plan. Based on the Table 4.4-9 data, internal roadway traffic noise levels at the nearest proposed residential uses within the project site are predicted to range from approximately 53 to 67 dB L_{dn}. Specifically, traffic noise levels at outdoor activity areas of lots nearest to the Ring Road are predicted to range from 61 to 67 dB L_{dn}. Traffic noise levels along certain segments of Nichols Grove Drive are predicted to range from 62 to 64 dB L_{dn}. Therefore, exterior noise levels associated

with internal roadway traffic would exceed the City of Wheatland 60 dB L_{dn} exterior noise level criterion at the above mentioned outdoor activity area locations.

The results of the barrier analysis performed by Bollard Acoustical Consultants, as shown in Appendix E-1 to F of the Noise Study (See Appendix E of this Draft EIR), indicate that six-foot tall noise barriers would be required at the locations shown on Figure 4.4-3 in order to ensure that predicted cumulative internal roadway traffic noise levels at the above-mentioned locations would comply with the City of Wheatland 60 dB L_{dn} exterior noise level criterion.

Additional Growth Scenario

Nichols Grove Tentative Map and Non-Participating Properties

Future traffic noise levels are based on the "2025 General Plan Buildout Plus Nichols Grove Plus Additional Growth" traffic scenario (See Chapter 4.3, Transportation and Circulation). As shown in Table 4.4-10, traffic noise levels are predicted to range from approximately 53 to 71 dB L_{dn}. Specifically, predicted noise levels range from approximately 68 dB L_{dn} to 71 dB L_{dn} along the segments of SR 65 nearest to the proposed project; however, it should be noted that SR 65 is approximately 670 feet away from the nearest proposed residential lots within the project. As a result, residential outdoor activity areas along this roadway would be located well outside of the 60 dB L_{dn} traffic noise contour and traffic noise levels would therefore comply with the City's 60 dB L_{dn} exterior noise level standard. In addition, with future construction of the SR 65 bypass, the traffic resulting from the additional 9,500 homes from the Urban Reserve area would access SR 65 east of the project area and would not substantially increase noise levels on SR 65 west of the project site.

Traffic noise levels at outdoor activity areas of lots nearest to Ring Road are predicted to range from 61 to 67 dB L_{dn}, and traffic noise levels along certain segments of Nichols Grove Drive are predicted to range from 62 to 64 dB L_{dn}. Therefore, exterior noise levels associated with internal roadway traffic would exceed the City of Wheatland 60 dB L_{dn} exterior noise level criterion at outdoor activity areas located along these segments. A six-foot tall noise barrier would reduce traffic noise impacts to 65 dB L_{dn} or less along the internal project roadways.

Implementation of the proposed project in combination with the cumulative development of the Wheatland General Plan, as well as any additional growth, could result in future residents and employees of the Nichols Grove Tentative Map site and non-participating properties being exposed to noise levels that exceed the City of Wheatland 60 dB L_{dn} criteria. As a result, this impact is considered ***potentially significant***.

Table 4.4-10
Cumulative Plus Additional Growth Traffic Noise Levels, Nichols Grove Roadways

Segment	Roadway	Segment Description	L_{dn} (dBA) at 100 feet	Distance to L_{dn} Contour (feet)	
				60 dB	65 dB
1	Old SR 65	North of Evergreen Drive	71	533	247
2	Old SR 65	Evergreen Drive to McDevitt Dr	70	476	221
3	Old SR 65	McDevitt Drive to 1st Street	68	368	171
4	Ring Road	West of McDevitt Drive	61	210	97
5	Ring Road	McDevitt Drive to Nichols Grove Drive	61	218	101
6	Ring Road	East of Nichols Grove Drive	67	217	101
7	McDevitt Drive	SR 65 to Nichols Grove Drive	63	114	53
8	McDevitt Drive	Nichols Grove Drive to Ring Road	58	52	24
9	McDevitt Drive	North of Ring Road	57	43	20
10	Nichols Grove Drive	McDevitt Drive to C Street	64	98	45
11	Nichols Grove Drive	C Street to B Street	63	89	41
12	Nichols Grove Drive	B Street to Nichols Road	62	73	34
13	Nichols Grove Drive	Nichols Road	58	38	18
14	Nichols Grove Drive	North of Collector	53	24	11
15	Nichols Grove Drive	South of Ring Road	57	43	20

Source: FHWA-RD-77-108 with inputs from KD Anderson & Associates, Inc., Bollard Acoustical Consultants, Inc., and Caltrans.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce traffic noise impacts to 65 dB L_{dn} or less along the internal project roadways, thereby reducing the impact to a *less-than-significant* level. In addition, the impact to non-participating properties would be reduced to a *less-than-significant* level with implementation of the following mitigation measures.

Nichols Grove Tentative Map

4.4-6(a) Implement Mitigation Measure(s) 4.4-2(a) and 4.4-2(b).

Non-Participating Properties

4.4-6(b) Implement Mitigation Measure 4.4-2(c).

Endnotes

[1] *City of Wheatland General Plan*, July 2006.
[2] *City of Wheatland General Plan EIR*, City of Wheatland, June 1999.
[3] *Bollard Acoustical Consultants, Inc, Environmental Noise Assessment*. October 16, 2007.

4.5 AIR QUALITY

INTRODUCTION

The Air Quality chapter describes the effects of the proposed project on local and regional air quality. The chapter includes a discussion of the existing air quality, construction-related air quality impacts resulting from grading and equipment emissions, direct and indirect emissions associated with the project, impacts of these emissions on both a local and regional scale, the impact of agricultural land uses on sensitive receptors on the project site, and mitigation measures warranted to reduce or eliminate any identified significant impacts. The chapter is based on the *Air Quality Impact Analysis for the Proposed Nichols Grove Project, City of Wheatland* (included as Appendix E of this Draft EIR) provided by Don Ballanti, Certified Consulting Meteorologist.[1] Additional information for the Air Quality chapter is drawn from the *City of Wheatland General Plan*[2] and the *City of Wheatland General Plan EIR*.[3]

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.

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 closest monitoring site to the project is in Yuba City, where concentrations of ozone, PM_{10}, $PM_{2.5}$, carbon monoxide and nitrogen dioxide are measured.

Both the federal and state governments have enacted laws mandating the identification of areas not meeting the ambient air quality standards and development of regional air quality plans to eventually attain the standards. Under the federal Clean Air Act, Yuba County has been designated attainment or unclassified for all national ambient air quality standards. Under the state system the Feather River Air Quality Management District (FRAQMD) is designated nonattainment for the California standards for ozone and PM_{10}, and is designated attainment or unclassified for all other pollutants. The air districts of the Northern Sacramento Air Basin have jointly prepared and adopted a uniform air quality attainment plan addressing ozone and PM_{10} (NSVAB, 2003).

Sensitive Receptors

The North Sacramento Valley Air Basin (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 south of the project site.

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 Northern Sacramento Valley Air Basin (NSVAB) multi-pollutant monitoring site is in Yuba City. Table 4.5-1 shows historical occurrences of pollutant levels exceeding the State/federal ambient air quality standards for the three-year period of 2004 to 2006. The number of days that each standard was exceeded is shown.

Pollutants of Concern

The pollutants of concern include ozone, PM_{10}, $PM_{2.5}$, carbon monoxide, nitrogen oxides, sulfur dioxide, and Toxic Air Contaminants (TACs). With the exception of TACs, the pollutants of concern are also "criteria" pollutants. The emission of criteria pollutants, and their airborne concentrations, is regulated by federal and State laws.

<u>Ozone</u>

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, while reactive organic gases are emitted during combustion and evaporation of organic

solvents. Ozone is a considered a secondary pollutant because the formation is a result of photochemical reactions and not direct emissions to the atmosphere.

Table 4.5-1
Air Quality Data Summary for Yuba County (2004-2006)

Pollutant	Standard		Days Exceeding Standard During:		
	State	Federal	2004	2005	2006
Ozone (O_3)	1-Hour	—	2	0	1
	—	1-Hour	0	0	0
	—	8-Hour	0	0	0
Carbon Monoxide (CO)	8-Hour	8-Hour	0	0	0
	1-Hour	—	0	0	0
Nitrogen Dioxide (NO_2)	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), 2007. (http://www.arb.ca.gov/adam/welcome.html)

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 may become nauseated or dizzy, may develop 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 also damages vegetation by slowing growth and, at high concentrations, causes brown and white flecking on leaves.

Suspended 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. The 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. "Inhalable" PM consists of particles less than 10 microns in diameter, and is defined as "suspended particulate matter" or PM_{10}. 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 PM_{10}. Fine particles are produced mostly from combustion or burning activities. Fuel burned in cars and trucks, power plants, factories, fireplaces and wood stoves produce fine particles.

The level of fine PM in the air is a public health concern because fine PM is able to 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. In addition, 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 is a local pollutant in that high concentrations are found only very near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes.

Carbon monoxide causes adverse health effects related to reactions with hemoglobin in the blood. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Carbon monoxide concentrations are highly seasonal, with the highest concentrations occurring in the winter. The seasonality is partly due to the fact that automobiles create more carbon monoxide in colder weather and also partly due to the very stable atmospheric conditions that exist on cold winter evenings when winds are calm. Concentrations typically are highest during stagnant air periods occurring most commonly from November through January.

Nitrogen Oxides

Nitrogen oxides (NO_X) are 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. In addition, 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 (SO_2) is a colorless gas and constitutes a major element of pollution in the atmosphere. SO_2 is commonly produced by fossil fuel combustion. In the atmosphere, SO_2 is usually oxidized by ozone and hydrogen peroxide to form sulfur trioxide (a secondary pollutant). If SO_2 is present during condensation, acid rain may occur.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Unlike criteria pollutants, safe levels of exposure to TACs cannot be established, and many different types of TACs exist, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as accidental

releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage and death.

Diesel exhaust is a TAC of growing concern in California. The California Air Resources Board (CARB) in 1998 identified diesel engine particulate matter as a TAC. The exhaust from diesel engines contains hundreds of different gaseous and particulate components, many of which are toxic. Many of these compounds adhere to the particles, and because diesel particles are so small, they penetrate deep into the lungs. Diesel engine particulate has been identified as a human carcinogen. Mobile sources, such as trucks, buses, automobiles, trains, ships and farm equipment, are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections.

Global Climate Change

Greenhouse Gases (GHG) are those that trap heat in the atmosphere. GHG 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.[4] 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).

According to the United States Environmental Protection Agency (USEPA), 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." Common GHG components include water vapor, carbon dioxide (CO_2), methane, nitrous oxides, chlorofluorocarbons, hydro-fluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Carbon dioxide is widely used as the reference gas for comparison of equivalent global warming potential. The CO_2 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 USEPA to have a comparative global warming potential 21 times greater than that of CO_2. At the extreme end of the scale, sulfur hexafluoride is estimated to have a comparative global warming potential 23,900 times that of carbon dioxide. The "specified time horizon" is related to the atmospheric lifetimes of such GHGs, which are estimated by the USEPA to vary from 50-200 years for carbon dioxide, 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 CO_2 equivalent (Tg CO_2 Eq.) is defined by the USEPA 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 CO_2 equivalents. In 2004, the U.S. contributed the greatest percentage of worldwide GHG emissions (35 percent). In 2004, the USEPA estimates that GHG emissions in the U.S. were 7074.4 Tg of

CO_2 equivalent, 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* 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 increase carbon content, and rising sea levels.

Changes in the Western United States and California Climate

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 greenhouse gases already released, and the difficulties associated with reducing emissions to a level that would stabilize the climate. According to the 2006 Climate Action Team Report[6] 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 from eight to 10.4 degrees Fahrenheit, 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.

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.

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.

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.

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.

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.

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, regional, and local 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

U.S. Environmental Protection Agency

The USEPA has established air quality standards for common pollutants. 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. Although the State and federal ambient standards were developed independently, with differing purposes and methods, both processes shared an attempt to avoid health-related effects. As a result, some differences between federal and State standards are known to exist, as illustrated in Table 4.5-2.

The USEPA has been directed to develop regulations to address the GHG emissions of cars and trucks. At the time of this writing, USEPA regulations for GHGs do not exist, and are not expected until late 2008 at the earliest.

Table 4.5-2
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	State Standard
Ozone	1-Hour	—	0.09 PPM
	8-Hour	0.08 PPM	0.07 PPM
Carbon Monoxide	8-Hour	9.0 PPM	9.0 PPM
	1-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual Average	0.053 PPM	0.03 PPM
	1-Hour	—	0.18 PPM
Sulfur Dioxide	Annual Average	0.03 PPM	—
	24-Hour	0.14 PPM	0.04 PPM
	1-Hour	—	0.25 PPM
PM_{10}	Annual Average	—	20 $\mu g/m^3$
	24-Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
$PM_{2.5}$	Annual Average	15 $\mu g/m^3$	12 $\mu g/m^3$
	24-Hour	35 $\mu g/m^3$	—
Lead	Calendar Quarter	1.5 $\mu g/m^3$	—
	30 Day Average	—	1.5 $\mu g/m^3$
Sulfates	24 Hour	25 $\mu g/m^3$	—
Hydrogen Sulfide	1-Hour	0.03 PPM	—
Vinyl Chloride	24-Hour	0.01 PPM	—

PPM = Parts-per-Million
$\mu g/m^3$ = Micrograms-per-Cubic Meter

Source: California Air Resources Board, February 22, 2007. (http://www.arb.ca.gov)

State

California Clean Air Act

The California Clean Air Act (CCAA) requires that air quality plans be prepared for areas of the State that have not met State air quality standards for ozone, CO, NO_X, and SO_2. Among other requirements of the CCAA, the plans must include a wide range of implemental control measures, which often include transportation control measures and performance standards. In order to implement the transportation-related provisions of the CCAA, local air pollution control districts have been granted explicit authority to adopt and implement transportation controls.

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 requires that the California Air Resources Board (ARB) develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty truck and other vehicles determined by the Air Resources Board (ARB) to be vehicles whose primary use is noncommercial personal transportation in the state." Currently, the State is

waiting for a determination on the State's request for a waiver from the USEPA to begin regulation of GHG emissions from vehicles.

Executive Order S-3-05

In 2005, Governor Schwarzenegger signed Executive Order S-3-05, which established total GHG emission targets. Specifically, emissions are to be reduced to year 2000 levels by 2010, 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (Cal-EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary is also directed to submit biannual reports to the governor and state legislature describing: (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 Cal-EPA created a Climate Act Team (CAT) made up of members from various state agencies and commissions. In March 2006, CAT released their first report. In addition, the CAT has released several "white papers" addressing issues pertaining to the potential impacts of climate change on California.

Executive Order S-01-07

On January 18, 2007, Governor Schwarzenegger signed Executive Order S-01-07, which mandates that a statewide goal be established to reduce carbon intensity of California's transportation fuels by at least 10 percent by 2020. The Order also requires that a Low Carbon Fuel Standard for transportation fuels be established for California.

Assembly Bill 32, The California Climate Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (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 implement the cap, AB 32 directs ARB 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 also 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.

Senate Bill 1368

Senate Bill (SB) 1368 is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 requires the California Public Utilities Commission (PUC) to establish a GHG emission performance standard for baseload generation from investor owned utilities by February 1, 2007. The California Energy Commission (CEC) must establish a similar standard for local publicly owned utilities by June 30, 2007. These

standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas fired plant. On January 27, 2007, the PUC adopted an interim Greenhouse Gas Emissions Performance Standard to require that all new long-term commitments for baseload power generation to serve Californians do not exceed the emissions of a combined cycle gas turbine plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the PUC and CEC. On May 28, 2007 the Energy Commission adopted regulations pursuant to SB 1368 establishing and implementing a GHG emission performance standard for baseload generation of local publicly owned electric utilities. The final rulemaking package was submitted to the Office of Administrative Law (OAL) on June 1, 2007 with a request for expedited review. On June 29, 2007 OAL issued a decision disapproving the rulemaking action. Revised regulations have not been submitted as of the writing of this DEIR (August, 2007).

California Air Resources Board (CARB)

The CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for the California Clean Air Act (CCAA) adopted in 1988. The CARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the National Ambient Air Quality Standards established by the USEPA. As discussed above, the CARB is charged with developing rules and regulations to cap and reduce GHG emissions.

Local

Feather River Air Quality Management District

The project is within the Feather River Air Quality Management District (FRAQMD), which is within the Sacramento Valley Air Basin. The Sacramento Valley Air Basin has been further divided into two planning areas called the Northern Sacramento Valley Air Basin (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.

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.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.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.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.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

Nichols Grove Tentative Map

Donald Ballanti, certified consulting meteorologist, prepared an air quality report for the Nichols Grove Tentative Map site (*Air Quality Impact Analysis For the Proposed Nichols Grove Project, City of Wheatland*), and the following information outlines the methods of analysis in the report.

New Vehicle Travel Emissions

Estimates of regional emissions generated by Nichols Grove Tentative Map site traffic were made using the URBEMIS-2002 version 8.7.0 modeling program. The program estimates the emissions that result from various land use development projects. Land use projects can include residential uses such as single-family dwelling units, apartments and condominiums, and nonresidential uses such as shopping centers, office buildings, and industrial parks. URBEMIS-2002 contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information was used when available.

Inputs to the URBEMIS-2002 program include trip generation rates, vehicle mix, average trip length by trip type, and average speed. Trip generation rates for project land uses were provided by the project transportation consultant. The analysis was carried out assuming project build-out would occur by the year 2020.

Non-Participating Properties

Discussion of the air quality impacts that could result from development of the non-participating properties is based on a qualitative analysis that conservatively assumed the greatest potential air quality impacts that are likely to result from complete development of the non-participating properties consistent with current General Plan land use designations.

Standards of Significance

The Feather River Air Quality Management District's Board of Directors has approved thresholds of significance to be used in the environmental review of development projects under the California Environmental Quality Act, which are as follows:

- An increase in emissions of an ozone precursor greater than 25 pounds per day, Ozone precursors are Reactive Organic Gasses (ROG) and Nitrogen Oxides (NO_X);
- An increase in emissions of PM_{10} greater than 80 pounds per day;
- Exposure of sensitive receptors to substantial pollutants concentrations; and
- Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Nichols Grove Tentative Map and non-participating properties), unless otherwise noted.

4.5-1 Short-term construction-related air quality impacts.

Nichols Grove Tentative Map

The URBEMIS-2002 program (Jones and Stokes, 2005) was applied to the project to estimate the maximum construction emissions. Buildout of the project is not expected until 2020, although the bulk of the project construction would occur within a four-year period. Maximum emissions of NO_X and ROG are associated with paving operation, while maximum emissions of PM_{10} occur during the first phases of construction when clearing, earthmoving and grading occur. Table 4.5-3 shows the expected maximum daily construction emissions for the project assuming twice daily watering for dust control. As shown in Table 4.5-3, the Nichols Grove Tentative Map project would substantially exceed the FRAQMD thresholds of significance, and the project would result in an adverse impact to air quality during construction.

Table 4.5-3
Maximum Construction Emissions (Pounds per Day)

	ROG	NO_X	PM_{10}
Project Emissions	78.8	462.5	859.6
Feather River AQMD Thresholds	25.0	25.0	80.0

ROG = Reactive Organic Gases, NO_X = Nitrogen Oxides, PM10 = Particulate Matter, 10 microns

Source: Don Ballanti, Nichols Grove Air Quality Impact Analysis, June 2007.

The majority of PM_{10} particles generated from construction would be from soil particles, while a small fraction would be from diesel exhaust. Diesel exhaust particulate is a pollutant that has come under scrutiny in recent years. In 1998 the California Air Resources Board 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 (CARB, 2000). High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truckstops) were identified as having the highest associated risk.

Health risks from TACs are a function of both concentration and duration of exposure. Unlike the above types of sources, 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 emission occurs within the project site, which is a substantial distance from nearby receptors. Because of a short duration at any

one location and lack of a downwind receptor, health risks from construction emissions of diesel particulate would be a less-than-significant impact.

Non-Participating Properties

Upon development of the non-participating properties consistent with current General Plan land use designations, construction and paving activities could generate significant amounts of construction emissions. As outlined above, mass grading could result in substantial emissions of PM_{10}. Paving and the application of surface finishes could result in ROG and NO_X emissions that could result in adverse impacts to ozone levels. As a result, future development of the non-participating properties could result in the emission of air quality pollutants that would exceed FRAQMD standards. In addition, the heavy diesel engines typically associated with construction equipment would emit TACs, which could in turn result in adverse impacts to nearby residents.

Conclusion

In the absence of emission controls and mitigation measures, ROG, NO_X, and PM_{10} emissions from the Nichols Grove Tentative Map would exceed the FRAQMD's significance threshold. Similarly, emissions resulting from development of the non-participating properties has the potential to exceed FRAQMD's standards. Consequently, the proposed project's emissions would result in a ***significant*** air quality impact.

Mitigation Measure(s)

The following mitigation measures would reduce the construction-related ROG emissions by 10 to 20 percent, NO_X emissions by 30 to 40 percent, and particulate emissions by 50 by 75 percent. However, construction emissions associated with buildout of the Nichols Grove Tentative Map site and non-participating properties would remain above the FRAQMD thresholds of significance for ROG, NO_X, and PM_{10}; therefore, the impact would remain *significant and unavoidable*.

Nichols Grove Tentative Map

4.5-1(a) *Prior to initiation of ground disturbance activities, the contractor shall submit an Off-road Construction Equipment Emission Reduction Plan for review and approval of the FRAQMD. The plan shall demonstrate a project wide heavy-duty (> 50 horsepower) off-road vehicle (owned, leased, and subcontracted) fleet-average 20 percent NO_X reduction and 45 percent particulate reduction as compared to the most recent CARB fleet average at the time of construction. The Off-road Construction Equipment Emissions Reduction Plan shall include a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that would be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughout for each piece of equipment. Acceptable options for reducing*

emissions may include use of late model engines, low-emissions diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or options as they become available.

4.5-1(b) *During construction, throughout the duration of the project, the inventory shall be updated and submitted monthly for review by the FRAQMD, except for any 30-day period in which construction activity does not occur.*

4.5-1(c) *At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide FRAQMD with the anticipated construction timeline, including start date, name, and phone number of the project manager and on-site foreman.*

4.5-1(d) *Prior to initiation of ground disturbance activities, all construction contracts shall stipulate the following:*

- *Construction equipment exhaust emissions shall not exceed FRAQMD Rule 3.0, Visible Emission Limitations. Operators of vehicles and equipment found to exceed opacity limits shall take action to repair equipment within 72 hours or remove the equipment from service. Failure to comply may result in a Notice of Violation;*
- *The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained;*
- *Equipment operators shall be instructed to minimize equipment idling time to five minutes;*
- *Utilize existing power sources (e.g. power poles) or clean fuel generator rather than temporary power generators;*
- *Portable engines and portable engine-drive equipment units used on the project 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; and*
- *Open burning of removed vegetation during infrastructure improvements shall not be permitted. Vegetative material shall be chipped or delivered to waste energy facilities.*

4.5-1(e) *Prior to initiation of ground disturbance activities, the applicant shall submit a Construction Dust Control Plan for the review and approval of the FRAQMD. The Plan shall include the following and any additional*

measures contained in the FRAQMD's current list of Best Available Mitigation Measures (BAMM) for construction:

- *All active water construction areas shall be watered at least twice a day, or as need to prevent visible dust plumes from blowing off-site;*
- *On-site storage piles shall be covered with tarpaulins or other effective covers;*
- *All trucks hauling dirt, sand, soil, or other lose material on public streets shall be covered or shall maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114;*
- *All unpaved access roads, parking areas, and staging areas the construction sites, shall be paved, applied with (non-toxic) soil stabilizers, or applied with water three times daily;*
- *All paved access routes, parking areas, and staging areas shall be swept daily (preferably with water sweepers);*
- *Trucks and other equipment leaving the construction site shall be washed to remove particulate matter;*
- *Incorporation of the use of non-toxic stabilizers according to manufacturer's specifications to all inactive construction areas;*
- *Exposed stockpiles shall be enclosed, covered, watered twice daily, or applied with (non-toxic) soil binders;*
- *Construction site vehicles shall be limited to 15 miles per hour (mph) on unpaved areas;*
- *Disturbed areas shall be replanted with vegetation as quickly as possible;*
- *All grading operations shall be suspended by the developer or contractor or as directed by the FRAQMD when winds exceed 20 mph; and*
- *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.*

4.5-1(f) *Prior to initiation of ground disturbance activities, the applicant shall develop and submit a Construction Phase Trip Reduction Plan, for review and approval of the FRAQMD, to achieve a minimum average vehicle ridership (AVR) of 1.5 for construction employees.*

4.5-1(g) *During construction, all architectural coatings used at the project site shall be compliant with the most current FRAQMD Rule 3.15, Architectural Coatings, for review and approval of the City Engineer and FRAQMD.*

4.5-1(h) Implement the following feasible construction phase emissions measures for Traffic Control as reviewed and approved by the City Engineer:

- *Construction activities shall minimize disruptions to traffic flow;*
- *Provide temporary traffic control as needed during all phases of construction to improve traffic flow, as deemed appropriate by the Department of Public Works and/or Caltrans; and*
- *Schedule operations affecting traffic for off-peak hours to the greatest extent possible.*

Non-Participating Properties

4.5-1(i) In conjunction with submittal of a development application for any of the non-participating properties, the applicant shall submit an air quality analysis at the discretion of the Planning Director. The analysis shall include, but not be limited to, quantification of construction and operational emissions, determination of air quality impacts, and identification of mitigation measures needed to reduce any significant impacts. The applicant shall be required to implement mitigation measures recommended in the air quality impact analysis per the review and approval of the City Engineer.

4.5-2 Impacts of carbon monoxide to local air quality due to project trip generation.

Nichols Grove Tentative Map and Non-Participating Properties

Concentrations of carbon monoxide are related to the levels of traffic and congestion along streets and at intersections. The project would increase traffic volumes on streets near the project site, and therefore would increase local carbon monoxide concentrations. However, concentrations of this pollutant approaching the ambient air quality standards are only expected where background levels are high and traffic volumes and congestion levels are high. The statewide carbon monoxide protocol document identifies signalized intersections operating at Level of Service E or F as having potential to result in localized exceedences of the state/federal ambient air quality standards (Garza et all, 1997) as a result of large numbers of cars idling at stop lights. The proposed project intersections affected by project traffic are not signalized; therefore, cars are unlikely to spend a significant amount of time idling. Furthermore, Yuba County concentrations of CO are predicted to be very low. Therefore, because the project is within an attainment area for carbon monoxide, background levels of CO are low, and the project would not affect any signalized intersections operating at LOS E or F, the impacts of the project traffic on local carbon monoxide concentrations would be ***less-than-significant***.

Mitigation Measure(s)
None Required.

4.5-3 Impacts to residences located next to Union Pacific Railroad.

Nichols Grove Tentative Map and Non-Participating Properties

The southwest corner of the project site is within 1,000 feet of the Union Pacific Railroad (UPRR). The California Air Resources Board has recently published *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB, 2005). The document makes the recommendation to "Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard." It should be noted that the UPRR corridor is not a rail yard and would not be the site of extended locomotive idling. The Nichols Grove Tentative Map site includes a park and detention basin buffer between the UPRR corridor and most residences; however, the southwest corner of the site contains a 5.7-acre site designated for high-density residential units. In addition, the non-participating property located west of the Nichols Grove Tentative Map site includes residential areas adjacent to the railroad corridor. While development of the proposed project would place future residents near the rail corridor, given that a rail yard is not located within 1,000 feet of the project, train traffic through the City of Wheatland typically moves at a high speed, and idling rarely occurs a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None Required.

4.5-4 Impacts of PM_{10}, ozone precursors, and ROG on local air quality.

Nichols Grove Tentative Map

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 fireplace/woodstove and maintenance equipment exhaust emissions. Total emissions associated with the project are shown in Table 4.5-4 for the two ozone precursors (reactive organic gases and nitrogen oxides) and PM_{10}.

Table 4.5-4
Project Regional Emissions (Pounds per Day)

	ROG	NO_X	PM_{10}
Area Sources	144.1	22.0	249.0
Vehicles	104.6	81.4	252.8
Total	**248.7**	**103.3**	**501.8**
FRAQMD Threshold of Significance	25.0	25.0	80.0

Source: Don Ballanti, Nichols Grove Air Quality Impact Analysis, June 2007.

Project emissions for PM_{10} are greatest in winter due to wood burning in fireplaces and woodstoves. Winter emissions for PM_{10} are shown in Table 4.5-4. Emissions of PM_{10} 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 Nichols Grove Tentative Map would result in an adverse impact to regional air quality.

Non-Participating Properties

Development of the non-participating properties would result in new vehicle trips by residents, employees, and patrons of the potential housing, employment, and commercial development. Vehicle trips would result in the emission of ROG and NO_X. In addition, natural gas combustion, smoke from woodstoves, and maintenance equipment exhaust would result in new emissions of PM_{10}, ROG, and NO_X. As a result, development of the non-participating properties would increase PM_{10}, ROG, and NO_X emissions above current levels, and the potential exists for resultant emissions to exceed the FRAQMD thresholds of significance.

Conclusion

As shown above in Table 4.5-4, emissions resulting from development of the Nichols Grove Tentative Map project would exceed the FRAQMD thresholds of significance. In addition, development of the non-participating properties could also exceed the FRAQMD thresholds of significance. Therefore, development of the Nichols Grove Tentative Map and non-participating properties would result in a ***significant*** impact to local air quality.

Mitigation Measure(s)

The following mitigation measures would reduce project impacts by a minimum of 35 percent; however, the ROG, NO_X, and PM_{10} emissions would not be reduced below the FRAQMD thresholds of significance; therefore, the impact would remain *significant and unavoidable*.

Nichols Grove Tentative Map

4.5-4(a) *Prior to initiation of ground disturbance activities, the applicant shall submit an Operational Emissions Reduction Plan for review and approval of the FRAQMD. In addition, the Plan shall be provided to the air district, the public, and the City of Wheatland with adequate time for air district and public review and comment period prior to submittal to the governing board for consideration at a public hearing. The Plan shall be the applicant's commitment to feasible mitigation measures from the BAMM list, recommended measures from air district staff, or voluntary off-site mitigation projects sufficient to provide a minimum 35 percent reduction in emissions.*

Non-Participating Properties

4.5-4(b) *Implement Mitigation Measure 4.5-1(i). If PM_{10}, ozone precursors, or ROG operational impacts to local air quality are determined to be*

significant for a particular project, the air quality impact analysis shall require implementation of Mitigation Measure 4.5-4(a).

Cumulative Impacts and Mitigation Measures

4.5-5 Cumulative impacts to regional air quality.

Nichols Grove Tentative Map and Non-Participating Properties

According to 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 (Nichols Grove Tentative Map in conjunction with future development of non-participating properties) would exceed the FRAQMD thresholds of significance for ROG, NO_X and PM_{10}; 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)

The following mitigation measures would reduce project impacts by a minimum of 35 percent; however, the ROG, NO_X, and PM_{10} emissions would not be reduced below the FRAQMD thresholds of significance. Therefore, the impact would remain *significant and unavoidable*.

Nichols Grove Tentative Map

4.5-5(a) Implement Mitigation Measures 4.5-4(a).

Non-Participating Properties

4.5-5(b) Implement Mitigation Measure 4.5-4(b).

4.5-6 Project impacts concerning the production of greenhouse gases.

The cumulative increase in GHG concentrations in the atmosphere has contributed to, and will continue to contribute to, increases in global average temperature and associated shifts in climatic and environmental conditions. Multiple adverse environmental effects are attributable to global climate change, such as sea level rise, increased incidence and intensity of severe weather events (e.g., heavy rainfall, droughts), and extirpation or extinction of plant and wildlife species. Given the significant adverse environmental

effects linked to global climate change induced by GHGs, the emission of GHGs is considered a significant cumulative impact. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission 2006a). Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. The challenge in assessing the significance of an individual project's contribution to global GHG emissions and associated global climate change impacts is to determine whether a project's GHG emissions—which are at a micro-scale relative to global emissions—result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

Qualitative vs. Quantitative Assessment

As discussed above, CARB and other air quality regulatory agencies have not issued any guidance that agencies can follow in evaluating how land use developments contribute to climate change. While there are some established methodologies and mitigation measures for stationary source emissions, an accepted methodology for evaluating how land use projects may contribute to climate change via mobile source emissions does not exist.

Issues of GHG emissions and climate change are fundamentally different from other areas of air quality impact analysis, which are all linked to some region or area in which the impact is significant. In the case of toxic air contaminants, that area typically is a very localized area. In the case of ozone precursors, that area is typically the air basin. In those contexts, where air quality is linked to a particular location or area, considering the creation of new emissions in that area to be an environmental impact is sensible.

As demonstrated below, calculating the project's approximate GHG emissions is possible; however, it should be noted that the emissions calculations have significant limitations. These calculations allow the user to estimate GHG emissions in pounds per day or tons of CO_2 per year for various land uses and projects. The calculations also included some features that minimized double counting of trips, because the traffic study included trip reductions. However, the GHG emissions calculations presented here only evaluate and model aggregate CO_2 emissions, they do not demonstrate, with respect to a global impact, how much of these aggregate emissions are in fact "new" emissions specifically attributable to the proposed project.

This fact is critically important, because the approval of the proposed project would not create new drivers – the primary source of the proposed project's emissions. New residents, employees, and patrons of the project would most likely be switching their greenhouse gas emissions from one place to another, rather than creating new emissions. Thus, the use of models that measure overall emissions, without accounting for existing emissions, would substantially overstate the proposed project's impact on GHG emissions. Overstating the impacts of the proposed project on GHG emissions could lead to misallocation of resources in seeking solutions to GHG emissions and climate change problems. Instead, a more effective approach to resolving climate change issues would

include imposing State or federal regulations on fuel formulation, vehicles, and the like; as California is attempting to do with the Low Carbon Fuel Standard.

The proposed project for the most part would not "create" GHG emissions. Instead, the project would "move" the emissions from one area to another, as an existing driver moves from one area to the other. Therefore, quantitative analysis of GHG emissions would be substantially different from other air quality impacts, where the addition of "moved" emissions to a new locale (such as a toxic hot spot or an air basin that is not attaining ozone standards) can make a substantial difference. Accordingly, the above quantitative analysis of the proposed project's contribution to GHG is inherently inaccurate and speculative.

Nichols Grove Tentative Map

The major sources of GHG emissions generated from the proposed Nichols Grove Tentative Map are vehicle source CO_2 emissions. Vehicle transportation is one of the major contributors to GHG emissions in Yuba County and the City of Wheatland. Vehicle emissions primarily consist of CO_2 from the tailpipe during vehicle operation. Using the URBEMIS outputs contained in Air Quality Assessment (Appendix F of this Draft EIR), the proposed project is estimated to generate 22,950 new vehicle trips per day and generate an average of 167,082 vehicle miles traveled (VMT) per day, or approximately 60,984,930 VMT annually. Assuming an emissions factor for future CO_2 emissions from vehicles of approximately 366 grams CO_2/mile,[8] approximately 24,604 tons (US) of CO_2 per year would be generated by the vehicle trips associated with the proposed project. It should be noted that while the CO_2 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. Additional GHG emissions would result from the use of electricity and the combustion of natural gas. However, the actual statewide GHG emissions totals generated by the Nichols Grove Tentative map are likely much lower than the figure listed above, as the vast majority of the vehicle trips "generated" by the project are already occurring elsewhere.

Carbon dioxide emissions in California totaled approximately 391 million tons in 2004.[9]

Non-Participating Properties

The non-participating properties contain land uses designated for residential, commercial, and employment uses. While vehicle trips associated with the development of the non-participating properties was included in the Wheatland General Plan EIR, separating out the trips for the specific properties has not been done. Therefore, evaluating the potential CO_2 emissions is not feasible at this time.

Development of the non-participating properties would result in an increase in the total GHG emissions within the City limits; however, the development of employment and

commercial opportunities within the City has the potential to reduce VMT by Wheatland residents traveling to work and shopping destinations.

Project Compliance with GHG Reduction Strategies

The Cal-EPA Climate Action Team developed a report that proposes a path to achieve the Governor's targets that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs. The report indicates that the strategies would reduce California's emissions to the levels proposed in Executive Order S-3-05. The strategies that apply to the project are contained in Table 4.5-5. As shown in the table, the project would comply with the potential measures set forth by the Climate Action Team to bring California to the emission reduction targets.

The increase in energy efficiency and programs designed to promote fuel conservation through the reduction in vehicle trips would reduce the project's incremental contribution to GHG emissions and global climate change in a manner that is consistent with the strategies to reduce California's emissions to the level proposed in Executive Order S-3-05.

Table 4.5-5
Project Compliance with GHG Emissions Reduction Strategies

Agency	Strategy	Project Compliance with Reduction Strategy
California Air Resources Board (CARB)	Vehicle Climate Change Standards Heavy-Duty Vehicle Emissions Reduction Measures	**Compliant.** The vehicles that access the project will be in compliance with any vehicle standards that are established by CARB.
	Diesel Anti-Idling	**Compliant.** CARB's Airborne Toxic Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling ensures that diesel trucks accessing the project site would not idle.
California Energy Commission	Building Energy Efficiency Standards Appliance Energy Efficiency Standards	**Compliant.** California law requires compliance with Title 24 efficiency standards.
State Department of Business, Transportation, and Housing	Measures to Improve Transportation Energy Efficiency	**Compliant.** The proposed project is adjacent to existing urbanized area, and is surrounded by lands planned for development. The project site would contain pedestrian and bicycle paths and amenities. All of these features promote transportation efficiency.

Conclusion

Greenhouse gas emission estimates from an individual project have a relatively high uncertainty. In addition, the potential affects of current and future regulations on CO_2 emissions attributable to the project and cumulative CO_2 emissions from other sources in the State cannot be quantified. Furthermore, the way in which CO_2 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)

Measures to reduce GHG emissions are equivalent to measures to reduce air pollutant emissions. Therefore, mitigation measures intended to reduce air quality pollutants resulting from combustion of fuels and emissions of ROGs, would also reduce the project's GHG impact; 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 be *significant and unavoidable*.

Nichols Grove Tentative Map

4.5-6(a) Implement Mitigation Measures 4.5-1(a-d and f-h) and 4.5-4(a).

Non-Participating Properties

4.5-6(b) Implement Mitigation Measures 4.5-1(i) and 4.5-4(b).

Endnotes

[1]*Air Quality Impact Analysis for the Proposed Nichols Grove Project, City of Wheatland*, Don Ballanti, Consulting Meteorologist, June 2007.
[2]*City of Wheatland General Plan*, City of Wheatland, June 1999.
[3]*City of Wheatland General Plan EIR*, City of Wheatland, June 1999.
[4]*Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*, Association of Environmental Professionals, June 29, 2007.
[5]*Our Changing Climate: Assessing the Risks to California*, California Climate Change Center, 2006.
[6]*Climate Action Team Report*, California Climate Action Team, March 2006.
[7]Meehl, 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, 2007: Global Climate Projections. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment*

Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

[8]*Proposed Methodology to Model Carbon Dioxide Emissions and Estimate Fuel Economy*, California Air Resources Board, 2002. (http://www.arb.ca.gov/msei/onroad/downloads/pubs/co2final.pdf.) Accessed in August 2007.

[9]*Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, California Energy Commission (CEC), 2006. Publication CEC-600-2006-013-D.

4.6 BIOLOGICAL RESOURCES

INTRODUCTION

The Biological Resources chapter evaluates potential biological resource impacts associated with the implementation of the proposed Nichols Grove project and includes a discussion of the mitigation measures necessary to reduce impacts to a less-than-significant level where possible. The information contained in this analysis is primarily based upon the *Arborist Report and Tree Inventory Summary* prepared by Sierra Nevada Arborists,[1] the *Biological Resource Assessment* prepared by Gallaway Consulting, Inc.,[2] the *City of Wheatland General Plan*,[3] and the *City of Wheatland General Plan EIR*.[4]

ENVIRONMENTAL SETTING

The following sections describe the regional and local setting of the site as well as the biological resources occurring in the proposed project area.

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. The majority of 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.

Nichols Grove Tentative Map Site

The proposed project is situated in an area that historically has been dominated by agricultural land use. The Nichols Grove Tentative Map site represents the Biological Study Area (BSA), and presently consists of seven fields that are currently either walnut or almond orchards, dry grain crop fields, or pasture for grazing cattle or horses. Grasshopper Slough drains the site and has well-established riparian trees and shrubbery dominated by Valley oak. Open agricultural lands surround the site to the east and west. Dry Creek borders the project site to the north, and residential development within the City of Wheatland is south of the project site. Soils within the

project site are well drained and are comprised of Conejo loam, 0 to 2 percent slopes; Kimball loam, 0 to 1 percent slopes; Redding gravelly loam, 3 to 8 percent slopes; and San Joaquin loam, 0 to 1 percent slopes. Within the project area, the average annual temperature is 62.6 degrees Fahrenheit, and the average rainfall is 18 to 22 inches.

Habitat Types

The following habitat types are found on the Nichols Grove Tentative Map project site, as illustrated in Figure 4.6-1, Project Habitat Types.

Dryland Grain Crops

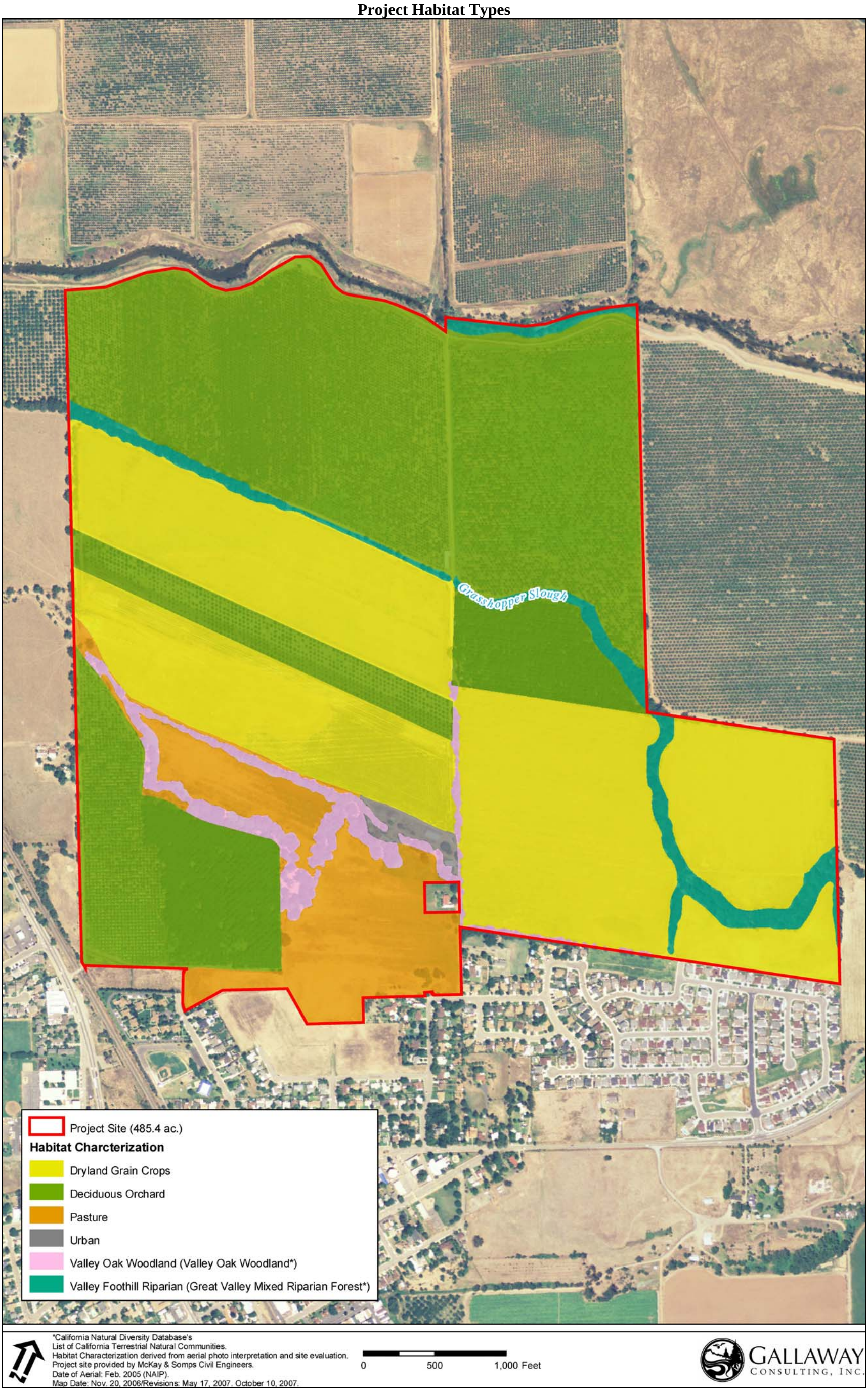
Dryland grain and seed crops occur in association with orchards, vineyards, pasture, urban, and other wildlife habitats such as riparian, chaparral, wetlands, desert, and herbaceous types. Dryland grain and seed crops are usually established on fertile soils, which historically supported an abundance of wildlife. Grain crops have reduced the wildlife habitat richness and diversity. Hawks, owls, and other predators feed on the rodents in these areas. Prior to establishing State and federal wildlife refuges, waterfowl depredation of these crops was extensive. That problem has been essentially eliminated; however, some species of waterfowl feed on the green foliage during winter months. Deer, elk, antelope, and wild pigs forage in grain fields and can cause depredation problems. Pheasants introduced to the cropland habitat have experienced recent population declines owing to changes in crop patterns and cultural practices for growing small grains. Changes include clean farming, double cropping, and chemical control of crop diseases and pests rather than leaving land fallow in alternate years.

Deciduous Orchard

Orchards are typically associated with other agricultural types such as irrigated grain and seed crops, row and field crops, and pasture. Orchards are frequently associated with Valley Foothill riparian areas, shrub habitats (mixed chaparral), annual grasslands, Valley Foothill hardwood, Valley Foothill hardwood conifer, and ponderosa pine (*Pinus ponderosa*).

Orchards have been planted on deep fertile soils that once supported productive and diverse natural habitats. Larger and more diverse populations of wildlife were also supported by these native habitats. However, some species of birds and mammals have adapted to the orchard habitats. Many have become “agricultural pests,” which has resulted in intensive efforts to reduce crop losses through fencing, sound guns, or other management techniques. Wildlife such as deer and rabbit browse on trees, while other wildlife such as squirrel and numerous birds feed on fruit or nuts. Some wildlife (e.g. morning dove, *Zenaida macroura*, and California quail, *Callipepla californica*) is more passive in use of the habitat for cover and nesting sites. Deciduous orchards can be especially beneficial to wildlife during hot summer periods. However, orchards provide much less cover from rain and cold during the winter months when the leaves have dropped. Water can be beneficial in irrigated orchards. Many wildlife species act as biological control agents by feeding on weed seeds and insect pests.

Figure 4.6-1
Project Habitat Types



Pasture

Pastures often occur in association with agricultural habitats. Moreover, irrigated pastures can be found adjacent to habitats such as Valley Foothill riparian, mixed chaparral, Coastal scrub, fresh emergent wetland, and annual and perennial grasslands. Pastures are used by a variety of wildlife depending upon geographic area and type of adjacent habitats. Pastures within the proposed project site provide habitat for ground nesting birds and foraging areas for locally-occurring raptor species, including Swainson's hawk (*Buteo swainsoni*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), barn owl (*Tyto alba*), turkey vulture (*Cathartes aura*), and Cooper's hawk (*Accipiter cooperii*). Grazing by deer would also be expected in pasture areas within the Nichols Grove Property.

Urban

Urban development has occurred within or adjacent to most other habitats in California, with the highest density at lower elevations. The majority of urban developments in California were developed in grassland or scrub (coastal sagebrush or chaparral) vegetation. In some cases, the original vegetation at such locations was modified by agriculture and today agriculture and grazing lands, rather than natural vegetation, surround most cities. Although the site is largely undeveloped, several barns and agricultural buildings occur on the site and represent the beginnings of urban development.

Valley Foothill Riparian

Transition to adjacent non-riparian vegetation is usually abrupt, especially near agriculture. Valley Foothill riparian habitat is found in association with riverine, grassland, oak woodland, and agriculture. Valley Foothill riparian habitats provide food, water, migration, and dispersal corridors, as well as escape, nesting, and thermal cover for an abundance of wildlife. At least 50 amphibian and reptile species occur in lowland riparian systems. Several of the amphibian and reptile species are permanent residents; others are transient or temporal visitors. In one study conducted on the Sacramento River, 147 bird species were recorded as nesters or winter visitants. An additional 55 species of mammals are known to use California's Central Valley riparian communities.

Sensitive Natural Communities

Great Valley Mixed Riparian Forest is a California Terrestrial Natural Community recognized by the California Natural Diversity Database (CNDDB). Terrestrial Natural Communities are monitored by the California Department of Fish and Game (CDFG) and ranked according to their rarity through the state. Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. The most current version of the CNDDB's List of California Terrestrial Natural Communities may be used as a guide to the names and status of communities. Though the following communities fall under the Valley Foothill Riparian habitat described above, the CNDDB list is monitored and regulated by the CDFG.

Great Valley Mixed Riparian Forest

Remnant Great Valley Mixed Riparian Forest occurs primarily along Grasshopper Slough through the central portion of the project site. Holland (1986) describes Great Valley Mixed Riparian Forest as occurring in relatively fine texture alluvium in floodplains of low gradient depositional streams, usually below 500 feet. Dominant canopy species typically include Fremont cottonwood (*Populus fremontii*), sycamore (*Plantanus racemosa*), black walnut (*juglans nigra*), Valley oak, and willow species (*Salix spp.*). Sub-canopy associates often include wild grape (*Vitis californica*), wild rose (*Rosa californica*), Himalayan blackberry (*Rubus discolor*), blue elderberry, and poison oak (*Toxicodendron diversiloba*). Herbaceous layers consist of sedges, rushes, and grasses. Great Valley Mixed Riparian Forest in the proposed project site is dominated by Valley oak, California buckeye (*Aeshulus californica*), California black walnut, and Oregon ash (*Fraxinums latifolia*). Great Valley Mixed Riparian Forest is listed as a sensitive plant community by CDFG.

Valley Oak Woodland

Vegetation types dominated by oak trees cover about four million hectares in California, or roughly 10 percent of the State's land area. These extensive oak woodlands serve a number of important ecological functions. Oak woodlands play a critical role in protecting soils from erosion and landsliding, regulating water flow in watersheds, and maintaining water quality in streams and rivers.

Valley Oak Woodland habitat varies from savanna-like to forest-like stands with partially closed canopies, comprised mostly of winter deciduous, broad-leaved species. Denser stands typically grow in valley soils along natural drainages. Tree density decreases with the transition from lowlands to the less fertile soils of drier uplands. Shrub layer associated with Valley oak stands is best developed along natural drainages, becoming insignificant in the uplands with more open stands of oaks. Valley oak stands where little or no grazing activities occur tend to develop a partial scrub layer of bird-disseminated species, such as poison oak, toyon (*Heteromeles arbutifolia*), and coffeeberry (*Rhamnus californica*). Mature Valley oaks with well-developed crowns range in height from 49 to 115 feet (Cheatham and Haller 1975, Conrad et al. 1977). Valley Oak Woodlands in the Great Valley usually merge with annual grasslands or border agricultural lands. Near major stream courses, this community intergrades with Valley Foothill riparian vegetation.

Oak woodlands have higher levels of biodiversity than virtually any other terrestrial ecosystem in California. According to Mayer and Laudenslayer (1988), with the exception of riparian habitat, hardwood habitats including oak woodlands provide breeding habitat for more wildlife species than any other habitat in California. Mayer and Laudenslayer (1988) estimated in 1980 that these woodlands provide important breeding habitat for over 29 amphibian and reptile species, 57 bird species, and 10 mammal species. Bird species include primary and secondary cavity nesters and insectivores such as acorn woodpeckers (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), northern flickers (*Colaptes auratus*), American kestrel, Western screech owl (*Otus kennicotti*), ash-throated flycatcher (*Myiarchus crinitus*), Western wood-peewee (*Contopus sordidulus*), oak titmouse (*Baeolophus inornatus*), Bewick's wren

(*Thryomanes bewickii*), and Hutton's vireo (*Vireo huttoni*). Reptiles and amphibians common to this habitat include Western toad (*Bufo Boreas*), Pacific tree frog (*Hyla regilla*), and gopher snake (*Pituophis melanoleuces*). Common mammals include black-tailed deer (*Odocoileus hemionus columbianus*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and dusky-footed wood rat (*Neotoma fuscipes*).

On-Site Trees

On November 28, 2006, Sierra Nevada Arborists conducted field inspections on the Nichols Grove Tentative Map site to identify, inventory, and evaluate trees within "potential impact areas." Only trees with a diameter at breast height (dbh) of six inches or greater were considered. The "potential impact areas" were defined as areas within the project site, not including the agricultural orchards, which would be affected by the proposed development. Orchard trees are not considered a natural woodland resource. The survey inventoried the potential impact area for both native and non-native trees 6 inches or greater in dbh. A total of 301 native and non-native trees totaling 5,077 aggregate diameter inches were inventoried within the "potential impact area." See Table 4.6-1, Species Diversification, for the composition of the 301 trees surveyed.

Table 4.6-1
Species Diversification

Common Name ***(Scientific Name)***	**Quantity**	**Aggregate Diameter (inches)**
Almond *(Prunus sp.)*	4	56
California Black Walnut *(Jugalans hindsii)*	25	464
California Buckeye *(Aesculus californica)*	4	52
Edible Fig *(Ficus carica)*	1	30
Elderberry *(Sambucaus caerulea)*	1	8
English Walnut *(Jugans regia)*	3	40
Fruitless Mulberry *(Morus alba)*	2	39
Oregon Ash *(Fraxinus latifolia)*	1	22
Pecan *(Carya illnoensis)*	5	57
Valley Oak *(Quercus lobata)*	255	4,309
Total	**301**	**5,077**

Source: Sierra Nevada Arborists, 2007.

Non-Participating Properties

Similar to the Nichols Grove Tentative Map site, most of the non-participating properties are situated in areas that have historically been dominated by agricultural use. As can be seen in Figure 4.6-1, non-participating properties to the west and south appear to be a continuation of the pasture and dryland grain crop habitat types that are present on the Nichols Grove Tentative Map site. The non-participating property located west of the Nichols Grove Tentative Map site (APN 015-140-056) likely contains Valley Foothill Riparian habitat along the course of Grasshopper Slough. As discussed above, the Valley Foothill Riparian habitat is composed of both the Great Valley Mixed Riparian Forest and Valley Oak Woodland sensitive natural communities.

The non-participating properties west of SR 65 and the UPRR can best be described as an urban habitat. While the property is undeveloped, the site is entirely surrounded by urban uses and is not connected to other habitats with wildlife values.

A substantial number of trees are located along property lines and drainages within the non-participating properties. With the exception of the orchard varieties, tree species on the non-participating properties are expected to be similar to those on the Nichols Grove Tentative Map site, with the predominant species being the valley oak.

Special-Status Species

The special-status species evaluation performed by Gallaway Consulting, Inc. included those species identified as having relative scarcity and/or declining populations by the USFWS or 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 to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened, or endangered in California by the CNPS are included. While site-specific impacts would vary, special-status species that occur within the Nichols Grove Tentative Map site are expected to also occur within similar habitats on the adjacent non-participating properties.

Special-Status Plants

Habitat for sensitive and/or plant species listed by the USFWS, the CDFG, and the CNPS, within the Wheatland USGS 7.5' quad and surrounding eight quads, is not present within the proposed project site. Agricultural practices have altered previous grasslands within the site that may have supported any potentially occurring special-status species. Regionally-occurring State and/or federally listed plant species in the vicinity of the proposed project site are associated with vernal pools and require heavy clay soils, or cismontane woodlands, which do not occur within the site.

Special-Status Wildlife

Site surveys performed by Gallaway Consulting Inc. did not detect the occurrence of any State or federally listed threatened or endangered species, although several environmentally sensitive features are associated with the site. Within the proposed project site, primarily concentrated in Grasshopper Slough, are numerous elderberry bushes (*Sambucus sp*.). Although elderberry is not a special-status species, the elderberry bush provides suitable habitat for the Federally-threatened Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB). Definitive evidence of VELB was not observed (i.e. exit holes) on shrub stems. Several holes were observed on elderberry shrub stems; however, the holes were not recent.

In the special-status species evaluation, Gallaway Consulting, Inc. conducted a search of the California Natural Diversity Database (CNDDB) to determine special-status species or sensitive natural communities that potentially occur or were observed on the project site. The record search was conducted for the Wheatland and eight surrounding USGS quadrangles. Several State and/or federal special-status species have potential to occur within the proposed project site (See Figure 4.6-2).

Table 4.6-2 includes the results of the CNDDB record search. Of the 28 special-status species evaluated in Table 4.6-2, 11 species 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 area would eliminate the potential for many of the special-status species to occur onsite.

The following species are included in Table 4.6-2 below, and have been determined to have the potential to occur on-site. The remaining species are not discussed further due to the lack of habitat on the project site to support these species.

Invertebrates

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is a federal Threatened species that is dependent upon the elderberry (*Sambucus mexicana*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and have been documented as occurring in the Wheatland area. The USFWS generally considers any elderberry stem equal to, or greater than, one inch in diameter, measured at ground level, to be potential habitat for the valley elderberry longhorn beetle.

Numerous elderberry shrub clusters occur in 58 points and/or areas within the proposed Nichols Grove Tentative Map site (See Figure 4.6-3). Some occurrences within the site are comprised of a single stem in an isolated area, and other occurrences are comprised of many stems over large areas. Most shrubs are concentrated in and along Grasshopper Slough.

Figure 4.6-2
CNDDB Occurrences

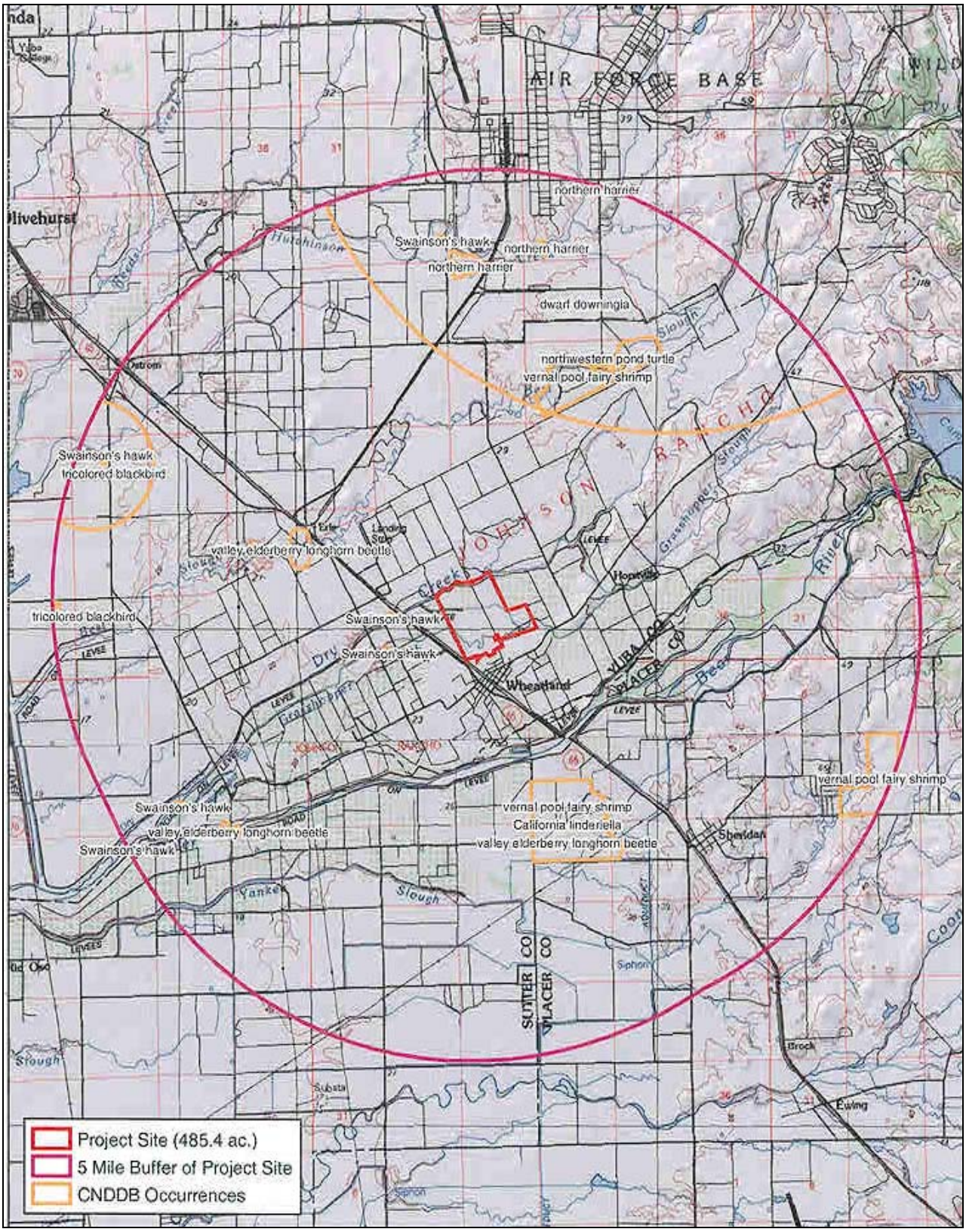


Table 4.6-2
Special-Status Species and Sensitive Natural Communities that Potentially Occur or Were Observed within the Project Site

Common Name (*Scientific Name*)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence*
SENSITIVE NATURAL COMMUNITIES AND HABITATS			
Great Valley Mixed Riparian Forest	_/SNC/_	A tall, dense, winter-deciduous, broadleafed riparian forest. The tree canopy is usually fairly well closed and moderately to densely stocked with several species including *Acer negundo*, *Juglans hindsii*, *Platanus racemosa*, *Populus fremontii*, and *Salix* spp.	Known. Occurs within BSA.
Valley Oak Woodland	_/SNC/_	Valley Oak Woodland occurs in California's Central Valley and central Coast Ranges in a wide range of physiographic settings, but is best developed on deep, well-drained alluvial soils, usually in valley bottoms. Most large, healthy Valley oaks are rooted down to permanent water supplies.	Known. Occurs within BSA.
Essential Fish Habitat (EFH) for Pacific Salmon	Federally Protected Under the Magnuson-Stevens Fishery Conservation Act	In this case EFH is defined as those waters and substrate necessary to Pacific salmon for spawning, breeding, feeding, or growth to maturity.	Known. Occurs north of the northern border of the site. Dry Creek constitutes EFH.
PLANTS			
Ahart's Dwarf Rush (*Juncus leiospermus var. ahartii*)	__/__/1B	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools / vernally mesic areas. (Mar-May)	None. No suitable habitat.
Big-scale Balsam Root (*Balsamorhiza macrolepis* var. *macrolepis*)	__/__/1B	Cismontane woodlands and chaparral. Valley and Foothill grasslands. Sometimes serpentinite. (Mar-June)	None. No suitable habitat.
Bogg's Lake Hedge-Hyssop (*Gratiola heterosepala*)	__/SE/1B	Marshes and swamps. Vernal pools. (Apr-Aug)	None. No suitable habitat.

(continued on next page)

Table 4.6-2
Special-Status Species and Sensitive Natural Communities that Potentially Occur or Were Observed within the Project Site

Common Name (*Scientific Name*)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence*
Brandegee's Clarkia (*Clarkia biloba* ssp. *brandegeeae*)	__/__/1B	Chaparral. Cismontane woodlands/often along roadcuts. (May-July)	None. No suitable habitat.
Dwarf Downingia (*Downingia pusilla*)	__/__/2	Valley and foothill grasslands. Vernal pools. (Mar-May)	None. No suitable habitat.
Hartweg's Golden Sunburst (*Pseudobahia bahiifolia*)	FE/SE/1B	Cismontane woodlands. Valley and foothill grasslands in heavy clay soils. (Mar-Apr)	None. No suitable habitat.
Legenere (*Legenere limosa*)	__/__/1B	Vernal pools. (Apr-June)	None. No suitable habitat.
Pincusion Navarretia (*Navarretia myersii* ssp. *myersii)*	__/__/1B	Vernal pools. (May)	None. No suitable habitat.
Veiny Monardella (*Monardella douglasii* ssp. *venosa*)	__/__/1B	Cismontane woodlands. Valley and foothill grasslands in heavy clay soils. (May-July)	None. No suitable habitat.
INVERTEBRATES			
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE/__/__	Pools found in grass-bottomed swales of unplowed grasslands. Some pools are mud bottomed and highly turbid.	None. No suitable habitat.
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	FT/__/__	Moderately turbid, deep, cool-water vernal pool.	None. No suitable habitat.
Conservancy Fairy Shrimp (*B. conservatio*)	FE/__/__	Large, long standing vernal pools.	None. No suitable habitat.

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Table 4.6-2
Special-Status Species and Sensitive Natural Communities that Potentially Occur or Were Observed within the Project Site

Common Name (*Scientific Name*)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence*
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)	FT/__/__	Within stems of blue elderberry bushes (*Sambucus mexicana*).	High. Suitable habitat detected within the BSA. No presence detected.
REPTILES AND AMPHIBIANS			
Western Pond Turtle (*Clemmys marmorata*)	_/CSC/_	Permanent or nearly aquatic habitats by slow moving waters with abundant aquatic vegetation.	Moderate. Suitable habitat is associated with Dry Creek.
Giant Garter Snake (*Thamnophis gigas*)	FT/ST/__	Agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley.	None. Sub-marginal habitat within BSA. No known occurrence within 5 miles.
California Red-legged Frog (*Rana aurora draytonii*)	FT/CSC/_	Requires permanent water source, typically occurs along slow moving streams, ponds, or marshes with emergent vegetation.	None. Not known to occur in Central Valley.
FISH			
Central Valley Spring-run Chinook Salmon *(Oncorhynchus tshawytscha)*	FT/ ST/__	Occurs in drainages within the Sacramento River watershed. Dry Creek → Bear River → Feather River → Sacramento River.	None. Due to life history of this Evolutionary Significant Unit (ESU) and local summer flow regime; this run is not expected to occur in Dry Creek adjacent to the site.
Central Valley Steelhead (*Oncorhynchus mykiss*)	FT/__/__	Occurs in drainages within the Sacramento River watershed. Dry Creek → Bear River → Feather River → Sacramento River.	High. This species is a year round resident in the watershed and will occur seasonally in Dry Creek

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Table 4.6-2
Special-Status Species and Sensitive Natural Communities that Potentially Occur or Were Observed within the Project Site

Common Name (*Scientific Name*)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence*
			adjacent to the site.
Central Valley Fall/Late Fall-Run Chinook Salmon (*Oncorhynchus tshawytscha*)	_/CSC/_	Occurs in drainages within the Sacramento River watershed. Dry Creek → Bear River → Feather River → Sacramento River.	High. This species will occur in Dry Creek during high flow periods adjacent to the site.
Delta Smelt (*Hypomesus transpacificus*)	FT/ST/__	Delta smelt are found only from the Suisun Bay upstream through the San Francisco Bay Delta in Contra Costa, Sacramento, San Joaquin, Solano and Yolo Counties.	None. Species does not occur in Yuba County. No suitable habitat present.
Sacramento Splittail (*Pogonichthys macrolepidotus*)	__/SC/__	Largely confined to: (1) the San Francisco Bay Delta, (2) Suisun Bay, (3) Suisun Marsh, (4) Napa River, (5) Petaluma River, and (6) other parts of the Sacramento-San Joaquin Estuary.	Low. Not likely to occur, but seasonal presence is possible in Dry Creek adjacent to the site.
MAMMALS			
Yuma Myotis Bat (*Myotis yumanensis*)	_/CSC/_	Woodland and forested areas, large buildings and abandoned mine tunnels within one-half mile of a surface water source.	Moderate. Potential roosting and foraging areas within riparian areas and old buildings onsite. No presence (guano deposits) was detected during surveys of buildings.
BIRDS			
Bald Eagle (*Haliaeetus leucocephalus*)	FT/SE/__	Lakes, rivers, estuaries, reservoirs and some coastal habitats.	None. No suitable breeding or foraging habitat present.
Bank Swallow (*Riparia riparia*)	__/ST/__	Nests in steep riverbank cliffs, gravel pits, and highway cuts.	None. No suitable breeding or foraging habitat present.

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Table 4.6-2
Special-Status Species and Sensitive Natural Communities that Potentially Occur or Were Observed within the Project Site

Common Name (*Scientific Name*)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence*
California Black Rail (*Laterallus jamaicensis coturniculus*)	__/ST/__	Yearlong resident of saline, brackish, and fresh emergent wetlands in the San Francisco Bay Area, Sacramento-San Joaquin Delta, coastal Southern California, the Salton Sea and lower Colorado River area.	None. No suitable habitat.
Cooper's Hawk (*Accipiter cooperii*)	_/CSC/_	Frequents landscapes where wooded areas occur in patches and groves. Often uses patchy woodlands and edges with snags for perching. Dense stands with moderate crown-depths used for nesting	Known. Observed during survey. Suitable nesting and foraging areas within BSA.
Long-Eared Owl (*Asio otus*)	_/CSC/_	Riparian habitat required; also uses live oak thickets and other dense stands of trees.	Moderate. Suitable habitat within the project area.
Northern Harrier (*Circus cyaneus*)	_/CSC/_	Meadows, grasslands, open rangelands, desert sinks, and emergent wetlands.	Moderate. Suitable foraging areas within project area.
Swainson's Hawk (*Buteo swainsoni*)	__/ST/__	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures.	High. Active nest site documented within 1-mile of the survey area.
Tricolored Blackbird (*Agelaius tricolor*)	_/CSC/_	Emergent wetlands with tall, dense cattails or tules, but also thickets of willow, blackberry, and wild rose habitats.	Low. Marginal habitat within site.
Western Burrowing Owl (*Athene cunicularia hypugea*)	_/CSC/_	Open grasslands and chaparral at lower elevations.	Moderate. Suitable habitat within the BSA.
Western Yellow-Billed Cuckoo (*Coccyzus americanus occidentalis*)	FC/SE/__	Densely foliaged, deciduous trees and shrubs, especially willows.	None. Not known to occur; no suitable habitat

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Table 4.6-2
Special-Status Species and Sensitive Natural Communities that Potentially Occur or Were Observed within the Project Site

Common Name (*Scientific Name*)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence*
White-tailed Kite (*Elanus leucurus*)	__/FP/__	Uses herbaceous lowlands with variable tree growth and dense population of voles. Substantial groves of dense, broad-leafed deciduous trees used for nesting and roosting.	Moderate. Suitable foraging areas within project area.
Yellow Warbler (*Dendroica petechia*)	_/CSC/_	Very partial to riparian woodlands of the lowlands and foothill canyons.	Moderate. Suitable nesting and foraging habitat within BSA.

CODE DESIGNATIONS

FE *= Federally-listed Endangered*
FT *= Federally-listed Threatened*
FC *= Federal Candidate Species*
MBTA *= protected by the Federal Migratory Bird Treaty Act*

SE *= State-listed Endangered*
ST *= State-listed Threatened*

CSC *= CDFG Species of Special Concern*
FP *= CDFG Fully Protected Species*
SNC*= CDFG Sensitive Natural Community*

CNPS 1B *= Rare or Endangered in California or elsewhere*
CNPS 2 *= Rare or Endangered in California, more common elsewhere*
CNPS 3 *= More information is needed*
CNPS 4 *= Plants with limited distribution*

****Potential for occurrence:*** *for plants "potential for occurrence" is considered the potential to occur during the survey period; for birds and bats "potential for occurrence" is considered the potential to breed, forage, roost, over-winter, or stop-over in the project area during migration. Any bird or bat species could fly over the project area, but this is not considered a potential for occurrence. The categories for the potential for occurrence include:*

None: The species or natural community is known not to occur, and has no potential to occur in the project area based on sufficient surveys, the lack of suitable habitat, and/or the project area is well outside of the known distribution of the species.
Low: Potential habitat in the project area is marginal, but the species is known to occur in the vicinity of the project area; or suitable habitat is present, but the species is not known to occur in the vicinity of the project area.
Moderate: Suitable habitat is present in the project area and the species is known to occur in the vicinity of the project area.
High: Habitat in the project area is highly suitable for the species and there are reliable records close to the project area, but the species was not observed.
Known: Species was detected in the project area or a recent reliable record exists for the project area.

Figure 4.6-3
Elderberry Bush Occurrences

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.

Reptiles and Amphibians

Giant Garter Snake

The giant garter snake is designated as a federal and State Threatened species, afforded special protection by USFWS and CDFG. 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.

The giant garter snake is not known to occur within five miles of the proposed project site and Grasshopper Slough does not represent suitable habitat. Although Grasshopper Slough could provide adequate water during the snake's active period (i.e., early spring to mid fall) to provide prey base and cover, Grasshopper Slough does not contain adequate herbaceous wetland vegetation, for escape cover or foraging, as well as adjacent basking sites. Additionally, rice fields are not proximal to the project site. Therefore, lack of suitable habitat in or around the proposed project site preclude the giant garter snake for occurring within the project site

Western Pond Turtle

The western pond turtle (*Clemmys marmorata*), a California Species of Special Concern, is the only fresh-water turtle native to greater California. The literature describes two subspecies of western pond turtle; the northwestern pond turtle (*C. m. marmorata*) and the southwestern pond turtle (*C. m. pallida*). Overall, western pond turtles are habitat generalists, and have been observed in slow-moving rivers and streams (*e.g*. in oxbows), lakes, reservoirs, permanent and ephemeral wetlands, stock ponds, and sewage treatment plants. They prefer aquatic habitat with refugia such as undercut banks and submerged vegetation, and require emergent basking sites such as mud banks, rocks, logs, and root wads to thermoregulate their body temperature.

Western 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 don't overwinter emerge from the nest in the early fall.

Fish

Central Valley Steelhead

Central Valley steelhead occur in the Sacramento River watershed year round and rearing juvenile steelhead will remain in the River system six months to a year until emigrating to estuarine areas. Dry Creek, which borders the northern portion of the Nichols Ranch property, is hydrologically connected to the Bear River, which flows into the Feather River, and eventually into the Sacramento River at Verona, CA. Dry Creek, a perennial drainage, has a high potential of seasonally supporting Central Valley steelhead. This reach 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. Summer water quality adjacent to the Nichols Ranch Property is negatively affected by agricultural tailings, which elevate temperatures to lethal levels (i.e. greater than 70° Fahrenheit), and preclude occurrence. High winter flows and low temperatures greatly increase the species upstream range in the watershed.

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.

Central Valley Fall/Late Fall-run Chinook Salmon

The Central Valley Fall/Late Fall-run Chinook salmon is a species of special concern and are associated with Essential Fish Habitat. EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. For the purpose of interpreting the 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.

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 form 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 (California Department of Fish and Game, 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. This reach of Dry Creek 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. Chinook salmon are expected to occur in Dry Creek only during winter and spring periods when water quality is suitable.

Mammal(s)

Yuma Myotis Bat

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. Additionally, bat roost in open buildings and barns, in which there are several located within the proposed project site. Grasshopper Slough and Dry Creek could be utilized for foraging opportunities. Although colonial roosting and large groups of bats occurring within the project site is highly unlikely, the widespread occurrence of this species throughout California, a small group or individuals could be present at the proposed project site.

Birds

Swainson's Hawk

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.

According to the CNDDB and supplemental data, 39 active (i.e., used within the last five years) Swainson's hawk nest sites occur within 10 miles of the proposed project site (See Figure 4.6-4). Table 4.6-3 outlines the number of "active" nests and their proximity to the project area. The occurrences were documented during surveys of the region by the CDFG from 2001-2004, and additional nest sites may occur in the vicinity. The mature oak trees located, within the Nichols Grove Tentative Map site and the adjacent non-participating property, along both Grasshopper Slough and Dry Creek provide suitable nesting habitat for the Swainson's hawk.

Table 4.6-3
Number of Nests in Proximity of Project Site

Distance of Nest to Site (miles)	Number of SWHA Nests
<1	2
>1-5	6
>5-10	31

Source: Gallaway Consulting, Inc., 2007.

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. There are 239.9 acres of suitable Swainson's hawk foraging habitat within the Nichols Grove Tentative Map property (See Figure 4.6-5). The non-participating properties are largely composed of open pasture and other agricultural lands that constitute foraging habitat for the Swainson's hawk.

Cooper's Hawk

Cooper's hawk breeds throughout most of the wooded portions of California and often utilizes dense stands of live oak, deciduous riparian habitats, and forest habitats near water for nesting and foraging. The species forages in scattered woodland and along woodland habitat edges. Coopers hawk nest in deciduous trees, with peak activity occurring in March through July. According the Biological Resource Assessment, the species was observed on the project site.

Figure 4.6-4
Swainson's Hawk Occurrences

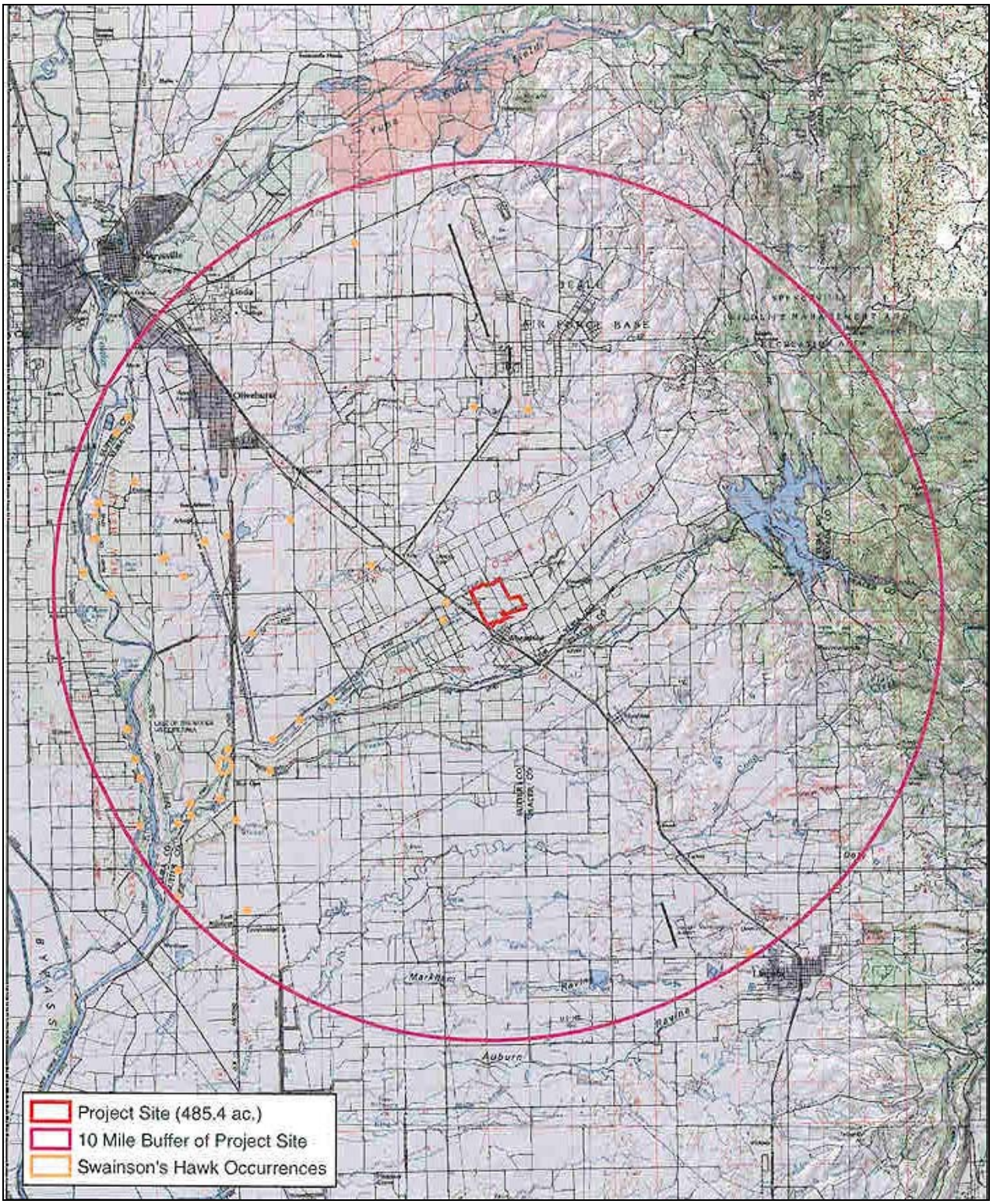
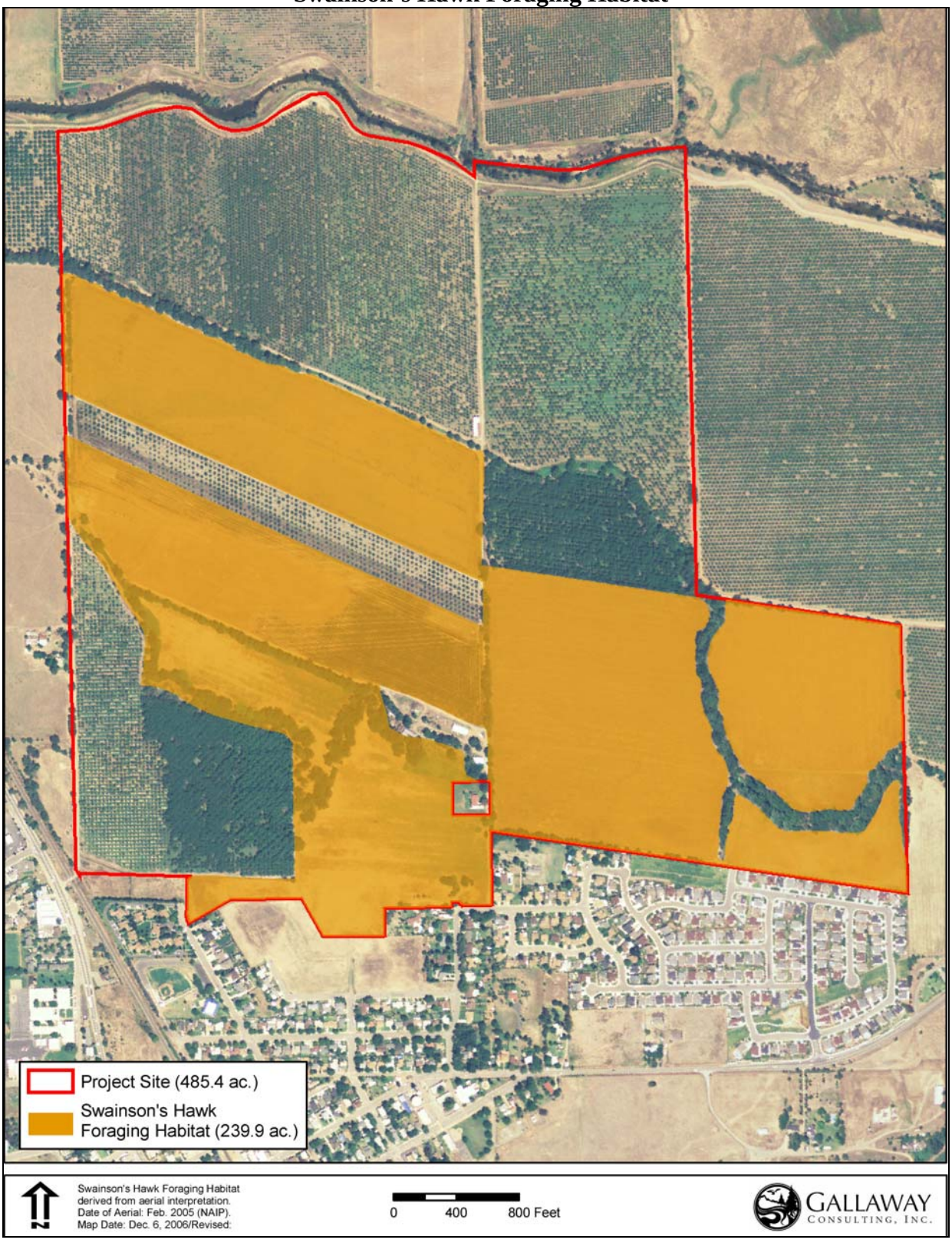


Figure 4.6-5
Swainson's Hawk Foraging Habitat



Northern Harrier

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. Although the species could potentially utilize the site for foraging, the heavy agricultural activity within the project site does not make the site suitable for nesting.

Burrowing Owl

The Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded special protection by CDFG. Burrowing owls typically establish their nesting sites in ground squirrel burrows during the late winter and early spring. The greater Sacramento Valley populations include both winter nesting birds as well as permanent residents.

The proposed project site contains primarily worked agricultural areas, including orchard and row crop fields, that would not provide suitable burrowing or foraging areas for Burrowing owls. Portions of the site are open pasture areas and evidence of burrowing mammals was detected during the site survey. Dale Whitmore, a regional CDFG wildlife biologist was contacted about known occurrences of the species within the area. Mr. Whitmore indicated that populations occur at Beale Air Force Base and are a common resident raptor species in the region. Though habitat within the proposed project site is not optimum, there is a moderate potential that the species could utilize the proposed project site for foraging and nesting.

Long-eared Owl

The Long-eared owl is an uncommon yearlong resident throughout the State except the Central and Southern California deserts. The Long-eared owl is typically found in riparian habitat and could be founding 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 gilding 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. The riparian habitat and densely growing trees along fencerows within the property provide suitable roosting and nesting habitat for the species. The riparian and densely growing trees are adjacent to open fields, which provide suitable foraging habitat for the owl. The Long-eared owl has a moderate chance of occurring within the proposed project site.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. Preferring to nest in dense stands of cattails, bulrush, and blackberry thickets, the tricolored blackbirds are colonial nesters. A number of tricolored blackbird nesting colonies have been documented in the Wheatland, Honcut, and Pennington quadrangles. However, the absence of suitable nesting habitat in the project area,

such as emergent marsh/open water or associated blackberry thickets, would eliminate any reasonable potential for tricolored blackbirds to nest at the Nichols Grove site.

Yellow Warbler

The species is widespread throughout California and has the moderate potential of occurring within the proposed project site during their summer nesting season. The Yellow warbler is usually found in riparian deciduous habitats during the summer, often comprised of cottonwood, willow, alder and other small trees, and shrubs typical of low open canopy riparian woodland. Annual migration in California typically occurs from April-October, and the Yellow warbler could utilize the riparian area surrounding Grasshopper Slough for nesting and foraging.

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

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. §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. §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. §328.3(e)).

State

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 California Department of Fish and Game (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 California Department of Fish and Game (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, §§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 §§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 §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), it may require review and approval of the RWQCB.

Streambed Alteration

The California Department of Fish and Game is a trustee agency that has jurisdiction under the California Fish and Game Code (§1600 *et seq*.). The California Fish and Game Code (§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 EFH 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 EFH. NMFS is required to provide EFH conservation and enhancement recommendations to the Federal action agencies. The geographic extent of freshwater EFH 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

City of Wheatland General Plan

The City of Wheatland established the following General Plan goals and policies regarding biological resources.

Fish and Wildlife Habitat

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.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.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.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.

Policy 8.B.9. The City shall require levee vegetation management be consistent with flood control and reclamation district constraints.

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.

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 has not declared that the City intends to participate in the development of the NCCP/HCP; however, following completion of the NCCP/HCP annexation and development of properties located in the county will be subject to the NCCP/HCP. Currently, the NCCP/HCP is in the early planning phases and adoption of the NCCP/HCP is anticipated to occur in late 2010.

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.

Methods of Analysis

Sources of information used for this section include the results from Gallaway Consulting, Inc.'s *Biological Resource Assessment*, Sierra Nevada Arborists' *Arborist Report and Tree Inventory Summary*, and local, State, and federal resource agencies.

Gallaway Consulting, Inc.

Gallaway Consulting, Inc. obtained lists of special-status species that potentially occur in the vicinity of the proposed project site from the United States Fish and Wildlife service, the California Department of Fish and Game's Natural Diversity Database, and the California Native Plant Society's list of rare and endangered plants. Special-status species are those that fall into one of the following categories:

- Listed and threatened or endangered, or are proposed candidates for listing under the California Endangered Species Act (14 CCR 670.5) or the federal Endangered Species Act (50 CFR 17.12);
- Listed as a Species of Special Concern by CDFG or protected under the California Fish and Game Code (3503.5);
- Included on the California Native Plant Society List 1A, 1B, or 2;
- Protected under the Migratory Bird treaty Act; or
- Species that are otherwise protected under the California Environmental Quality Act.

In addition, Gallaway Consulting, Inc. consulted the CNDDB to identify sensitive natural communities occurring within the City of Wheatland and eight surrounding USGS quadrangles. The CNDDB identifies sensitive natural communities, which includes those communities that, if eliminated or substantially degraded, would sustain a significant adverse impact as defined by CEQA. Furthermore, in a review of the Federal Register information, the Biological Resource Assessment determined if USFWS-designated critical habitat for special-status species occurs within the proposed project site.

Biological surveys were conducted in the project area on November 28, 2006 by Elena Alfieri, botanist and Ryan Brown, biologist. General biological resource surveys and protocol-level surveys were conducted to determine the presence of special-status species and habitats in the project area and to determine of the resources would be impacted by the proposed project. Special-status species observed in the biological survey can be found in Appendix E of the Biological Resource Assessment (See Appendix G of this Draft EIR).

Sierra Nevada Arborists

During the period of January 3-19, 2007, Sierra Nevada Arborists visited the Nichols Grove Tentative Map project site located in the City of Wheatland. The purpose the field reconnaissance effort was to obtain supplemental data for trees previously identified by others, which are enumerated on the undated, six-page "Nichols Ranch Tree Impact Report." A copy of this report is located in the appendix of the Arborist Report and Tree Inventory Summary conducted by Sierra Nevada Arborists.

The report identified, inventoried, and evaluated the current structure and vigor of the trees that measured six inches and greater in diameter measured at breast height (DBH) within various potential impact areas as determined on the Tree Topo Limits Field Map, dated September 7, 2006. In addition to the field identification and inventory efforts, Sierra Nevada Arborists made an effort to assess the tree's condition. The overall structural condition and vigor were separately assessed from "good" to "poor." Trees that met the above-referenced criteria were assigned a round, stamped metal number tag affixed to the tree stem. At the time of tagging the following information was gathered for each tree:

- DBH;
- Dripline radius (DLR); and
- Assessment of root crown, trunk, limbs, and foliage.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Nichols Grove Tentative Map and non-participating properties), unless otherwise noted.

4.6-1 Impacts to Valley Elderberry Longhorn Beetles.

Nichols Grove Tentative Map

As discussed previously and indicated in Figure 4.6-3, a total of 58 points and/or areas of elderberry bushes are located within the Nichols Grove Tentative Map site. Some occurrences within the site are a single stem in an isolated area, while other occurrences are comprised of many stems over large areas. Development of the uses proposed for the Nichols Grove Tentative Map could result in impacts to elderberry bushes.

Non-Participating Properties

Site-specific studies have not been conducted to date for the non-participating properties to identify special-status plants or animals. However, some of the non-participating properties are expected to contain elderberry bushes, which could support the Valley elderberry longhorn beetle. Potential occurrences of elderberry shrubs are anticipated in areas along Grasshopper Slough. Therefore, elderberry shrubs could occur on APN 015-140-056 due to the presence of Grasshopper Slough on-site. Future development of this property consistent with the General Plan designations could adversely impact Valley elderberry longhorn beetle habitat. In addition, should other non-participating properties contain elderberry bushes, development of the site(s) could result in adverse impacts to Valley elderberry longhorn beetle habitat.

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)
The implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

Nichols Grove Tentative Map

4.6-1(a) *Per the Guidelines, the USFWS must be contacted if encroachment within the 100-foot buffer is expected and for a Section 7 FESA consultation if elderberry bushes shall be disturbed. The following conditions shall be implemented to minimize impacts to the existing bushes:*

- *Orange barrier fencing shall be placed a minimum of 20 feet from the drip line of each elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level, and construction personnel and/or activities shall avoid fenced areas;*

- *Project proponent shall employ dust control measures during all construction activities; and*

- *No insecticides, herbicides, fertilizers, or other chemicals shall be applied within 100 feet of elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level during the construction activities. All drainage water during and following construction shall be diverted away from the bushes.*

4.6-1(b) *If complete avoidance of elderberry plants is not possible, transplantation shall be used as prescribed by the Guidelines to a USFWS-approved conservation area. At the discretion of the USFWS, a plant that would be extremely difficult to move because of access problems may be exempted from transplantation (USFWS 1999). In cases where transplantation is not possible, the minimization ratios may be increased to offset the additional habitat loss.*

If elderberry shrubs would be adversely affected by construction (i.e. directly impacted), the elderberry bushes shall be transplanted to a mitigation area in compliance with USFWS standards. A qualified biologist shall be onsite during the transplanting to assure compliance with the Guidelines. Transplanting shall preferably take place between November 1 and February 15 after the bushes have lost the majority of their leaves. Elderberry bushes shall be cut back to three to six feet from the ground or to 50 percent of their height, which ever is tallest. All stems measuring greater than 1-inch shall be transplanted. A backhoe shall be used to excavate a hole of adequate size in the conservation area for each bush, and then the bushes shall be excavated. The root ball and surrounding soil shall be maintained during the transplanting process. Once the plants have been moved, a water basin shall be placed around each bush that measure three feet in diameter, the walls shall measure eight inches wide and six inches tall.

Each elderberry stem measuring ≥1 inch at ground level that is adversely affected (i.e., transplanted or destroyed) must be replaced, in the conservation area, with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 8:1 (new plantings to affected stems). If the USFWS determines that the elderberry plants on the proposed project site are unsuitable candidates for transplanting, the USFWS may require the applicant to plant seedlings or cuttings at a ratio higher than those stated above for each elderberry plant that cannot be transplanted.

Associate native plant seedlings will consist of willows, sycamores (Platanus racemosa), Oregon ash, button willow (Cephalanthus occidentalis), and wild grape (Vitus californicus). Each seedling and associate plant shall be provided with a water basin measuring 3 feet by 8 inches by 6 inches. The conservation area shall be protected in perpetuity and shall be maintained by the project proponent, or delegated third party. Plants shall be manually watered until they are established and watering is no longer necessary. Weed control and vegetation maintenance shall be managed as stated in the Vegetation Maintenance section of the Guidelines.

4.6-1(c) *Any conservation area shall be monitored for 10 consecutive years. Two site visits shall take place each year between 14 February and 30 June by a qualified biologist. The surveys shall include:*

- *Population census of adult beetles;*
- *Census of beetle exit holes;*
- *Evaluation of the transplanted bush, seedlings, and associated plants;*
- *Evaluation of protective measures (i.e., fencing, signs, and weed control); and*
- *General habitat assessment.*

A yearly report and original field notes shall be prepared describing the conditions as stated above. Reports shall be submitted by 31 December of the same year to the USFWS, Chief of the Endangered Species Branch, Sacramento. Success criteria will be judged on 60 percent survival rate of the elderberry and associate plants. If the success rate drops below 60 percent additional plants shall be planted to assure a 60 percent survival rate.

Non-Participating Properties

4.6-1(d) *In conjunction with submittal of a development application for any of the non-participating properties, the applicant(s) shall submit a Biological Resources Assessment at the discretion of the Planning Director. The assessment shall include, but not be limited to, identification and analysis*

of all occurrences of elderberry bushes, impacts to special-status species, and loss of biological resources and/or wetlands, and mitigation to reduce significant impacts. The applicant shall be required to implement all mitigation measures recommended in the assessment.

4.6-1(e) *If suitable Valley elderberry longhorn beetle habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-1(a-c).*

4.6-2 Impacts to Swainson's hawk.

Nichols Grove Tentative Map

As mentioned previously, there are currently 39 "active" Swainson's hawk nests within 10 miles of the proposed project site, and two active nest sites within one mile. In addition, mature oak trees on the project site are potential nesting habitat for the Swainson's hawk. Implementation of the proposed project could result in the removal of nesting habitat and the disturbance of nesting Swainson's hawks.

The Nichols Grove Tentative Map site includes 239.9 acres of suitable Swainson's hawk foraging habitat. This foraging habitat is used to support nesting populations in the near vicinity. Development of the Nichols Grove Tentative Map site would substantially reduce the amount of onsite foraging habitat, which would be an adverse impact.

Non-Participating Properties

Most of the non-participating properties are located adjacent to the Nichols Grove Tentative Map site, although one of the non-participating properties is located across the SR 65 and UPRR corridor. As a result, the Swainson's hawk nesting sites identified above in the discussion of the Nichols Grove Tentative Map are also located in close proximity to the non-participating properties. In addition, the non-participating properties located west of the Nichols Grove Tentative Map site contain mature oak trees that are potential Swainson's hawk nesting habitat.

The non-participating properties are predominantly grasslands and open farmland, with some riparian and urban areas. As stated above, grasslands and open farmland are considered to be Swainson's hawk foraging habitat. Therefore, development of the non-participating properties would result in an adverse impact to Swainson's hawk foraging habitat.

Conclusion

The proposed project contains a substantial amount of Swainson's hawk foraging habitat. In addition, mature oak trees on both the Nichols Grove Tentative Map site and non-participating properties are potential nesting habitat for Swainson's hawks. Due to the presence of Swainson's hawk foraging habitat, the potential presence of nesting sites on

individual properties, and the presence of "active" nesting sites within 10 miles of the project area, development of the proposed project would have a ***potentially significant*** impact to Swainson's hawk nesting and foraging habitat.

Mitigation Measure(s)
The implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

Nichols Grove Tentative Map

4.6-2(a) *If Swainson's hawks are found nesting within 0.5-mile of the Nichols Grove Tentative Map site appropriate Management Conditions per the Staff report regarding mitigation for impacts to Swainson's hawks (Buteo swainsoni) in the Central Valley of California (CDFG 1994) shall be required as follows:*

- *No intensive new disturbances (e.g., heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities) or other project-related activities that may cause nest abandonment or forced fledging, shall be initiated within 0.25 miles (buffer zone) of an active nest between March 1 and September 15. The buffer zone should be increased to 0.5 mile in nesting areas away from urban development (i.e., in areas where disturbance [e.g., heavy equipment operation associated with construction, use of draglines, new rock crushing activities] is not a normal occurrence during the nesting season). Nest trees shall not be removed unless there is no feasible way of avoiding the trees. If a nest tree must be removed, a Management Authorization (including conditions to offset the loss of the nest tree) must be obtained from CDFG with the tree removal period specified in the management Authorization, generally between October 1 and February 1.*

  If construction or other project-related activities that may cause nest abandonment or forced fledging are necessary within the buffer zone, monitoring of the nest site (funded by the project sponsor) by a qualified biologist (to determine if the nest is abandoned) shall be required.

  If the nest site is abandoned and the nestlings are still alive, the project proponent shall fund the recovery and hacking (controlled release of captive reared young) of the nestlings. Routine disturbances such as agricultural activities, commuter traffic, and routine maintenance activities within 0.25-mile of an active nest should not be prohibited. A qualified wildlife biologist shall verify fledging of nestlings.

4.6-2(b) *Prior to initiation of ground disturbance activities, the project applicant and City staff shall consult with CDFG to determine the extent of mitigation necessary for the loss of 239.9 acres of Swainson's hawk foraging habitat.*

Or;

Prior to initiation of ground disturbance activities, upon approval of the pending Yuba-Sutter Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP), the applicant shall participate and incorporate mitigation measures set forth in the NCCP/HCP.

Non-Participating Properties

4.6-2(c) *Implement Mitigation Measure 4.6-1(d). The assessment shall include an analysis of active nesting sites within 0.5-mile of any of the properties. If Swainson's hawk nests are found within 0.5-mile of any of the properties, the applicant shall be required to implement Mitigation Measure 4.6-2(a). The assessment shall also determine if the property (or properties) is considered Swainson's hawk foraging habitat. If the property (or properties0 is determined to be Swainson's hawk foraging habitat, the applicant shall be required to implement Mitigation Measure 4.6-2(b).*

4.6-3 Impacts to Western burrowing owls.

Nichols Grove Tentative Map

As discussed previously, the proposed project site contains primarily worked agricultural areas that would not provide suitable burrowing or foraging areas for burrowing owls. However, portions of the site contain open pasture areas and evidence of burrowing mammals was detected during the site survey. Furthermore, Dale Whitmore, a regional CDFG wildlife biologist, was contacted about known occurrences of the species within the area. Mr. Whitmore indicated that populations occur at Beale Air Force Base and are a common resident raptor species in the region. Though habitat within the proposed project site is not optimum, a moderate potential exists that the species could utilize the proposed project site for foraging and/or nesting.

Non-Participating Properties

Open grasslands are the predominant habitat present on the non-participating properties. As state above, open grasslands are considered to be potential burrowing owl nesting habitat. If burrowing owl nests are located on a non-participating property, development of the property would result in adverse impacts to the burrowing owl.

Conclusion

The Nichols Grove Tentative Map site and the non-participating properties contain suitable burrowing owl habitat. Because the burrowing owls are a species of special concern and the project site has the potential to support burrowing owls, a ***potentially significant*** impact would result.

Mitigation Measure(s)
The implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

Nichols Grove Tentative Map

4.6-3(a) *The Staff Report on Burrowing Owl Mitigation, published by CDFG (1995), recommends pre-construction surveys shall be conducted to locate active burrowing owl burrows. Prior to issuance of grading permits, this preconstruction survey shall be conducted by a qualified biologist or ornithologist during both the wintering and nesting season, unless the species is detected on the first survey. If possible, the winter survey shall be conducted between December 1 and January 31 (when wintering owls are most likely to be present) and the nesting season survey should be conducted between April 15 and July 15 (the peak of breeding season). Surveys conducted from two hours before sunset to one hour after, or from one hour before to two hours after sunrise, are preferable. The survey techniques shall be consistent with the Staff Report survey protocol and include a 260-foot-wide buffer zone surrounding the project area. Repeat surveys should also be conducted not more than 30 days prior to initial ground disturbance to inspect for re-occupation and the need for additional protection measures. The survey(s) shall be paid by the applicant and approved by the City.*

4.6-3(b) *If no burrowing owls are detected during preconstruction surveys, then no further mitigation is required. If active burrowing owl burrows are identified, project activities shall not disturb the burrow during the nesting season (February 1–August 31) or until a qualified biologist has determined that the young have fledged or the burrow has been abandoned. A no disturbance buffer zone of 160-feet is required to be established around each burrow with an active nest until the young have fledged the burrow as determined by a qualified biologist.*

4.6-3(c) *If destruction of the occupied burrow is unavoidable during the non-breeding season, September 1– January 31, passive relocation of the burrowing owls shall be conducted. Passive relocation involves installing a one-way door at the burrow entrance, encouraging owls to move from the occupied burrow. No permit is required to conduct passive relocation; however, this process shall be conducted by a qualified biologist and in*

accordance with CDFG mitigation measures. In addition, to offset the loss of foraging and burrow habitat on the project site, a minimum of 6.5 acres of foraging habitat (calculated on a 300-ft foraging radius around the burrow) per pair or unpaired resident bird, shall be acquired and permanently protected at a location acceptable to the CDFG.

4.6-3(d) *If burrowing owls are identified on the project site, the City of Wheatland must receive copies of the Mitigation Agreement by and between the applicant and CDFG, prior to the issuance of grading permits for the proposed project.*

Non-Participating Properties

4.6-3(e) *Implement Mitigation Measure 4.6-1(d). If suitable burrowing owl habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-3(a-d).*

4.6-4 Impacts to raptors.

Nichols Grove and Non-Participating Properties

Suitable habitat for other raptors such as sharp-shinned hawks, Cooper's hawks, white-tailed kites, and northern harriers is present within the project site. Additionally, a Cooper's hawk was observed on the Nichols Grove Tentative Map site during the survey and is expected to be a year long resident. Construction of the proposed project 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. Because the project site provides suitable nesting habitat for several raptor species and the proposed project has the potential of disturbing 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.

Nichols Grove Tentative Map

4.6-4(a) *A qualified wildlife biologist shall conduct a pre-construction raptor survey during April-May, or no more than 30 days prior to construction activities, to determine the presence/absence of nesting raptors in the project site. Should nesting raptors be observed, appropriate spatial and temporal buffers shall be required by CDFG. In addition, larger trees (i.e., ≥12" dbh) to be removed shall be removed between September 1 and*

March 1 to ensure that active raptor nests are not removed as a result of construction-related activities.

Non-Participating Properties

4.6-4(b) Implement Mitigation Measure 4.6-1(d). If the property (or properties) is determined to contain raptor nesting habitat, the applicant shall be required to implement Mitigation Measure 4.6-4(a).

4.6-5 Impacts to Migratory Songbirds/Passerines.

Nichols Grove Tentative Map

Oak woodland, riparian vegetation, and open agricultural habitats at the project site provide foraging and nesting habitat for yellow warbler, a California species of concern, and other non-listed migratory songbirds 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 nesting season (March through July), could potentially disrupt nesting individuals. Activities associated with construction could lead to nest abandonment and nest failure, which would be considered an adverse impact.

Non-Participating Properties

The various non-participating are composed of a variety of habitats, including: oak woodlands, riparian vegetation, and open agricultural habitats. As stated above, the listed habitats provide foraging and nesting habitat for the yellow warbler and other non-listed migratory songbirds. Similar to the Nichols Grove Tentative Map project, development of the non-participating properties could result in adverse impacts to migratory songbirds and passerines.

Conclusion

The project site 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.

Nichols Grove Tentative Map

4.6-5(a) All vegetation (i.e., trees, shrubs) that would need to be removed for construction shall be cut down between September 16 and February 14

(outside the nesting season for migratory bird species with potential to occur on the site) to ensure that active nests are not removed as a result of the project. To avoid potential erosion impacts, vegetation removal shall be limited to cutting of shrubs and trees at ground level to maintain the root system. Once the rainy season has passed, the root systems can be removed. If all vegetation removal associated with construction activities is completed between September 16 and February 14, no pre-construction surveys or additional mitigation is required.

4.6-5(b) *To avoid impacts to migratory nesting birds during the breeding season (February 15 through September 15), a qualified biologist approved by the USFWS shall conduct a pre-construction survey of all suitable nesting habitat within the project site no more than 30 days prior to construction. If nesting migratory birds are not detected, no further mitigation shall be necessary.*

If nesting migratory birds are detected, a no-disturbance buffer per USFWS shall be established during the nesting season and no construction shall occur within the buffer area until a qualified biologist confirms that there was no nesting attempt or that the fledglings are no longer occupying the area. Additionally, signs shall be placed locating areas to be avoided.

Non-Participating Properties

4.6-5(c) *Implement Mitigation Measure 4.6-1(d). If suitable migratory songbird and/or passerine habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-5(a-b).*

4.6-6 Impacts to Yuma Myotis Bat.

Nichols Grove Tentative Map and Non-Participating Properties

As previously discussed, the Yuma myotis bat is common and widespread in California. The bat is known to roost in buildings, mines, caves, and crevices. Optimal habitats include open woodlands and forests with sources of water over which to feed. The Yuma myotis bat could utilize crevices of tree snags and bark of larger mature trees in the proposed project's riparian areas for roosting. Additionally, bats often roost in open buildings and barns, which there are several of within the Nichols Grove Tentative Map site and on some of the non-participating properties. Furthermore, Grasshopper Slough and Dry Creek could be utilized for over water foraging. Although colonial roosting and large groups of bats occurring within the site is highly unlikely, the potential exists that individuals and small groups of the Yuma myotis bat may utilize the site. Because the Yuma myotis bat could possibly utilize the site, a ***potentially significant*** impact could occur.

Mitigation Measure(s)
The implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

Nichols Grove Tentative Map

4.6-6(a) *A pre-construction survey for roosting bats shall be performed by a qualified biologist within 30 days prior to any removal of trees or structures on the site. If no active roosts are found, then no further action would be warranted. If either a maternity roost or hibernacula (structures used by bats for hibernation) is present, the following mitigation measures shall be implemented.*

4.6-6(b) *If active maternity roosts or hibernacula are found in trees or structures which will be removed as part of project construction, the project shall be redesigned to avoid the loss of the tree or structure occupied by the roost to the extent feasible as determined by the City. If an active maternity roost is located and the project cannot be redesigned to avoid removal of the occupied tree or structure, demolition shall commence before maternity colonies form (i.e., prior to March 1) or after young are volant (flying) (i.e., after July 31). Disturbance-free buffer zones as determined by a qualified biologist in coordination with the California Department of Fish and Game shall be observed during the maternity roost season (March 1 - July 31).*

4.6-6(c) *If a non-breeding bat hibernacula is found in a tree or structure scheduled for removal, the individuals shall be safely evicted, under the direction of a qualified biologist (as determined by a Memorandum of Understanding with the California Department of Fish and Game), by opening the roosting area to allow airflow through the cavity. Demolition shall then follow at least one night after initial disturbance for airflow. This action should allow bats to leave during darkness, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. Trees or structures with roosts that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.*

4.6-6(d) *If special-status bats are found roosting within trees or structures on-site that require removal, appropriate replacement roosts shall be created at a suitable location on-site or off site in coordination with a qualified biologist, the California Department of Fish and Game, and the City of Wheatland.*

Non-Participating Properties

4.6-6(e) Implement Mitigation Measure 4.6-1(d). If suitable Yuma myotis bat habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-6(a-d).

4.6-7 Impacts to western pond turtle.

Nichols Grove Tentative Map

Due to the presence of Grasshopper Slough, the western pond turtle, a California Species of Special Concern, has the moderate potential to occur within the Nichols Grove Tentative Map site. 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 has the potential to adversely affect the western pond turtle.

Non-Participating Properties.

The non-participating property located west of the Nichols Grove Tentative Map site, APN 015-140-056, also contains portions of Grasshopper Slough. As such, the western pond turtle has a moderate potential to occur on the site. Future development activities could include construction within upland habitats, as well as, bridge and stormwater outfall construction within Grasshopper Slough. Therefore, development of the property has the potential to adversely affect the western pond turtle.

Conclusion

Temporary construction impacts that may affect the western pond turtle include the presence of heavy equipment, placement of the stormwater outfalls into Grasshopper Slough, bridge construction activities on Grasshopper Slough and earthmoving activities as part of residential and commercial construction. In addition, the proposed project may result in impacts to upland habitat for western pond turtle. Loss of habitat and potential loss of individuals and nests if this species is present within construction areas could have a ***potentially significant*** impact.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce the impact to a *less-than-significant* level.

Nichols Grove Tentative Map

4.6-7(a) A qualified biologist shall conduct a pre-construction survey for western pond turtles in all construction areas identified as potential nesting or

dispersal habitat located within 1,000 feet of potential aquatic habitat 48 hours prior to initiation of construction activities. If western pond turtle is found during pre-construction surveys, the turtle(s) shall be relocated as necessary to a location deemed suitable by the biologist and CDFG (i.e., at a location which is a sufficient distance from construction activities). This survey shall include looking for turtle nests within the construction area. If a nest is found within the construction area, construction shall not take place within 100 feet of the nest until the turtles have hatched and have left the nest or can be safely relocated with assistance from CDFG.

4.6-7(b) *Because attempting to locate pond turtle nests will not result in a realistic probability of detection, after completion of pre-construction surveys, and relocation as necessary, exclusion fencing shall be placed around all construction-sites adjacent to aquatic habitats to eliminate the possibility of nest establishment in uplands adjacent to aquatic areas.*

4.6-7(c) *If construction activities occur in aquatic areas where turtles have been identified during pre-construction or other surveys, a biological monitor shall be present during disturbance of those aquatic habitats. If any turtle is found, the turtle(s) shall be relocated as necessary to a location deemed suitable by the biologist and CDFG (i.e., at a location which is a sufficient distance from construction activities).*

4.6-7(d) *A qualified biologist shall provide project contractors and construction crews with a worker-awareness program before any work within aquatic habitats or adjacent upland habitats that are appropriate for western pond turtles. This program shall be used to describe the species, its habits and habitats, its legal status and required protection, and all applicable mitigation measures.*

Non-Participating Properties

4.6-7(e) *Implement Mitigation Measure 4.6-1(d). If suitable western pond turtle habitat is determined to exist on any of the non-participating properties, the applicant(s) shall be required to implement Mitigation Measures 4.6-7(a-d).*

4.6-8 Impacts to Essential Fish Habitat.

Nichols Grove Tentative Map and Non-Participating Properties

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 the Nichols Grove Tentative Map site to the north. Dry Creek is EFH, 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. The proposed project does not include any off-site work within Dry Creek that could adversely impact EFH and associated Central Valley steelhead and Fall-run Chinook salmon. Because implementation of the proposed project would not result in construction activities in Dry Creek, a ***less-than-significant*** impact would occur to EFH.

Mitigation Measure(s)
None required.

4.6-9 Impacts to Natural Woodland Resources.

Nichols Grove Tentative Map

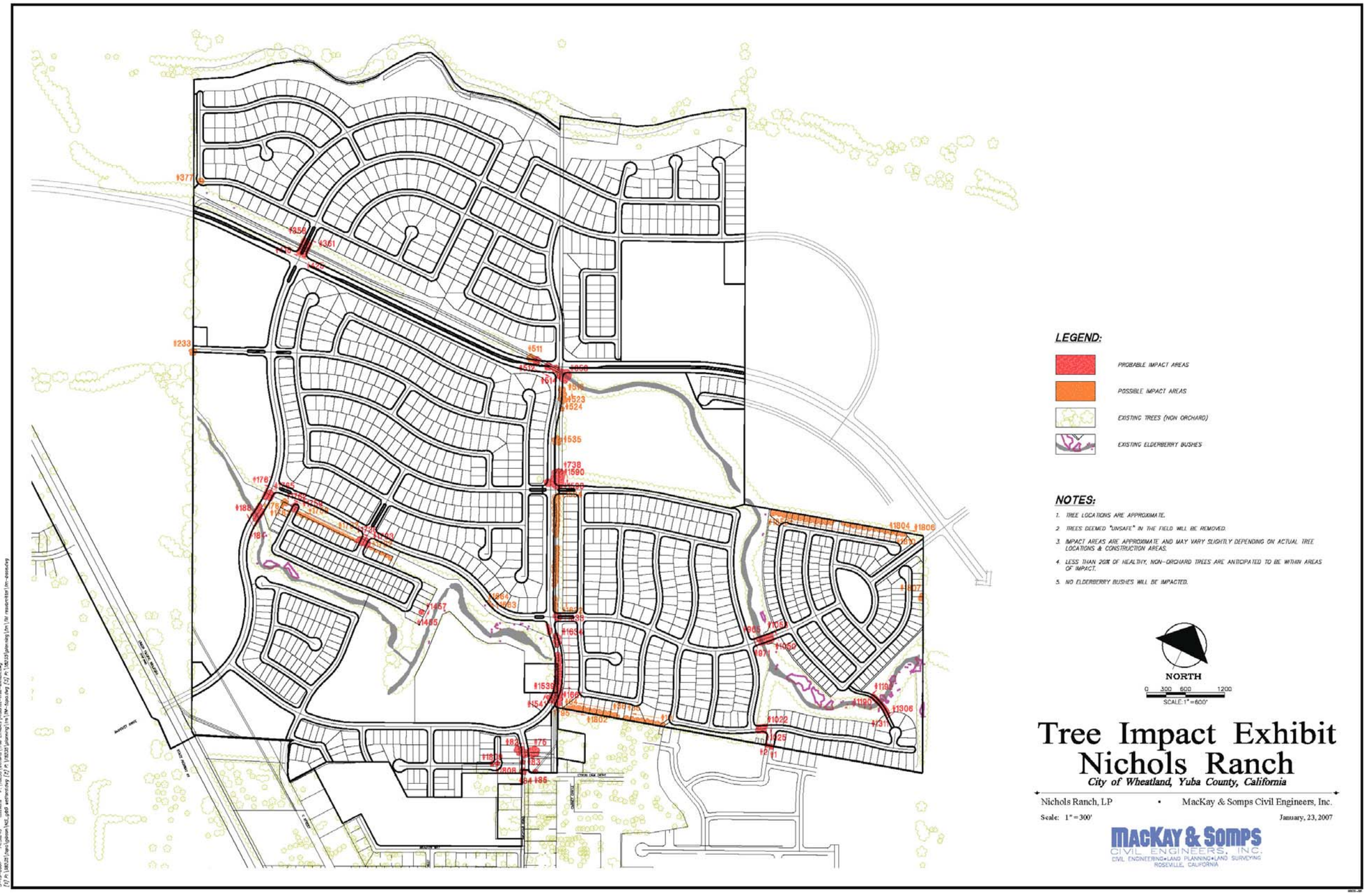
Native trees within the project site have been identified as a sensitive natural resource by the City of Wheatland. Policy 8.C.2 of the Wheatland General Plan states that the "City shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands and riparian areas." Sierra Nevada Arborists performed a conditional assessment within the "potential impact area" to evaluate the structure and vigor of each tree six inches or greater in diameter at breast height (dbh). Of the 301 trees surveyed with a dbh of six inches or greater 286 were native species, including black walnut, California buckeye, elderberry, Oregon ash, and valley oak. Several of the trees located along the Grasshopper Slough riparian corridor are mature specimens of substantial size. The Nichols Grove Tentative Map project has been designed to largely avoid the existing trees. At the time of writing the report (January, 2007) Sierra Nevada Arborists recommend the removal of 30 trees, totaling 530 aggregate diameter inches due to the nature and extent of the defects, compromised health, and/or structural instability, which may be hazardous depending on their proximity to planned development activities (See Table 4.6-4). As shown in Figure 4.6-6, the affected trees would be located throughout the Nichols Grove Tentative Map site. The number of trees to be removed represents approximately ten percent of the non-orchard tree cover. However, the removal of mature trees, particularly native species, would represent an adverse impact to woodland resources.

Table 4.6-4
Nichols Grove Tentative Map – Affected Trees

Tree #	Common Name	Species	Multi-Stems (inches)	Total DBH (inches)	Dripline Radius (feet)	Conditional Assessment	
						Structure	Vigor
23	Valley Oak	*Quercus lobata*		19	25	Poor	Fair
75	Valley Oak	*Quercus lobata*		58	50	Poor	Fair
80	Fruitless Mulberry	*Morus alba*		12	18	Poor	Fair
81	Fruitless Mulberry	*Morus alba*	13, 14	27	25	Poor	Fair
358	Valley Oak	*Quercus lobata*		10	15	Poor	Fair
360	Valley Oak	*Quercus lobata*		8	13	Poor	Fair
361	Valley Oak	*Quercus lobata*		9	24	Poor	Fair
1050	Valley Oak	*Quercus lobata*		10	15	Poor	Fair
1306	California Black Walnut	*Juglans hindsii*		20	24	Poor	Fair
1310	Oregon Ash	*Fraxinums latifolia*		22	23	Poor	Fair
1456	California Buckeye	*Juglans hindsii*		20	25	Poor	Fair
1590	Valley Oak	*Quercus lobata*		9	6	Poor	Fair
1619	California Black Walnut	*Juglans hindsii*	4, 13	17	12	Poor	Fair
1641	Almond	*Prunus sp.*	5, 7, 7, 8	27	21	Poor	Fair
1644	Valley Oak	*Quercus lobata*		11	13	Poor	Fair
1645	California Black Walnut	*Juglans hindsii*		11	19	Poor	Fair
1646	Valley Oak	*Quercus lobata*		27	34	Poor	Fair
1647	Valley Oak	*Quercus lobata*		18	25	Poor	Fair
1648	Valley Oak	*Quercus lobata*		24	30	Poor	Fair
1650	Valley Oak	*Quercus lobata*		12	8	Poor	Fair
1653	Valley Oak	*Quercus lobata*		17	16	Poor	Fair
1654	Valley Oak	*Quercus lobata*		15	6	Poor	Fair
1655	Valley Oak	*Quercus lobata*		13	17	Poor	Fair
1656	Valley Oak	*Quercus lobata*		11	15	Poor	Fair
1657	Valley Oak	*Quercus lobata*		23	32	Poor	Fair
1659	Edible Fig	*Ficus carica*	4, 4, 5, 5, 6, 6	30	23	Poor	Fair
1795	English Walnut	*Juglans regia*		7	29	Poor to fair	Fair
1799	California Black Walnut	*Juglans hindsii*		18	28	Poor	Poor
1801	California Black Walnut	*Juglans hindsii*		11	4	Poor	Poor
1859	California Black Walnut	*Juglans hindsii*		14	16	Poor	Fair

Source: Sierra Nevada Arborists, 2007.

Figure 4.6-6
Tree Impact Exhibit



Non-Participating Properties

Aerial photographs of the non-participating properties indicate the presence of trees on most of the non-participating properties. A substantial portion of the trees is likely to be native species of substantial size. Upon development, the non-participating properties could remove native trees within the property, which would represent an adverse impact to woodland resources.

Conclusion

Development of the Nichols Grove Tentative Map and non-participating properties would result in the removal of native trees, some of which are of significant size. Therefore, a ***potentially significant*** impact to natural woodland resources would occur.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce the impact to a *less-than-significant* level.

Nichols Grove Tentative Map

4.6-9(a) *Prior to approval of the project improvement plans an ISA Certified Arborist shall review the plans and provide a detailed impact assessment, including identification of trees which may require removal for home construction and other contemplated site development activities. This will be particularly important if homes, residential and/or pedestrian activities fall within or near the fall zone of a tree which has been noted as having structural defects, questionable long-term longevity and/or a conditional rating which is less than "Fair," and for trees which measure 16 inches or greater in diameter which will be retained with close proximity to development, particularly trees which will be retained on home sites, as trees of this size may pose a more significant hazard if a sudden limb shed and/or catastrophic failure should occur. The review shall also include an assessment of impacts that will be sustained by the trees retained within the development area, along with specific recommendations on a tree-by-tree basis to help reduce adverse impacts of construction on the retained trees, where possible. The ISA Certified Arborist shall subsequently prepare a Tree Preservation Report, which includes a requirement of 1:1 tree replacement ration. The Report shall include preservation recommendations, with consideration given to the recommendations made in the Nichols Ranch, LP Arborist Report prepared by Sierra Nevada Arborists, dated January 23, 2007.*

Non-Participating Properties

4.6-9(b) *In conjunction with submittal of a development application for any of the non-participating properties, the applicant(s) shall submit an arborist*

report at the discretion of the Planning Director. The report shall evaluate the structure and vigor of each tree 6 inches or greater in diameter at breast height, as well as include recommendations for 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 developer shall comply with and implement the approved report.

4.6-10 Impacts to wetlands and other Waters of the United States.

Nichols Grove Tentative Map

Dry Creek borders the project site to the north, a high potential exists for federally Threatened Central Valley steelhead and fall/late-run Chinook salmon to occur within this waterway. If Dry Creek is not completely avoided by construction activities, consultation with the National Marine Fisheries Service would be necessary in regards to potential adverse effects to steelhead and Essential Fish Habitat.

Within the project boundaries the USACE has verified a formal wetlands delineation, performed by Gibson and Skordal, LLC, (as cited in the biological assessment) which determined that 5.97 acres of Waters of the United States are present within the Nichols Grove Tentative Map site. Where complete avoidance is not possible, project impacts would be minimized to the greatest extent possible. Prior to any construction activities that may impact Waters of the United States, the project applicant will be required to notify the USACE and DFG regarding the specific actions and impacts the construction would have on any jurisdictional wetlands or Waters of the United States, and obtain a water quality certification from the Regional Water Quality Control Board. Both of the above steps are contingent upon having successfully completed the CEQA process. A Nationwide or Individual Permit from the USACE, a Biological Opinion from the USFWS, and final approval from the DFG may be required prior to construction, depending on the final construction footprint and the project impacts on special-status species. As wetlands occur on the Nichols Grove Tentative Map site, development of the project could result in adverse impacts to wetlands and Waters of the United States.

In addition, the project includes the construction of an off-site 60-inch storm drain pipe from the project's western boundary to the existing City detention basin. The current project plans indicate that this 60-inch storm drain pipe would cross the northern tributary of Grasshopper Slough, located on the property immediately west of the Nichols Grove Tentative Map site. Installation of this storm drain pipe could, therefore, result in adverse impacts to Grasshopper Slough off-site.

Non-Participating Properties

Formal wetland delineations have not been conducted for any of the non-participating properties. In addition, Grasshopper Slough flows through, and adjacent to the non-participating property west of the Nichols Grove Tentative Map site (APN 015-140-056).

As a result, future development of the non-participating properties could result in adverse impacts to wetlands and Waters of the United States.

Conclusion

Wetlands have been identified within the Nichols Grove Tentative Map site. In addition, the non-participating property west of the Nichols Grove Tentative Map site contains wetlands. As biological assessments have not been conducted, the potential exists that other non-participating properties also contain wetlands. As a result, development of the proposed project would result in a ***potentially significant*** impact to wetlands and Waters of the United States.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce the impact to a *less-than-significant* level.

Nichols Grove Tentative Map

4.6-10(a) *Prior to initiation of ground disturbance activities, the applicant shall consult with the Army Corps of Engineers with respect to the potential impacts to the wetlands identified in the formal wetland delineation previously accepted by the Army Corps of Engineers. If the Army Corps of Engineers 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 Corps determines that jurisdictional waters are present on- or off-site, which may be impacted by the project, 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 initiation of ground disturbance activities.*

4.6-10(b) *Prior to initiation of ground disturbance activities, the applicant shall submit to the California Department of Fish and Game (CDFG) a formal wetland delineation based on current regulations of the Army Corps of Engineers. 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 appropriate mitigation, and shall abide by the conditions of any executed permits for any work related to the outfall.

4.6-10(c) *If the project would result in impacts to the jurisdictional wetlands identified on the project site, the acreage of jurisdictional habitat removed shall be replaced on a "no-net-loss" basis in accordance with Corps and CDFG regulations. A conceptual on-site wetlands mitigation plan, including an agreed-upon replacement ratio of wetlands with the Corps. 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, the Corps. 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.*

Non-Participating Properties

4.6-10(d) *Implement Mitigation Measure 4.6-1(d). If wetlands and/or Waters of the United States are identified the applicant shall conduct a formal wetland delineation based on current regulations of the Army Corps of Engineers. Following acceptance of the delineation by the Army Corps of Engineers, the applicant(s) shall be required to implement Mitigation Measures 4.6-10(a-c).*

Cumulative Impacts and Mitigation Measures

4.6-11 Cumulative loss of biological resources in the City of Wheatland and the effects of ongoing urbanization in the region.

Nichols Grove Tentative Map

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 Nichols Grove Tentative Map project area is highly disturbed as a result of current and historical onsite farming activities like many of the surrounding land uses. However, disturbed lands provide habitat for many common species and may provide habitat for several special-status species.

In combination with future planned developments, the proposed project would have significant cumulative impacts on biological resources. However, individual projects are required to mitigate for impacts to special-status species and habitat the loss of habitat within the region would not be cumulatively considerable and therefore represent a less-than-significant impact pursuant to CEQA.

Non-Participating Properties

Upon development, the non-participating properties would contribute to the cumulative loss of biological resources within the General Plan Study Area. However, individual projects are required to mitigate for impacts to special-status species and habitat the loss of habitat within the region would not be cumulatively considerable and therefore represent a less-than-significant impact pursuant to CEQA. However, as the non-participating properties have not performed biological assessments, development of the properties could result in a significant cumulative impact.

Conclusion

The Nichols Grove Tentative Map project is located in the northern portion of the City and according to the Biological Assessment prepared for this project, does not provide high quality habitat for most species. In addition, project-level mitigation has been included above to ensure that all impacts resulting from the Nichols Grove Tentative Map project and future development of non-participating properties would be less-than-significant. Therefore, the project's incremental contribution to cumulative impacts would be ***less-than-significant***.

Mitigation Measure(s)
None required.

Endnotes

[1] *Arborist Report and Tree Inventory Summary,* Sierra Nevada Arborists, January 2007.
[2] *Biological Resource Assessment,* Gallaway Consulting, Inc., February 2007.
[3] *City of Wheatland General Plan,* July 2006.
[4] *City of Wheatland General Plan EIR,* July 2006.

4.7 CULTURAL RESOURCES

INTRODUCTION

The Cultural Resources chapter 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 *City of Wheatland General Plan*,[1] the *City of Wheatland General Plan EIR*,[2] and the *Cultural Resources Assessment of the Proposed Nichols Ranch Development* prepared by Peak & Associates, Inc.[3] The Cultural Resources Assessment includes an analysis of the existing setting and describes the potential effects to prehistoric or historic period cultural resources.

ENVIRONMENTAL SETTING

The following environmental setting discussion for the Nichols Grove Tentative Map and 10 non-participating properties consists of the project area ethnology, historical background, existing historical resources, and existing cultural resources.

Ethnology

The proposed project area is within the territory once claimed by the Valley Nisenan, or Southern Maidu, a Penutian-speaking central California group. Their traditional homelands once included the lower drainages of the American River, Yuba River, Bear River, and Feather River. The Hill Nisenan had settlements higher up in these drainages. The Nisenan were the southernmost of the three Maiduan divisions, inhabiting the northeastern half of the Sacramento Valley, and the adjoining western slopes of the Sierra Nevada.

Nisenan groups in the valley tended to define themselves by stream systems, and native communication often followed these waterways. In the foothills and mountains, the major drainages became formal or informal boundaries, with the land in between forming the districts. The Placerville District is between the Cosumnes River and the Middle Fork of the American River, the Auburn District between the Middle Fork of the American River and the Bear River, and the Nevada City District between the Bear River and the Yuba River. The Nisenan recognized several political divisions within their territory. One such center was at the mouth of the Bear River, including the valley drainage of the Bear and a stretch of the Feather River. The Bear River may have been a potential boundary.

Hill and Mountain Nisenan winter villages were located on ridges adjacent to streams or on flats along the rivers, often between the 1,000 and 2,000-foot level, out of the fog belt and with a southern exposure. These villages were generally smaller than those of the valley people, and during certain periods of the year, many families lived away from their main villages while they engaged in subsistence activities. Every part of their territory was within a one or two day journey from the winter village; thus, some winter movement to the valley floor or up into the mountains was possible for small groups of hunters, families, or those who wanted to visit or trade.

Few villages occupied the valley plain between the Sacramento River and the foothills. Although both the valley and foothill people hunted and gathered there, the resource focus was along the edges of rich ecotones, either the rivers and the valley floor, or the valley floor and the foothills. The plains surrounding Wheatland fall in between these two rich ecotones, which are ecological zones or boundaries where two or more ecosystems meet. Low site densities were found in similar open and exposed terrain west of Lincoln. The lands at what is now Beale Air Force Base did not support a resource base that was critical to the survival of prehistoric peoples. The open exposed terrain along the western edge of the Sierra Nevada foothill region is hot in the summer and damp in the winter, thus limiting the amount of time most Native Americans would undertake subsistence activities there. Thus, the likelihood is low that Native Americans would have spent an appreciable amount of time in the area, instead retreating to villages and camps along the lower Yuba River to the north, and back into the hills to the east where they would find abundant shade, water, and protection from the wind and potential enemies. The availability of firewood may also have been a strategic factor in locating villages in the foothill oak woodland.

Nisenan villages consisted of from four to 12 separate dwellings, housing a nuclear or polygamous family, with the main cooperative or corporate unit being an informal bilateral "family." Several villages uniting under a single chief formed larger social organizations, called tribelets. Permanent semi-subterranean dwellings (*hu*) and a dance house (*kum*) were constructed at these year-round village sites. Seasonal camps were located along creeks, and temporary lean-to structures with some mud covering at the base were built.

In addition to village sites, daily activities were carried on at seasonal camps, quarries, ceremonial grounds, trading locations, burial grounds, task-specific sites for fishing, hunting, gathering vegetable foods, river crossings, and battlegrounds. These locales were accessed by a network of trails. Major north-south trails along the margin of the foothills that were usable year round, as were other east-west trails along the natural levees of the stream courses.

As with most hunters and gatherers, vegetable food resources formed the subsistence baseline for the Nisenan. The Nisenan used a wide range of floral and faunal species, although they apparently made extensive use of only a small percentage of these. The least productive time of the year was late winter-early spring. The salmon run began in late spring. Roots were dug in the spring and were consumed raw, steamed, baked, or were dried for later use. Grass seeds were harvested in summer. Acorns became available in massive quantities in the autumn. An acorn diet was the hallmark of California Indians, and acorns were the primary staple for those groups who inhabited the foothills of the Sierra.

Nisenan population in pre-contact times is thought to have numbered around 9,000. Euro-American expansion into the Sacramento Valley during the 19th century initiated a series of changes, which proved devastating to Native American populations. In 1833, a great malaria epidemic that swept through the Sacramento Valley killed an estimated 75 percent of the Valley Nisenan population. The malaria seems to have been introduced by the Hudson Bay trappers in 1831-1832. The 1833 epidemic that decimated the Indians in the Central Valley played a major role in defining the post-contact land use pattern of the Indians of the region, as well as impacting the Euro-American economic development. By the end of the 1830s, over half of the original population was gone and the survivors were facing a time of great stress and the rapid destruction of their prehistoric way of life.

Valley and Hill Nisenan groups were culturally, linguistically, and presumably ethnically related but there seems to be a separation of the Valley Nisenan and the Foothill Nisenan near the edge of the valley where the foothills start. Social and religious ties in the valley were stronger to the north and west along the rivers than to the east. Territory disputes and resource competition prevailed between the valley people and the foothill people. The valley peoples tended to interact socially and economically more with non-Nisenan valley peoples such as the Patwin, who lived on the western side of the Sacramento Valley, than with the Hill Nisenan. The valley peoples were more oriented to the Sacramento, American, Yuba, Feather, and Bear Rivers on the valley floor, and their large villages with rich and complex cultural characteristics are usually found along these watercourses. For example, Nisenan in the Roseville-Rocklin area seem to have been more influenced by the Valley Nisenan, while groups in the Loomis Basin fall into the Auburn-foothill sphere. Similarly, Hill Nisenan peoples were more likely to have close relations with surrounding non-Nisenan hill and mountain peoples, including the Konkow, Mountain Maidu, Washoe, and Sierra Miwok. Valley flooding created tule forests, ponds and swampy areas, and helped insulate the edge of the foothills from the river peoples, at least until summer.

Historical Background

The Historical Background section includes a discussion of early explorations and settlement of the proposed project site. This section also 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

In 1769, the Spanish government sent Father Junipero Serra into present-day California to establish missions among the Indians, initially along the coast. The California Indian population plummeted during the mission period, and their lands came under Spanish ownership. Seeking more native souls to replace those in the coastal areas who had died, the Spanish began to explore the Central Valley. Expeditions led by Gabriel Moraga in 1808 and by Luis Arguello in 1821 crossed portions of present day Yuba County. While Nisenan were not removed to the missions, the Nisenan may have harbored escaped missionized Indians.

Throughout the 1820s and 1830s, trappers visited the Wheatland area from the Hudson's Bay Company and American Fur Company, exploiting beaver and other fur resources. These and other trappers set up temporary camps in Nisenan territory and relationships were friendly. John C. Fremont explored the area in 1846.

Early Settlement

California came under Mexican rule in 1822 when Mexico became independent of Spain. As British and Americans were allowed to become Mexican citizens, they acquired large tracts of land granted to them by Mexico and initially dominated the business and commercial affairs of the region. Land in California was first granted by Mexican governors. John Sutter initially established land holdings that included much of what is now Yuba County. Sutter owned more land than Mexican law permitted; therefore, he sublet parts of his estate to other settlers. In 1844, a Mexican who had been in the employ of Sutter, Don Pablo Guttierez, obtained a grant of five leagues on the north side of Bear River, now known as the Johnson grant. The land grant, dated December 22, 1844, was first known as Rancho de Pablo, for Pablo Guttierez, the grantee. Wheatland falls within the center of this land grant. During 1844, Guttierez built an adobe house at the place afterwards called Johnson's Crossing, located about three miles east of Wheatland. Guttierez was killed in 1844-45 in the Micheltorena campaign and his grant was sold at auction by Sutter, the magistrate of the region. William Johnson and Sebastian Kyser purchased the land for 150 dollars and settled there the same year. After the purchase, the grant was divided, with Johnson taking the east half and Kyser the west. In 1846, they built an adobe house a short distance below the crossing.

For several years after 1845 Johnson's Ranch was well known as the first settlement reached by the overland immigrants after crossing the Sierra and is considered to be the end of the Emigrant Trail. Here immigrants rested and obtained supplies. In 1847, Johnson's Ranch was the base from which survivors of the Donner Party were rescued. Sebastian Kyser served as a member of one rescue party. Among those rescued was 16-year-old Mary Murphy, who met Johnson and married him that June. She divorced him that same year and married Charles Covillaud, another immigrant who visited the Rancho. Her name was given to the new town of Marysville that Covillaud laid out in 1849-50.

By 1849 there were a number of settlements along Bear River established by people engaging in mining, the livestock trade, trading post, sawmills, hotels, cutting hay, and raising cattle. Johnson's Crossing provided a way station for teams engaging in hauling freight from Sacramento to the northern mines. Johnson's Crossing also became a stopping place for trappers, explorers, and travelers. In the year 1846, various explorers and immigrants visited the Rancho. John C. Fremont and Kit Carson camped at Johnson's Rancho in 1846. General Stephan Watts Kearney and his troops stayed at the Rancho in 1847. Traffic at Johnson's Crossing appears to have decreased to the point that, by 1854, the crossing was rarely used. A chain of title to the Johnson Rancho is provided in Thompson and West's (1979) and Delay's (1924) county histories.

The Donner Party in Wheatland

For several years after 1845, Johnson's Ranch was well known as the first settlement reached by the overland immigrants after crossing the Sierra and is considered to be the end of the Emigrant Trail (State of California 1976:139; 1982:159; *Wheatland News* 3/16/1973). Here immigrants rested and obtained supplies.

The Donner Party is the name given to a group of immigrants, including the families of George Donner and his brother Jacob, who became trapped in the Sierra Nevada Mountains during the winter of 1846-47. Nearly half of the party died, and the survivors were brought to the Johnson Ranch in Wheatland after being rescued in 1847. At the ranch, they rested and restored their health before heading on to Sacramento. The Donner Party has become legendary as the most spectacular episode in the record of Western migration.

Existing Cultural Resources

This section includes a discussion of the existing cultural resources within the proposed project site.

North Central Information Center of the California Historical Resources Information System

As part of the Cultural Resources Assessment by Peak & Associates, Inc., a records search to identify previously recorded cultural resources and cultural resources investigations was performed on December 11, 2006, by the North Central Information Center of the California Historical Resources Information System (NCICCHRIS). The North Central Information Center did not identify any recorded resources in or near the project site, despite six previous surveys in or near the project site. The other six surveys included the survey of both banks of Dry Creek (Miller 1961), Bear River (Stoll and Thompson 1961), a pipeline survey near Dry Creek (Peak & Associates), a proposed subdivision, which included a small portion of the Nichols Grove project (Swillinger 1989), a portion of State Route 65 (Noble 2003), and an overview study for the Wheatland General Plan (Lindstom 1996).

Native American Heritage Commission

On December 15, 2006, the Native American Heritage Commission (NAHC) completed a search of the Commission's sacred lands files that might supply information regarding Native American concerns associated with the project. The search did not indicate the presence of Native American cultural resources in the immediate project area. In addition, six letters were sent to Native American individuals/organizations with potential knowledge of cultural resources in the project area. Responses to these letters were not received.

The Cultural Resources Assessment prepared by Peak and Associates, Inc. concluded that after review of records maintained by the North Central Information Center of the California Historical Resources Information System and review of the Sacred Lands File maintained by the Native American Heritage Commission, that known cultural resources are not located within, or adjacent to, the proposed Nichols Grove Tentative Map project area.

Field Survey – Nichols Grove Tentative Map

Peak & Associates conducted a site survey in January 2007, which included areas omitted from the survey in 1990. The field survey consisted of a pedestrian walk-over with parallel transects that varied in width from approximately 50 to 65 feet. In general, the area has been in agricultural production for years and has been repeatedly plowed and disced. Particular evidence of long-term agricultural production was observed in the northern portion of the site, in which low spots were filled near Dry Creek. The field survey conducted by Peak & Associates did not result in the discovery of any prehistoric or historic period cultural resources within the Nichols Grove project area.

Non-Participating Properties

Site-specific field surveys were not performed for the non-participating properties portions of the project site. However, the potential exists for prehistoric or historic period cultural resources to exist on the non-participating properties, given the history of peoples in the Wheatland area described earlier.

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 (SB) 18

Senate Bill 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.

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

The below section evaluates 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 Assessment of the Proposed Nichols Ranch Development* prepared by Peak & Associates, Inc.

The Peak & Associates report included a field inspection of the site conducted by Ann Peak in January 2007. The examination consisted of a pedestrian walk-over of the project site with parallel transects that varied in width from approximately 50 to 65 feet.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project (Nichols Grove Tentative Map and non-participating properties), unless otherwise noted.

4.7-1 Disturbance or destruction of previously unknown archaeological resources on the project site.

Nichols Grove Tentative Map

The project site has been disturbed by agricultural activities and, according to the project-specific Cultural Resources Assessment, is unlikely to contain any undiscovered prehistoric or historic sites of value. Previous disturbances may have destroyed any existing sites or may have altered them to such a degree that the sites would not yield any valuable information. Furthermore, the Cultural Resources Assessment for the site did not find prehistoric or historic period cultural resources within the Nichols Grove Tentative Map site during the site reconnaissance. It should also be noted that the proposed project includes off-site drainage infrastructure improvements. A 60-inch storm drain pipe is proposed for construction from the project's western boundary to the existing City detention basin. This would necessitate improvements on the triangular parcel west of the Nichols Grove Tentative Map site. Construction of the storm drain pipe within this alignment could result in impacts to previously undisturbed cultural resources.

Non-Participating Properties

The portions of the project site referred to as non-participating properties have been previously disturbed by agricultural activities and are unlikely to contain any undiscovered prehistoric or historic sites of value. Previous disturbances may have destroyed existing sites or may have altered them to such a degree that they would not yield any valuable information. However, cultural resources studies were not performed and surface evidence of previous human activity is not always present. Thus, construction activities may uncover undocumented cultural resources at the non-participating properties.

Conclusion

Both the Nichols Grove Tentative Map site and the non-participating properties have been disturbed by agricultural activities and are 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.

Nichols Grove Tentative Map

4.7-1(a) *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(b) *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 Planning Director for approval.

4.7-1(c) *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.*

Non-Participating Properties

4.7-1(d) *In conjunction with submittal of an application for any of the non-participating properties, the applicant shall provide a cultural resources assessment, at the discretion of the Planning Director, analyzing any potential on-site archaeological and/or historical resources. The cultural resources report shall recommend mitigation measures, if applicable, and the applicant shall be required to adhere to the mitigation measures recommended in the cultural resources assessment, ensuring that adverse impacts to resources would not result from project implementation.*

4.7-1(e) *Implement Mitigation Measures 4.7-1(a-c).*

4.7-2 Impacts to existing structures.

Nichols Grove Tentative Map

According to the *Cultural Resources Assessment* prepared by Peak & Associates, the project site contains two sheds that were used to store hay. One shed is located north of the southern branch of Grasshopper Slough. The United States Geological Survey (USGS) Wheatland 7.5 Minute Quadrangle map indicates that a shed also exists in the northern portion of the project site. Hay sheds, however, are not normally associated with important persons or events, nor are they considered architecturally distinctive. In addition, according to the Cultural Resources Assessment for the project, hay sheds do not satisfy any of the criteria for inclusion in the National Register of Historic Places.

Non-Participating Properties

The non-participating properties were historically used for farming. Farm structures, which are likely to be present on-site, could be historically significant, architecturally distinctive, or associated with important persons or events. In addition, some residences exist on the non-participating properties, and a real estate office that was constructed in the style of a log cabin exists on one of the non-participating parcels located in the

southwestern portion of the proposed project site, the dates of which are currently unknown.

Conclusion

The cultural resources assessment concluded that the existing buildings on the Nichols Grove Tentative Map site are not considered historic and do not satisfy the criteria for historic structures; therefore, implementation of the Nichols Grove Tentative Map project would result in a *less-than-significant* impact to cultural resources. However, the possibility exists that the farm structures that exist on the non-participating properties could be historically significant. Therefore, a ***potentially significant*** impact may occur.

Mitigation Measures(s)
Implementation of the following mitigation measure would reduce potential impacts to structures on non-participating properties to a *less-than-significant* level.

Non-Participating Properties

4.7-2 Implement Mitigation Measure 4.7-1(d).

Cumulative Impacts and Mitigation Measures

4.7-3 Disturbance or destruction of previously unknown archaeological resources in combination with other development in the Wheatland area.

Nichols Grove Tentative Map

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. The field inspection by Peak & Associates did not find evidence of prehistoric, archaeological, or historical deposits on the site. However, the possibility exists for unknown resources to be discovered during project excavation construction activities. Implementation of project-level mitigation measures would mitigate impacts to potential unknown cultural resources.

Non-Participating Properties

Future development on the proposed project site would occur on the non-participating properties, which are located mainly at the periphery of the City, in predominantly rural areas with little historical development. The possibility exists for cultural resources to be

present under soils in some of the non-participating property areas, and cumulative development would create a significant impact to cultural resources.

Conclusion

With implementation of the project-level mitigation measures mitigating impacts to potential unknown cultural resources, the incremental contribution to cumulative impacts from the Nichols Grove Tentative Map and non-participating properties would be ***less-than-significant***.

Mitigation Measure(s)
None required.

Endnotes

[1] *City of Wheatland General Plan*, July 2006.
[2] *City of Wheatland General Plan EIR*, July 2006.
[3] *Cultural Resources Assessment of the Nichols Grove Project*, Peak & Associates, Inc., February 2007.
[4] *CEQA and Archaeological Resources*, State of California, Governor's Office of Planning and Research, 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 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, Nichols Ranch* conducted by Wallace Kuhl & Associates,[1] the *Preliminary Geotechnical Engineering Report, Powell Property* conducted by Wallace Kuhl & Associates,[2] the *Environmental Site Assessment, Nichols Ranch,* conducted by Wallace Kuhl & Associates,[3] the *Site Assessment Update, Powell Property*, conducted by Wallace Kuhl & Associates,[4] the *City of Wheatland General Plan*,[5] the *City of Wheatland General Plan EIR*,[6] the *U.S. Department of Agriculture Pacific Southwest MLRA Soil Survey*,[7] and the *USDA Natural Resources Conservation Service, Yuba County Soil Survey*.[8]

ENVIRONMENTAL SETTING

The proposed Nichols Grove project is situated in 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.

Project Site Characteristics

The proposed project site is located north of the existing City of Wheatland city limits and is within the City's Sphere of Influence. The proposed project is an existing agricultural site, with riparian habitat along two branches of Grasshopper Slough and along Dry Creek, which forms the northern boundary of the Nichols Grove Tentative Map.

Site Geology

The proposed project is predominantly underlain by Holocene age alluvium as identified by the Department of Interior United States Geologic Survey publication, "Geologic Map of the Cenozoic Deposits of the Sacramento Valley and Northern Sierra Foothills, California." Holocene alluvium covers all but the southern most portions of the property and consists of gravel, sand, silt, and some clay deposited by present day stream and river systems. The southern most portions of the property are underlain by the Pliocene age Laguna formation, consisting of interbedded alluvial gravel and silt.

Soil Conditions

Wallace Kuhl & Associates, in their exploratory borings, encountered surface materials with varying soil conditions consisting of interbedded sands, silts, and clays with some gravel during field investigations. In addition, the *USDA National Resources Conservation Service Yuba County Soil Survey* was consulted to determine the soil types found on the non-participating properties.

A review of the U.S. Department of Agriculture, Soil Conservation Service (SCS) Soil Survey of Yuba County, California, prepared in 1998, indicates that the near surface soils of the proposed project consist of four different soil types. The soil type that covers most of the property is the Conejo loam, while the Kimball loam covers the northern portion of the proposed project site and the Redding gravelly loam and San Joaquin loam occur in the southern portion of the property. The soils are described as follows:

- The Conejo loam, which covers about 80 percent of both the Nichols and Powell properties, typically consists of a surface layer of brown loam about 6 inches thick. The upper 8 inches of the topsoil is brown clay loam, and the lower part to a depth of about 65 inches is brown loam.
- The Kimball loam typically consists of a surface layer of light yellowish-brown and pale brown loam about 16 inches in thickness. The upper 26 inches of the subsoil is light brown clay loam. The lower part to a depth of 60 inches is very pale brown loam and pale brown sandy clay loam with a hardpan at a depth of 40 to 60 inches.
- The Redding gravelly loam, which is located in the southern portion of the proposed project, typically consists of brown gravelly and cobbly loam in the upper 6 inches, underlain by about 13 inches of yellowish-red gravelly loam sand about 14 inches of reddish brown and red clay. An indurated hardpan is at a depth of approximately 33 inches.

- The San Joaquin loam, which is located in the southwestern portion of the project site, has a surface layer of light brown loam about 4 inches thick, underlain by 12 inches of strong brown loam and about 9 inches of brown clay. An indurated hardpan is encountered at a depth of about 25 inches.

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 Environmental Setting and Background*,[9] 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.

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. The soils within the Nichols Grove Tentative Map site have a medium expansion potential and should be taken in consideration during the design and construction of foundations and slab-on-grade floors.

Groundwater

During the investigative borings, Wallace Kuhl & Associates did not encounter seepage or groundwater during boring samples conducted in February 2003 (Nichols Ranch Property) and 2004 (Powell Property). The review of available groundwater data published by the California Department of Water Resources indicates that water levels in groundwater monitoring wells near the site have not been above an elevation of 40 feet above mean sea level (msl) since 1960. Assuming similar groundwater elevations exist at the entire proposed project site, the groundwater table would not be higher than 30 to 35 feet below existing grade.

REGULATORY CONTEXT

The following section is a brief summary of the regulatory context under which soils and geologic hazards are managed at the federal, state, and local levels.

State

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 based on the Federal Uniform Building Code (UBC) 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

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 *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.

Method of Analysis

The environmental setting section and the impact discussions below are based primarily on the *Preliminary Geotechnical Engineering Reports* prepared for the Nichols Ranch and Powell properties by Wallace Kuhl & Associates (WKA) in February 2003 and March 2004, respectively. 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 *U.S. Department of Agriculture Pacific Southwest MLRA Soil Survey*.

Nichols Ranch Property

WKA field investigation for the project site consisted of general site reconnaissance, the drilling and sampling of 20 test borings, the excavation of nine test pits (See Figure 4.8-1) in February 2003, and the review of available geologic literature pertaining to the property.

In addition, undisturbed and disturbed samples were obtained from the test borings and taken in for laboratory testing, to determine the engineering characteristics of the on-site soil.

Powell Property

WKA field investigation for the project site consisted of general site reconnaissance, the drilling and sampling of 10 test borings (See Figure 4.8-2) in February 2004, and the review of available geologic literature pertaining to the property. In addition, undisturbed and disturbed samples were obtained from the test borings and taken in for laboratory testing, to determine the engineering characteristics of the on-site soil.

The logs of the borings and a key for the classification of the soils are included in the appended technical reports (See Appendix J).

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the Nichols Grove proposed project (Nichols Grove Tentative Map and non-participating properties), unless otherwise noted.

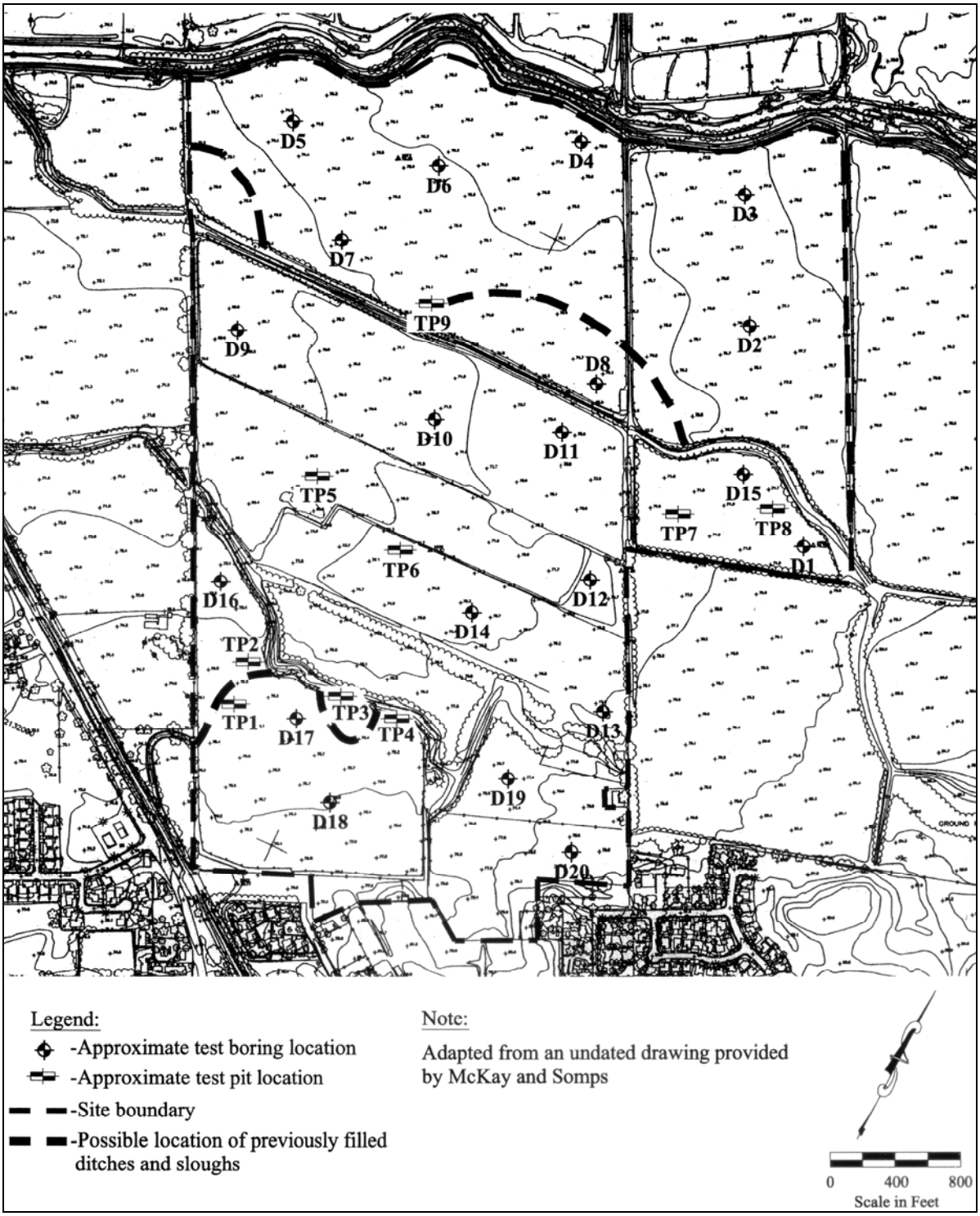
4.8-1 Damage to foundations, pavement, and other structures from expansive soils.

Nichols Grove Tentative Map

Portions of Grasshopper Slough have been filled and realigned during the past 40 to 50 years. Although maps showing the location of the backfilled sloughs are not available, the geotechnical report indicated the possible location of the filled areas, as shown in Figure 4.8-1. The geotechnical report states that during sampling, gray fine- to medium-grained sand, which is the type of soil used to fill the sloughs, was encountered at the location of Test Pit 9 (See Figure 4.8-1).

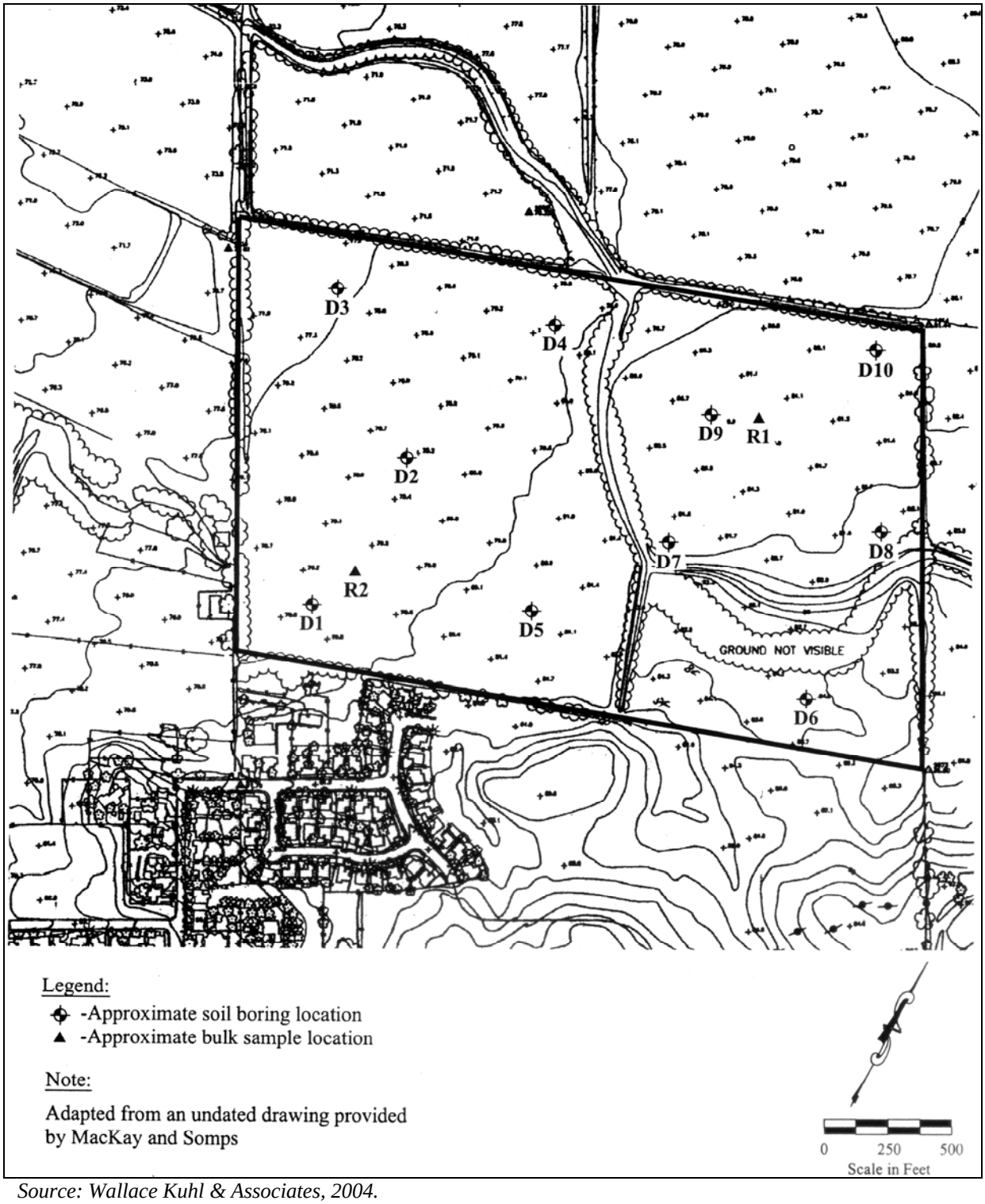
Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. These soils are typically characterized by large amounts of finer grained materials such as silts and clays within the soil matrix. Expansion is measured by shrink-swell potential, which is the relative volume change in a soil with a gain in moisture.

Figure 4.8-1
Locations of Exploratory Borings - Nichols Ranch Property



Source: Wallace Kuhl & Associates, 2003.

Figure 4.8-2
Locations of Exploratory Borings - **Powell Property**



Source: Wallace Kuhl & Associates, 2004.

The soils located within the Nichols Grove Tentative Map site are typical of the expansive soils in the Sacramento Valley. According to the geotechnical reports, the clays at Nichols Grove Tentative Map site have a medium expansion potential, as demonstrated by the Expansion Index test results. The clays that are present at the site are expected to experience volume changes with increasing or decreasing soil moisture content. The expansion of the on-site soils could result in damage to foundations constructed for the project.

Non-Participating Properties

The largest non-participating property is a 93-acre parcel that is adjacent to the west side of the Nichols Ranch Property. Nine smaller non-participating properties are located near the southwest and southeast portions of the Nichols Grove Tentative Map. The soil types for the non-participating properties include 141 Conejo loam, 0 to 2 percent slopes and 208 Redding gravelly loam, 3 to 8 percent slopes, which are consistent with the soils found on the Nichols Grove Tentative Map site and have a medium expansion potential. Therefore, future development on the non-participating properties, consistent with the current General Plan land use designations, could result in damage to foundations.

Conclusion

The geotechnical reports for the project parcels identify preliminary measures necessary to ensure that foundations are not damaged by expansive soil activity. For example, the reports state that proper reinforcement of slabs-on-grade and moisture conditioning of subgrade soils prior to concrete placement will be particularly crucial in areas underlain by expansive soils. The reports further state that in the opinion of WKA, the site is suitable for the proposed development, provided the concerns regarding expansive soils and possible loose soils in previously filled areas are addressed by future geotechnical investigations. As a result, because both the Nichols Grove Tentative Map site and the non-participating properties contain expansive soils, without future geotechnical investigation of site constraints, 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.

Nichols Grove Tentative Map

4.8-1(a) *Prior to submission of improvement plans, 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 (February 2003 and March 2004) for the Nichols Grove project including, but not limited to, the recommendations regarding expansive soils/loose/previously filled areas. The recommendations of the final geotechnical report shall be*

incorporated into the project design prior to issuance of building permits for the review and approval of the City Engineer.

Non-Participating Properties

4.8-1(b) In conjunction with development application submittal for any of the non-participating properties, the project applicant shall submit a design-level geotechnical study to the City Engineer for review and approval, which specifically addresses whether expansive soils or soils prone to liquefaction are present in the development area, and includes measures to address these soils where they occur. All grading and foundation plans designed by the project Civil and Structural Engineer must be reviewed and approved by the City Engineer and Building Inspector prior to initiation of ground disturbance activities and issuance of building permits, to ensure that all geotechnical recommendations specified in the geotechnical report are properly incorporated and utilized in design. In addition, all projects shall comply with UBC standards.

4.8-2 Loss of structural support due to liquefaction.

Nichols Grove Tentative Map and Non-Participating Properties

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 measures would reduce the above impact to a *less-than-significant* level.

Nichols Grove Tentative Map

4.8-2(a) Implement Mitigation Measure 4.8-1(a).

Non-Participating Properties

4.8-2(b) Implement Mitigation Measure 4.8-1(b).

4.8-3 Impacts related to seismic activity.

Nichols Grove Tentative Map and Non-Participating Properties

As previously described, the Wheatland area is subject to potential ground shaking from active faults both within and outside Yuba County. However, the County has experienced only one damaging earthquake within the past 50 years.

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.

4.8-4 Construction-related increases in soil erosion.

Nichols Grove Tentative Map and Non-Participating Properties

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.

In addition, the moving of the dirt cut from the streets and utility trenches to the building pads may disturb soils and artificially steepened slopes created during grading are prone to erosion, as soils tend to settle into a natural angle of repose.

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 the Hydrology and Water Quality section for further detail on potential project impacts on 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.

Nichols Grove Tentative Map, Non-Participating Properties

4.8-4 *Prior to the approval of the Improvement Plans, the project applicant shall prepare and submit an erosion control plan to the City Engineer for 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.*

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.

4.8-5 Long-term geologic and seismic impacts from the proposed project in combination with existing and future developments in the Wheatland area.

Nichols Grove Tentative Map and Non-Participating Properties

The Nichols Grove Tentative Map site could result in the development of up to 1,609 dwelling units, the dedication of one high density residential lot, dedication of one commercial mixed-use lot, seven park and open space lots containing parks and landscape corridors, four well lots, two school lots, and 30 miscellaneous lots. The 93-

acre non-participating property, west of the Tentative Map site, would eventually be prezoned and developed with Employment, Low Density Residential, and Commercial uses. In addition, the nine other non-participating properties would eventually be prezoned and developed with Residential, Employment, Park, and Public uses. 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 the 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] *Preliminary Geotechnical Engineering Report, Nichols Ranch,* Wallace Kuhl & Associates, February 28, 2003.
[2] *Preliminary Geotechnical Engineering Report, Powell Property,* Wallace Kuhl & Associates, March 9, 2004.
[3] *Environmental Site Assessment, Nichols Ranch,* Wallace Kuhl & Associates, March 7, 2003.
[4] *Site Assessment Update, Powell Property,* March 10, 2004.
[5] *City of Wheatland General Plan,* July 2006.
[6] *City of Wheatland General Plan EIR,* July 2006.
[7] *U.S. Department of Agriculture Pacific Southwest MLRA Soil Survey,* May 2005.
[8] *USDA Natural Resources Conservation Service, Yuba County Soil Survey,* July 2005.
[9] *Yuba County General Plan, Volume I, Environmental Setting and Background,* May 1994.