

4.9

HAZARDS

INTRODUCTION

The Hazards chapter describes existing and potentially occurring hazards and hazardous materials on the project site, and discusses potential impacts posed by those hazards to the environment, as well as to workers, visitors, and residents within and adjacent to the project site. More specifically, the chapter describes potential effects on human health that could result from soil contamination stemming from past uses of the site, or from exposure to hazardous materials used during previous agricultural operations on the project site. The Hazards chapter is based on the *Environmental Site Assessment, Nichols Ranch (“Phase I Report”)* prepared by Wallace Kuhl & Associates (WKA),¹ the *Site Assessment Update, Powell Property (“Phase I Report”)* prepared by Wallace Kuhl & Associates,² and the *City of Wheatland General Plan EIR*.³

ENVIRONMENTAL SETTING

The following section includes discussions regarding the past and current uses, on-site structures, wells, storage tanks, and other potential on-site hazards.

Existing Project Site Land Uses

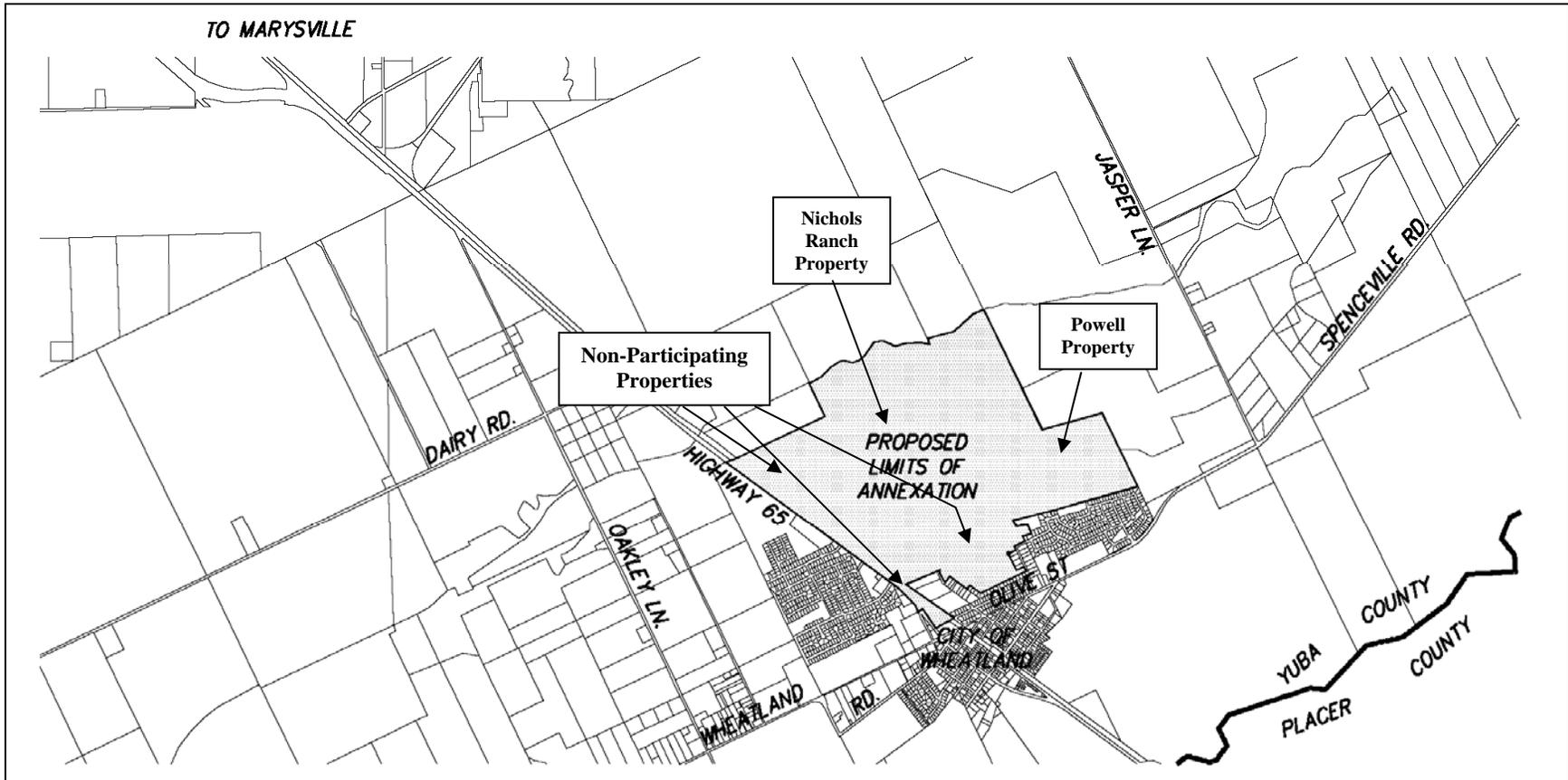
The proposed project is an existing agricultural site, which is bordered to the north by existing agricultural land and Dry Creek; to the east by existing agricultural land and rural residences; to the west by State Route 65 (SR 65) and the Union Pacific Railroad (UPRR) tracks; and to the south by an existing residential neighborhood (See Figure 4.9-1). The project would act as a residential extension of the neighborhood located south of the site.

Nichols Grove Ranch Property

The property site is nearly level agricultural land divided by wetland and tree corridors. The agricultural land portion of the proposed project is separated into several fields and orchards, either 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, as well as the southwestern portion and a narrow strip in the center of the property. 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.

**Figure 4.9-1
Property Locations**



Structures

The property contains a total of five farm structures, which are found 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. The pole barn is wood framed with a corrugated metal roof and is boarded up on three sides to protect baled hay from the elements. WKA did not observe unusual stains or odors in the visible portions of the floor or around the pole barn at the time of the reconnaissance.

Approximately one-half of the workshop has a concrete floor, while the remaining area is a dirt surface. Numerous inert items were stored in the dirt surface portion of the barn and WKA did not observe any unusual odors or stains in or around the dirt-surfaced portion of the workshop. However, the concrete-surfaced portion of the workshop contained several 55-gallon drums with hand pumps for new engine oils or transmission fluid and drums of grease. WKA did observe minor insignificant stains on the concrete floor and around some of the drums.

The storage building, located north of the workshop, is constructed of steel and fiberglass with a concrete foundation footing. The interior of the storage building has a dirt floor and is used for the storage of hay, a tractor, and a historic Wheatland Fire Truck. Although the floor was partially covered with hay, WKA did not observe any unusual stains or odors on the visible portions of the floor or around the storage building at the time of field reconnaissance.

The pesticide shed is wood framed with a metal corrugated roof and sides with a concrete floor. The pesticide shed contained several containers of seed, paints, and pesticides. One 55-gallon container of Round Up was observed inside the shed. WKA did not observe any significant staining of the concrete floor during field reconnaissance.

Wells

Four water supply wells are located within the proposed project, 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. At the domestic water supply well, stains or odors were not observed at the time of field reconnaissance. However, WKA did observe minor oil stains on the pump motors and the surrounding concrete bases of the irrigation wells, but the stains observed did not extend beyond the concrete bases to the nearby soils. The oil staining around the pump motors is typical of most electric pump motors because pump bearings require “drip” lubrication during operation.

Aboveground Storage Tanks (ASTs)

A large amount of farming equipment and supplies are stored around the building cluster area, which includes a harvester, two tractors, a backhoe, three truck trailers for hauling, and aboveground storage tanks (ASTs). A total of nine ASTs were stored throughout the building cluster area of the proposed project. The Phase I indicates that an out of service AST and

dispenser, an empty AST with hand pump stored on a wood pallet, and five mobile ASTs used for spraying fertilizers and pesticides, were located in the storage area.

Two fuel ASTs and dispensers are located north and south of the workshop. The southerly AST is located in front of the pesticide shed and is elevated off the ground by wood and concrete. The Phase I indicates that stains or odors were not observed around the southern AST and fuel dispenser. The northern AST and dispenser are located within the storage area north of the workshop. The northern AST is also elevated above the ground surface by concrete. The Phase I indicates that staining and fuel odors exist on the sides and base of the dispenser.

Stored Items and Debris

Wallace Kuhl & Associates observed numerous items within the building cluster area. Stored items included five mowers, several trash cans, hoses, camper shell, one small truck, four cars, three commercial trucks, two semi-trucks, three truck trailers for grain hauling, an old out of service fire truck, harvester, two tractors, backhoe, wood pallets, corrugated metal siding, concrete piping, miscellaneous farm implements, rolls of barbed wire and wired mesh, irrigation pipes and connectors, log splitter, firewood, railroad ties, five tire casings, scrap metal, and various chemicals in the storage shed.

Clay Removal Activities

Clay removal occurred in two areas of the property site. Clay removal is shown to have occurred in the 1960s, on a small area of land in the east-central portion to the property site, with operations ceasing in the early 1970s. The clay removal operation was relocated, in the 1980s, to the central portion of the property site, west of the building structures. Clay removal activities consisted of topsoil removal from areas discussed previously and stockpiled for later use. The desirable soils were removed to a depth of three to six feet.

Kinder Morgan and Pacific Gas and Electric (PG&E) Pipelines

Within the UPRR easements, located near the western portion of the property site, Kinder Morgan and PG&E own and maintain a liquid petroleum pipeline and high-pressure natural gas pipeline, respectively. The petroleum pipeline, owned and maintained by Kinder Morgan, is an eight-inch pipeline that operates at 1,380 pounds per square inch (psi) and transports gasoline, diesel fuel, aviation fuel, and other refined petroleum projects from the central refineries located in West Sacramento and Rancho Cordova, California to Beale Air Force Base and Chico.

The PG&E pipeline, identified as high-pressure gas main no. 123A, is a buried 16-inch pipeline at an operating pressure that ranges between 50 and 350 psi. In addition, an eight-inch pipeline, identified as high-pressure gas main no. 123B, parallels the UPRR easement that bisects the southwestern portion of the property and operates at pressure that ranges between 50 and 350 psi.

Soils Analysis

To address potential persistent pesticide residuals, WKA collected a total of 25 surficial soil samples from various locations within the property site. The samples were collected evenly spaced across each field of the property.

The soil samples obtained from the property site contained no detectable concentrations of DDT, or any of the DDT degradation compounds known as DDE and DDD. Regulatory criteria for determining whether soils are to be classified as “hazardous waste” for disposal purposes based on their residual agricultural chemical content are contained in Title 2, *California Code of Regulations*, Article 3, Section 66261.24, and are known as Total Threshold Limit Concentration (TTLC) values. TTLC values are not health-based numbers, and only apply to soil that would be picked up or removed from a site and disposed of at another location or facility. The TTLC for the sum of DDT and the associated degradation products is 1.0 parts per million (ppm).

The laboratory test results for the agricultural soil samples obtained from the property site revealed that detectable concentrations of DDT and the associated degradation products were not found and thus, are below the TTLC hazardous waste values.

Furthermore, the organochlorine pesticide residuals were measured against criteria that are used to evaluate if a substance shall be considered hazardous waste for disposal purposes, and to compare detected residual agricultural chemical concentrations to health-based criteria. To accomplish this, WKA contacted a regional toxicologist with U.S. EPA, who authored an October 1999 *Memorandum* that contains Preliminary Remedial Goals (PRGs) for compounds, including persistent pesticides. Dr. Smucker explained that the PRGs are a screening tool often used to initially evaluate whether a particular site may require additional study or remediation due to persistent pesticide residuals in soil.

The U.S. EPA PRG for proposed residential development soils is 1.7 ppm for each of the compounds DDT and DDE; the PRG for DDD is 2.4 ppm (unlike the hazardous waste criteria discussed above, a summation of the DDT compounds would not be necessary for comparison to the health-based criteria). None of the soil samples submitted for analytical testing yielded results above practical quantitation limits (i.e. – none of the target compounds were detected).

Powell Property

The Powell 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 property site abuts the southeastern portion of the Nichols Ranch property. The project site is separated into four fields either by the north or south branches of Grasshopper Slough or by access roads. The two larger fields located in the northeast and west sides of the property, support disc'd alfalfa fields. The southeast field and a small field, located on the northeast portion of the property and south of an access road, support dry-farmed grain fields. The remainder of the property consists of non-oiled access roads, and fallow land covered with dried grasses and weeds.

The drainage of the property consists of irrigation/stormwater trenches and Grasshopper Slough, all of which bound the majority of the fields. The majority of Grasshopper Slough gently meanders through the property and contains a corridor that is lined with trees, berry vines, and grasses. A small portion, located at a “Y” on the central portion of the property, appears to have been widened or deepened.

Well

The property site does not contain structures, earthwork equipment, or maintenance areas. However, one irrigation well exists and evidence of an underground irrigation system exists in the northeast and west fields. Additionally, WKA observed one decomposed 55-gallon drum, several steel pipe lengths, and one five-gallon Round Up™ container filled with soil. The irrigation well pump is operated by an electrical motor and stands on top of a concrete pedestal. Wallace Kuhl & Associates did observe minor oil stains on the irrigation well pump motor and the surrounding concrete bases, although the stains did not extend beyond the concrete bases to the nearby soils. The oil staining around the pump motors is typical of most electric pump motors because pump bearings require “drip” lubrication during operation. Furthermore, WKA did not observe unusual stains or odors in or around the abandoned drum, pipe lengths, or herbicide container during the field reconnaissance.

Radon Potential

Radon isotope-222 is a colorless, odorless, tasteless radioactive gas that is a natural decay product of uranium. Uranium and radon are present in varying amounts in rocks and soil, and radon is present in background concentrations in the atmosphere. Current evidence indicates that increased lung cancer risk is directly related to radon-decay products. The United States Environmental Protection Agency (EPA) has recommended an “action” level for indoor radon concentrations at or exceeding four pico-curies (a measurement of Radon) per liter of air (pCi/l). The Phase I states that the EPA/State Department of Health Services State Radon Survey predicts 4.7 percent of homes in Yuba County would exceed the EPA’s recommended level of 4 pCi/l.

Specific indoor radon information for the property can only be obtained subsequent to construction of the site, which would make radon testing feasible. The EPA generically recommends that all owners test their homes and commercial buildings for radon. Site-specific, geology, construction materials and methodologies, use characteristics of building occupants and the quality of construction can all affect indoor radon results. Based on the low percentage of homes predicted to exceed the EPA’s recommended exposure level as described above, the potential for radon concentrations exceeding four pCi/l at the property would be considered low.

Polychlorinated Biphenyls (PCBs)

High-voltage, tower-mounted electrical transmission lines, subtransmission lines, capacitors, or concrete pad-mounted electrical transformers were not observed on or adjacent to the property site. Neighborhood distribution electric lines supported on wood poles are located on and off the east and west sides of the property. During field reconnaissance, WKA observed three PG&E

pole mounted transformers located near the well. The transformers were not labeled as containing Non-PCB cooling fluid. Additionally, cooling fluid was not observed on the pole-mounted transformers or on the ground surface.

Soils Analysis

To address potential persistent pesticide residuals, WKA collected a total of ten surficial soil samples. The sample locations were somewhat evenly spaced across the property.

Eight of the ten soil samples obtained from the subject property did not contain detectable concentrations of DDT or any of the DDT degradation compounds known as DDE and DDD, or any of the other analytes of the organochlorine pesticide scan. The two samples that had detectable concentrations (S4 and S5) were obtained from the northeast side of the property where the peach orchard existed.

Regulatory criteria for determining whether soils are to be classified as “hazardous waste” for disposal purposes based on their residual agricultural chemicals content are contained in Title 22, *California Code of Regulations*, Article 3, Section 66261.24, and are known as Total Threshold Limit Concentration (TTLC) values. TTLC values are not health-based numbers, and only apply to soil that would be picked up or removed from a site and disposed of at another location or facility. The TTLC value for the summation of DDT compounds is 1.0 part per million (ppm). Comparison to the TTLC value requires a summation of the individually detected DDT compounds. The results reveal that the summation concentrations of DDT compounds ranged from <0.003 to 0.072 ppm at the former orchard areas of the property and are below their TTLC hazardous waste values.

Furthermore, the organochlorine pesticide residuals were measured against criteria that are used to evaluate if a substance shall be considered hazardous waste for disposal purposes, and to compare detected residual agricultural chemical concentrations to health-based criteria. To accomplish this, WKA contacted a regional toxicologist with U.S. EPA, who authored an October 1999 *Memorandum* (revised February 10, 2003) that contains Preliminary Remedial Goals (PRGs) for many compounds, including persistent pesticides. Dr. Smucker explained that the PRGs are a screening tool often used to initially evaluate whether a particular site may require additional study or remediation due to persistent pesticide residuals in soil. The U.S. EPA PRG for proposed residential development soils is 1.7 ppm for each of the compounds DDT and DDE; the PRG for DDD is 2.4 ppm (unlike the hazardous waste criteria discussed above, a summation of the DDT compound is not necessary for comparison to the health-based criteria). The highest individual DDT compound concentrations were 0.025 for DDT and 0.047 for DDE (both from S5). Clearly, the detected DDT and DDE compound concentrations are below the respective U.S. EPA health-based PRG values.

Non-Participating Properties

The non-participating properties are currently vacant lands and have historically been used for agricultural purposes. Some of the non-participating properties contain additional farm structures, and may contain additional on-site hazards, such as wells and/or storage tanks.

Aerial Photographic Review

The following section is based on the historic aerial photograph review conducted by WKA to identify historic uses and activities conducted on Nichols Ranch and the surrounding properties.

1962 Air Photos

The project site is shown to support an orchard on the southwest portion of the project site, south of the south fork of Grasshopper Slough. A portion of Grasshopper Slough has been rerouted and the slough's original course filled in by 1962, although the trees that lined the slough are still visible. The rerouted south fork has been channelized and extends to the south-central boundary. In addition, the western portion of the north fork of Grasshopper Slough has been channelized. The northwest/southeast-trending access road is visible on the central portion of the project site. The barn and workshop are visible in the central portion of the project site just north of the south fork of Grasshopper Slough and west of the access road. Clay removal is shown as occurring on a small area of land in the east-central portion of the project site, south of the north fork of Grasshopper Slough and east of the access road. Structures are not visible in the vicinity of the clay removal area. The remainder of the property supports irrigated hay crop, pasture, grain crop, and fallow land.

1970 and 1973 Air Photos

Significant changes have occurred on the proposed project site relative to the 1962 photographs. The clay removal from the eastern portion of the Nichols property has stopped and now supports grain crop. An orchard has been planted on the northern portion of the project site, just west of the access road. Another orchard has been planted east of the southwest orchard, and the south fork of the Grasshopper Slough has been rerouted in order to make room for another orchard. Furthermore, an orchard in the southeastern portion of the property has been removed and now supports irrigated hay crop and harvested dry farmed hay crop. The south-central portion of the property continues to support irrigated hay crop. The pole barn has been constructed in the central portion of the Nichols property; west of the access road and the residential subdivision southeast of the proposed project site has been completed.

1988 Air Photos

The proposed project site has had significant changes since the 1970 and 1973 Air Photos. The entire northern portion of the project site, located north of the north fork of Grasshopper Slough, now supports orchards. In addition, clay has been removed from the central portion of the property, located west of the building cluster. The building cluster now has numerous vehicles stored and parked north of the buildings. Additional residential subdivisions have been constructed south and southeast of the proposed project site.

Historic Topographic Maps

The following section is based on the historic topographic map review conducted by WKA to identify historic uses and activities conducted on Nichols Ranch and the surrounding properties.

1910 Map

The north and south fork of Grasshopper Slough are mapped and bisect the north and south portions of the property. Structures are not mapped on the property and two northwest/southeast trending unimproved access roads enter the property from the southern boundary of property, in which both roads cross the south fork of Grasshopper Slough. An improved access road bounds the western portion of the Nichols property.

1947 and 1949 Maps

The project site has had minor changes relative to the 1910 map. The access roads are no longer mapped on the property and an east to west trending levee has been constructed on the western portion of the Nichols property near the south side of the north fork of Grasshopper Slough. Woods are now mapped along the courses of the north and south forks of Grasshopper Slough and portions of the north and south forks of Grasshopper Slough have been abandoned and no longer hold water. A barn-sized structure is now mapped on the south-central portion of the Nichols property. Minor rural residential development is now mapped south and southeast of the property.

1973 Map

In the 1973 map, the northwest to southeast trending unimproved access road is mapped once again. The pole barn is mapped in the north-central portion of the Nichols property and the north fork of Grasshopper Slough has been rerouted along the levee between the on-site access road and the western property boundary. A residential subdivision is now mapped south of the property.

Interviews

Several interviews were conducted by WKA with persons familiar with the proposed project site and surrounding hazards. The results of the WKA interviews with the previous owner, government officials, and others are presented below.

Interview with Previous Owner (Nichols Grove Tentative Map Site)

The Nichols family formerly owned both the Nichols Ranch and Powell properties.

Nichols Ranch Property

The Nichols family purchased the property, referred in this section as the Nichols Ranch property, in 1946. Prior to that time the property was a portion of the Dam Ranch, which primarily cultivated hay and grain crops. Mr. Nichols indicated that persistent pesticides, specifically DDT, were used on the fields; persistent pesticide use is discussed in subsequent sections of this section. Additionally, portable diesel-powered fans are used in the orchards during freezing conditions. Mr. Nichols stated that stationary fans were not located on the property and smudge pots were never used.

Mr. Nichols stated that the barn and workshop existed on the property at the time of the purchase as well as some of the stored old farm implements. The pole barn north of the buildings cluster was constructed by 1970 (based on review of aerial photographs and topographic maps). The storage building located north of the workshop was recently constructed. Mr. Nichols indicated that clay soils were removed from two areas of the property on two separate occasions. Gladding McBean removed the clay soil for the manufacturing of clay pipe at their plant in nearby Lincoln. Mr. Nichols indicated that only earthwork vehicles operated on the subject property and that operation hubs were not set up. Fuel trucks would drive onto the property, refill the earthwork vehicles' fuel tanks, then leave the property. To the best of Mr. Nichols' knowledge, maintenance of the earthwork vehicles did not occur on the property. Mr. Nichols also informed us that portions of Grasshopper Slough have been filled and rerouted during the past 40 to 50 years.

Powell Property

The Nichols Family purchased the property in the late 1950s or the early 1960s. Prior to that time, the property supported dry-farmed grain. Mr. Nichols indicated that the water supply well existed on the property at the time of purchase. The Nichols family leveled the northeast and west sides of the property and, at that time, rerouted and filled the south fork of the Grasshopper Slough that was located on the southwest side of the property. The Nichols family cultivated alfalfa on the northeast and west fields of the property and dry farmed grain on the southeast field. The Nichols family sold the property three to four years later, and the owner, at that time, planted a 25-acre peach orchard on the northeast field and cultivated the remainder of the property in alfalfa and grain crops. The peach orchard was pulled in the early 1970s, and the property has subsequently supported alfalfa and grain crops. In addition, Mr. Nichols was not aware of any structures existing on the property and was only aware of the water supply well and the underground irrigation systems located in the northeast and west fields of the property.

Yuba County Agricultural Commissioner's Office

Because the subject property has an agricultural history (discussed in previous and subsequent sections of this report), WKA contacted Yuba County Assistant Agricultural Commissioner Charles Devaney. Mr. Devaney recalled that the property has supported almond and walnut orchards, alfalfa and oat crops. The Yuba County Agricultural Commissioner's Office had only the most recent Restricted Use Permits (often associated with registered chemical applications to agriculture) on file for the proposed project site. The most recent Pesticide Use Report summaries indicate that almond, walnut, alfalfa and oats were the commodities grown on the property from 1999 to 2002; no oats were grown in 1998. The Pesticide Use Report summaries indicate that the Vanguard WG, Roundup, Goal 2CL, Gramoxone, Velpar L, Diuron 4L, Furadan 4F, Princep jCaliper 90, Rapid 80, Karmex, Prism and Weedar 64 were used for weed control between 1998 and 2001. Additionally, Rovral, Sunspray, Champion, Manex, Amine 4 2,4-D, Asana XL, Gavicide Super 90, Nu-Cop 50DF, Chlorpyrifos 4E, Diazinon, Poast, PennCap-M, Break EC, Conform 2F, Nufos 4E, Balan DF and Ziram 76 were used for miscellaneous pest control between 1998 and 2001. In addition, Mr. Devaney indicated that Notices of Violation or Cease and Desist Orders are not in the County file for the proposed project sites.

Interviews with Others

The others interviewed by WKA include representatives from Gladding McBean, Kinder Morgan Energy Partners, and the Pacific Gas & Electric Company (PG&E).

Gladding McBean

Jim Keating, with Gladding McBean, was interviewed regarding the clay soil removal process during operations on the Nichols Ranch property. Mr. Keating indicated that the topsoil was removed from a designated area and stockpiled for later use. The desirable soils were then removed to typical depths of three to six feet, with deepest excavations extending to approximately eight feet in some areas. Areas where soil has been removed are noticeably lower than the adjacent fields.

Kinder Morgan Energy Partners

Kinder Morgan Energy Partners owns and operates a buried, liquid petroleum pipeline that trends northwest/southeast approximately 60 feet westerly of the Nichols property. WKA conducted a telephone interview with Kinder Morgan Energy Partners representative Ken Ellis regarding the underground pipeline easement. Mr. Ellis reported that the easement contains an eight-inch diameter liquid petroleum pipeline, which operates at 1,380 psi. Mr. Ellis further indicated that the pipeline is used to transport gasoline, diesel fuel, aviation fuel and other refined petroleum products from the central refineries located in Richmond and Contra Costa County to bulk petroleum storage and pumping facilities located in West Sacramento and Rancho Cordova, California. The pipeline continues from the Rancho Cordova station and continues through Wheatland, to Beale Air Force Base and Chico.

Mr. Ellis informed WKA that their pipeline is “smart tagged” on an annual basis, and explained that an electronic tool is utilized to assess the overall integrity of the pipeline by measuring the extent of corrosion both on the pipeline’s inside and outside walls. Mr. Ellis also indicated that the pipeline is hydrostatically tested on an annual basis and that leaks are not known to have occurred along that section of the pipeline located nearest to the subject property. In addition, WKA did not observe aboveground pipelines or hazardous waste pipelines on or near the subject property.

Pacific Gas & Electric

Pacific Gas & Electric was interviewed for information regarding the on-site natural gas line and the potential PCB content of nearby transformers.

Natural Gas Line

Wallace Kuhl & Associates (WKA) performed a February 20, 2003 telephone interview with PG&E land agent Bill Snider. Mr. Snider explained that the observed pipeline section within the railroad easement, “high pressure gas main no. 123A,” was installed in 1955. The gas main is a buried 16-inch pipe at an operating pressure that ranges between

50 and 350 pounds per square inch (psi). The pipeline that bisects the southwesterly corner of the property is identified as “high pressure gas main no. 124B,” and parallels the railroad track easement. Gas main 124B was installed in 1939 and consists of a buried eight-inch pipe with an operating pressure that also ranges between 50 and 350 psi.

Mr. Snider reported that to the best of his knowledge, leaks, ruptures, or problems are not known to have occurred along the buried pipeline courses adjacent to or in the vicinity of the project area.

Polychlorinated Biphenyls (PCBs)

To obtain information pertaining to the potential PCB content of the nearby pole-mounted transformers, WKA contacted PG&E senior environmental coordinator Mark Hays. Mr. Hays indicated that no database exists at PG&E to ascertain a transformer’s status regarding the transformer PCB content, although some transformers are tagged “Non-PCB.” Some of the pole-mounted transformers located on or near the property are not tagged with respect to PCB content. Mr. Hays has explained that since the early 1980s PG&E has initiated a policy of installing PCB-free equipment.

Potential Onsite Hazards

The potential on-site hazards include the following:

- Natural Gas Pipelines;
- Petroleum Pipelines;
- PCB Transformers; and
- Aboveground Storage Tanks.

Surrounding Hazardous Sites

The Phase I reports include the results of a search performed for the entire proposed project site by Environmental Data Resources, Inc. (EDR). Federal, State, and local databases were searched by EDR for potential hazardous sites on the project site and a within 0.5-mile radius around the site. None of the properties within the project boundaries were listed on any of the searched databases. However, the following six sites were identified within the American Society of Testing and Materials (ASTM) search distance:

- Bear River Elementary School;
- Raj Sharma Mini Mart;
- Tom Beilby’s Transmission;
- Moreno’s Restaurant;
- Wheatland Corporation Yard; and
- Nichols Brothers Property.

The ASTM-designated search radius was used by EDR, Inc. during review of the regulatory agency databases. In summary, the Phase I did not identify confirmed State or federal “Superfund” sites on or within one mile of the proposed project during review of the former Department of Health Services (DHS) Bond Expenditure Plan, the U.S. EPA’s National Priorities List (NPL), and the Cal-EPA’s Active Annual Workplan Sites list. Potential federal Superfund sites did not appear on or within one-half mile of the project sites during review of U.S. EPA’s Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). Additionally, the proposed project and adjacent land areas are not listed as Resource Conservation and Recovery Act (RCRA) Generators, nor does the project site appear in U.S. EPA’s Emergency Response Notification System (ERNS) database. Resource Conservation and Recovery Act Treatment, Storage, or Disposal (TSD) facilities are not located on or within one-half mile of the property. In addition, known contaminated municipal ground water wells, producing or abandoned Division of Oil and Gas (DOG) petroleum wells, or active or inactive landfills are not listed on, adjacent to, or within one-half mile of the proposed project.

The Bear River Elementary School site appears on the Department of Toxic Substances Control (DTSC) CalSites database. This site is listed simply because the DTSC tracks proposed school sites and school expansions while the school sites await State approval for development or expansion. The school site is not considered a hazardous materials threat to the project site. Review of various State databases including, but not limited to, the Office of Environmental Health Hazard Assessment’s Hazardous Waste and Substances Sites List, the Regional Water Quality Control Board (RWQCB) Leaking Underground Storage Tank database, and the Yuba County Office of Emergency Services (OES) Contaminated Sites List, reveals five known contaminated sites within one-half mile of the subject property. Two sites, Raj Sharma and Wheatland School District, have been remediated and received closure status from State and County agencies.

OES representative Mary Christopherson was interviewed by WKA regarding the remaining three known contaminated sites. In regard to Tom Beilby’s Transmission and Moreno’s Restaurant, located 1,300 feet and 1,500 feet south of the subject property, respectively, Ms. Christopherson indicated that the responsible parties have been ordered to produce preliminary site assessments to address contamination at the respective sites. Contaminated soils were discovered during the removal of underground storage tanks (USTs) at each site. Groundwater is not affected at either of the two sites. The assessments have not been submitted to date and information is not available with regards to the extent of contamination at either site.

Files are not available for review for the Wheatland Gas (aka Raj’s Mini Market) site, located 1,300 feet south of the subject property. The site is in litigation and the files have been sent to the District Attorney’s Office for review. Based on the little information available from the RWQCB, the site had a leaky UST that released regular unleaded gasoline into the underlying soils and groundwater in 1987. According to the RWQCB database, the site is considered a low priority. Ms. Christopherson indicated that this site has two USTs currently in operation.

The Yuba County OES Hazardous Materials List reveals six registered UST sites and/or hazardous materials storage sites that are located on or within one-half mile of the subject property. Five of the UST sites were discussed above. One UST site, the Wheatland Corporation

Yard, is located approximately 1,000 feet southeast from the property. This site is registered as having an inactive UST. Hazardous material releases have not been reported with regards to this site. One additional site, a Chevron gas station, is located west of the property beyond Highway 65. This site is a new gas station, which is likely why the site is not listed in any database to date. The Chevron sells three different grades of gasoline. This site is not listed as having experienced any hazardous material release.

Based on a January 2003 Business Plan, the Nichols Brothers property has two 1,000-gallon ASTs used for the storage of diesel and regular unleaded gasoline. According to the document, approximately 220 gallons of motor oil is stored in steel 55-gallon drums, and approximately ten gallons of waste oil is generated each month. The waste oil is transported to Yuba Sutter Disposal, Inc. (YSDI) for recycling. Furthermore, hazardous material releases have not been reported.

REGULATORY CONTEXT

The term hazardous substance refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if the material appears on a list of hazardous materials prepared by a federal, State or local regulatory agency or if the material has characteristics defined as hazardous by such an agency.

The California Environmental Protection Agency (EPA), Department of Toxic Substances Control (DTSC) defines hazardous waste, as found in the California Health and Safety Code Section 25141(b), as follows:

[...] its quantity, concentration, or physical, chemical, or infectious characteristics: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.

Many agencies regulate hazardous substances. The following discussion contains a summary review of regulatory controls pertaining to hazardous substances, including federal, State, and local laws and ordinances.

Federal Regulations

Federal agencies that regulate hazardous materials include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and the National Institute of Health (NIH). The following federal laws and guidelines govern hazardous materials:

- Federal Water Pollution Control;
- Clean Air Act;

- Occupational Safety and Health Act;
- Federal Insecticide, Fungicide, and Rodenticide Act;
- Comprehensive Environmental Response, Compensation, and Liability Act;
- Guidelines for Carcinogens and Biohazards;
- Superfund Amendments and Reauthorization Act Title III;
- Resource Conservation and Recovery Act;
- Safe Drinking Water Act; and
- Toxic Substances Control Act.

Prior to August 1992, the principal agency at the federal level regulating the generation, transport and disposal of hazardous waste was the EPA under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the California Department of Toxic Substance Control (DTSC) was authorized to implement the State's hazardous waste management program for the EPA. The federal EPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

The Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. The Comprehensive Environmental Response, Compensation, and Liability Act was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986. Subsection 101(40) of CERCLA defines "bona fide prospective purchaser" (BFPP) as a person, or tenant of that person, who acquires ownership of a facility after the date of enactment of the Brownfields Amendments, January 11, 2002. A BFPP may be subject to a "windfall lien" under the newly added CERCLA Section 107(r), up to the amount of unrecovered response costs incurred by the United States at a facility for which the owner is not liable as a BFPP, and where the response action increases the fair market value of the facility. As to the amount and duration of any windfall lien, the Brownfields Amendments state that the amount is not to exceed the increase in fair market value attributable to the response action at the time of sale or other disposition of the property. The windfall lien arises at the time response costs at the facility are incurred by the United States, and shall continue until the earlier of satisfaction of the lien by sale or other means, or, notwithstanding any statute of limitations under CERCLA Section 113, recovery of all response costs incurred at the facility.

State Regulations

The California Environmental Protection Agency (Cal-EPA) and the State Water Resources Control Board establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State and local laws include the following:

- Public Safety/Fire Regulations/Building Codes;
- Hazardous Waste Control Law;

- Hazardous Substances Information and Training Act;
- Air Toxics Hot Spots and Emissions Inventory Law;
- Underground Storage of Hazardous Substances Act; and
- Porter-Cologne Water Quality Control Act.

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL).

Assembly Bill 387 and Senate Bill 162

AB 387 and SB 162 provide a comprehensive program to ensure that hazardous material contamination issues are adequately addressed prior to school development. The program involves the preparation of a Phase I Environmental Site Assessment to determine whether a release of a hazardous material has occurred onsite in the past or if there may be a naturally occurring hazardous material present at the site. Based on the information gathered, the Phase I should conclude that either 1) recognized environmental conditions were not identified, or 2) a Preliminary Endangerment Assessment (PEA) is necessary.

Local Regulations

Yuba County Environmental Health Department

The Yuba County Environmental Health Department provides environmental health services to all residents in the County. Among the environmental health programs of the department are the Hazardous Materials Unit Programs, which address such issues as solid waste, hazardous wastes, and aboveground and underground storage tanks.

Wheatland General Plan

The City of Wheatland established the following General Plan goals and policies regarding development and hazardous materials.

Hazardous Materials

Goal 9.F To minimize the risk of life, injury, serious illness, damage to property, and economic and social dislocations resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous materials wastes.

Policy 9.F.1. The City shall ensure that the use and disposal of hazardous materials in the City complies with local, State, and federal safety standards.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. For the purposes of this EIR, an impact is considered significant if the proposed project would:

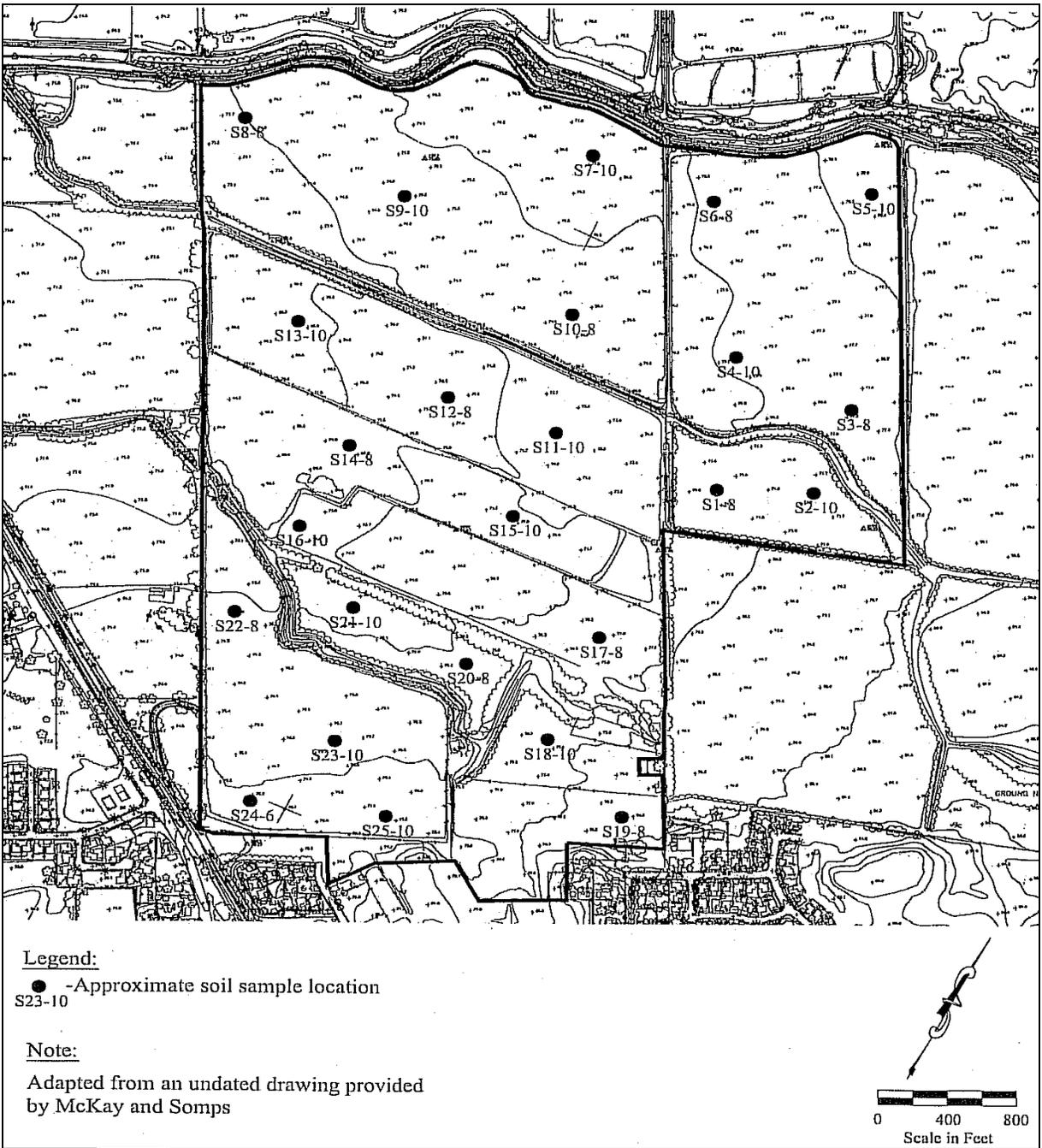
- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of a physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Method of Analysis

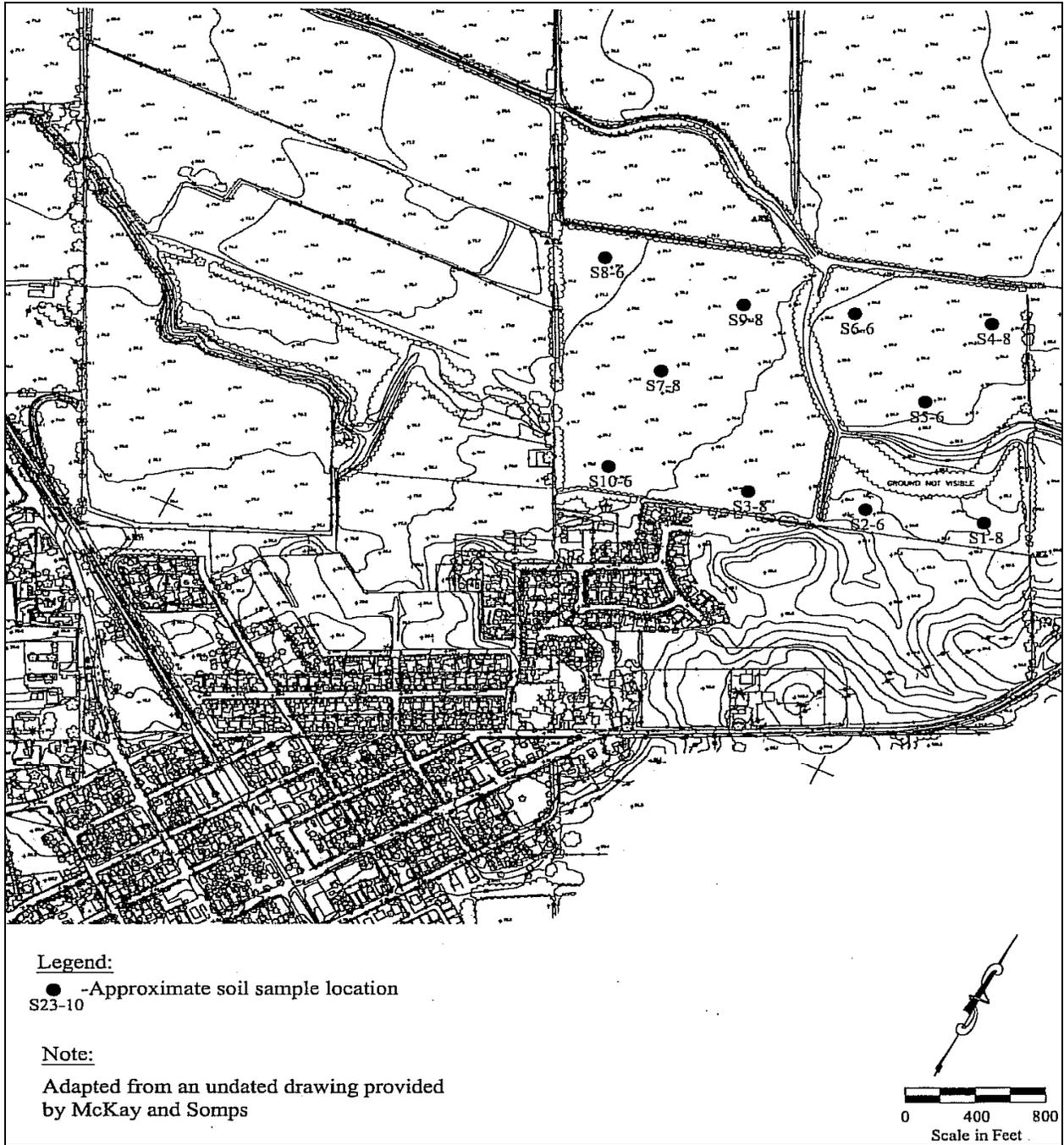
Wallace Kuhl & Associates conducted environmental site assessments for the two parcels making up the Nichols Grove Tentative Map project site, which were completed in compliance with the *American Society of Testing and Materials Standard E 1527-00 for Environmental Assessment*. The scope of work included on-site reconnaissance to assess and photograph present site conditions. Other means of gathering information pertaining to the project site are discussed above and include interviews, aerial photography and topographic map research, and relevant database searches.

To address potential persistent pesticide residuals, WKA collected a total of 35 surficial soil samples (25 Nichols Ranch samples and 10 Powell Property samples). As seen in Figure 4.9-2 and Figure 4.9-3, the samples were collected at evenly spaced intervals across the properties.

**Figure 4.9-2
Nichols Ranch Property Sample Locations**



**Figure 4.9-3
Powell Property Sample Locations**



All samples were collected in clean, two-inch diameter brass tubes using hand-sampling equipment from the depth indicated for each sample (See Appendix J). The tubes were sealed with polytetrafluoroethylene-coated sheets and plastic end caps, preserved on ice, and submitted to Acculabs, Inc. The samples were analyzed for organochlorine pesticides using EPA method 8081A.

Project 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.

4.9-1 Impacts from burn piles and other on-site farm implements.

Nichols Grove Tentative Map

During field observations of the proposed project site, two burn piles were located on the project site. One is located east of the access road and levee on the northeast portion of the project site. The other burn pile is located in the southwest corner of the project site. Both burn piles contain a large volume of tree branches, as well as some domestic trash, debris, and furniture. During reconnaissance, WKA did not observe significant staining or hazardous material odors around the burn piles. In addition, WKA did not observe signs of stressed vegetation or unnatural areas void of vegetation around burn piles.

The project site contains large quantities of debris and stored items around the building cluster in the central portion of the site. Most items observed appeared not to contain obvious hazardous materials. However, the underlying soils of burn piles and most of the stored items could not be observed for staining or potential soil contamination from discards and/or abandoned items.

Non-Participating Properties

The non-participating properties include one parcel in current agricultural use and the rest are vacant lands previously used for agricultural operations. Therefore, these parcels could contain farm implements related to the parcels' current or former use, and contamination related to the implements. In addition, the non-participating properties could contain burn piles and other debris containing hazardous materials. In addition, underlying soils of burn and debris piles could contain staining or soil contamination.

Conclusion

Because both the Nichols Grove Tentative Map site and the non-participating properties could contain underlying soils within debris and/or farm implement areas, which exhibit staining or soil contamination, 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

- 4.9-1(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.*

Non-Participating Properties

- 4.9-1(b) *In conjunction with submittal of a development application, the applicant(s) shall submit a Phase I Environmental Site Assessment for any of the non-participating properties to determine if any on-site structures contain hazards and to identify soil contamination, potential hazards related to nearby properties, and the location of wells, aboveground storage tanks, stored items and debris. The Phase I Environmental Site Assessment shall identify and include mitigation measures necessary to reduce significant hazardous and hazardous materials impacts. If the Phase I 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.

Nichols Grove Tentative Map

The Phase I ESA prepared for the project site by WKA shows that five irrigation wells are currently located within the proposed project site. The applicant has not indicated that the existing irrigation wells located within the project site would be retained to provide water for the project. If the wells were to be abandoned, the wells would require proper destruction. The procedure requires a well abandonment permit from the Yuba County Environmental Health Department, and a licensed C-57 contractor must perform the work.

Non-Participating Properties

The non-participating properties could contain irrigation wells as a result of either current or past agricultural operations on-site. If the wells were to be abandoned, the wells would require proper destruction. The procedure requires a well abandonment permit from the Yuba County Environmental Health Department, and a licensed C-57 contractor must perform the work.

Conclusion

Because of the possible abandonment of agricultural irrigation wells on both the Nichols Grove Tentative Map site and the non-participating properties, 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

4.9-2(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.*

Non-Participating Properties

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.

Nichols Grove Tentative Map and Non-Participating Properties

The Phase I ESA for the Nichols Grove Tentative Map project site indicates that nine storage tanks were present at the time of reconnaissance on the project site. As discussed previously, the AST and the diesel fuel dispenser located north of the on-site workshop were observed to have staining and fuel odor on the sides and base, which could potentially impact near-surface soils. Non-participating properties could also contain storage tanks, which have resulted in staining of surface soils. The exposure of construction workers to these items and the introduction of residential units to the site as a result of the proposed project, combined with the potential hazards and contaminants

associated with the AST and fuel dispenser, would be considered a **potentially significant** impact.

Mitigation Measure(s)

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

Nichols Grove Tentative Map

4.9-3(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.*

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 the Yuba County Environmental Health Department, at the expense of the applicant(s).*

4.9-4 Impacts from Polychlorinated Biphenyls (PCBs).

Nichols Grove Tentative Map and Non-Participating Properties

The PG&E pole-mounted transformers were observed around the irrigation wells located within the Nichols Grove Tentative Map project site. Typically, transformers are a health concern if they were installed prior to the late 1970s because they utilized PCBs. A number of adverse health effects are associated with this chemical. PCBs were used in electrical transformers because of their useful quality as being a fire retardant. These transformers were manufactured between 1929 and 1977. As indicated in the Phase I, since the early 1980s, PG&E has initiated a policy of installing PCB-free equipment.

However, because the dates are unknown for installation of transformers on both the Nichols Grove Tentative Map site and the non-participating properties, and the areas were developed prior to the 1980s, the potential exists for the transformers to contain PCBs. The exposure of construction workers and future residents of the proposed project to PCB transformers could cause a **potentially significant** impact.

Mitigation Measure(s)

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

Nichols Grove Tentative Map

4.9-4(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.*

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).*

4.9-5 Impacts from existing on-site structures and exposure of construction workers to asbestos and lead-based paint.

Nichols Grove Tentative Map

According to the Phase I Report prepared for the Nichols Ranch site by WKA, five existing structures on the project site were built prior to the mid-1970s. Therefore, the potential exists for asbestos-containing materials (ACMs) to be present in the buildings. These materials can include, but are not limited to resilient floor coverings, drywall joint compounds, acoustic ceiling tiles, piping insulation, electrical insulation and fireproofing materials.

Lead-based paints could also be present in the existing structures. Typically, exposure to lead from older vintage paint is possible when the paint is in poor condition or is being removed. In construction settings, workers could be exposed to airborne lead during renovation, maintenance, or demolition work. Lead-based paints were phased out of production in the early 1970s.

However, the existing structures on the project site were mainly used for the storage of farming equipment and hay. Materials used to construct the structures consist of wood, concrete, metal, and fiberglass panels. None of the materials are considered ACMs. However, a review of site photography, provided by WKA, indicates that portions of the structures are painted. As a result, lead-based paints may be present on the existing structures.

Non-Participating Properties

The non-participating properties include existing farm structures that could have been built prior to the mid-1970s; therefore, the potential exists for ACMs to be present in the

buildings. In addition, lead-based paints could be present in the existing structures if the structures were built prior to the early 1970s.

Conclusion

The non-participating properties contain structures that may include ACMs. In addition, all of the existing structures on the project site may contain surfaces that have been painted with lead-based paint. Demolition of the existing structures could result in the exposure of construction workers and nearby residents to asbestos and lead-based paint. Therefore, a *potentially significant* impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would mitigate potential impacts to a *less-than-significant* level.

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 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.*

Non-Participating Properties

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 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.

Nichols Grove Tentative Map

The Nichols Grove site has historically been used for farming operations. As a result, pesticides have been applied on the project site over the course of several years, as far back as the 1960s. During the testing of surficial samples of the project site by WKA, 33 of 35 samples contained no detectible concentrations of DDT or the DDT degradation compounds DDE and DDD or any other analytes of the organochlorine pesticide scan. Samples S4 and S5, which contained detectible concentrations of DDT or the DDT degradation compounds DDE and DDD are located in the northeast corner of the Powell property, where the peach tree orchard existed. The results were based on their chemical contents in Title 22, California Code of Regulations, Article 3, Section 66261.24, and are known as Total Threshold Limit Concentration (TTLC) values. The TTLC value for the summation of DDT compounds is 1.0 part per million (ppm). The samples taken from the orchard area were shown to have concentrations of DDT that ranged from <0.003 to 0.072 ppm and are well below the TTLC hazardous waste value.

Furthermore, the comparison of the detected agricultural chemical residual concentrations to health-based criteria is necessary. The EPA uses Preliminary Remedial Goals (PRGs) as a screening tool to evaluate whether a particular site may require additional study or remediation due to persistent pesticide residuals in soil. The U.S. EPA PRG for the proposed residential development soils is 1.7 ppm for each of the compounds DDT and DDE. The PRG for the compound DDD is 2.4 ppm.

The highest individual DDT compound concentrations were 0.025 ppm for DDT and 0.047 ppm for DDE, both of which were from sample S5. The detected DDT and DDE compound concentrations are below the PRG thresholds established by the EPA.

Non-Participating Properties

The non-participating properties have historically been used for farming operations. As a result, pesticides could have a long history of use on the site(s). As a result, persistent organochlorine pesticides may occur at levels in excess of the TTLC and/or PRG thresholds established by the EPA. Exposure of workers to elevated pesticide levels during grading or other excavation activities could result in an adverse impact.

Conclusion

As outlined above, the Nichols Grove Tentative Map project site does not contain organochlorine pesticide concentrations above the PRG thresholds established by the EPA; therefore, implementation of the Nichols Grove Tentative Map project would result in a *less-than-significant* impact. However, the non-participating properties could contain pesticide residuals at levels above the allowable thresholds and a *potentially significant* impact would occur.

Mitigation Measure(s)

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

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.*

4.9-7 Impacts of the McDevitt Drive extension on petroleum and natural gas pipelines.

Nichols Grove Tentative Map and Non-Participating Properties

The implementation of the proposed project would include the McDevitt Drive extension, located on the western portion of the project site. The extension of McDevitt Drive would be aligned with the existing McDevitt Drive, located west of SR 65 and the UPRR tracks. The extension would include an at-grade railroad crossing within the UPRR easement. As mentioned previously, Kinder Morgan and PG&E own and maintain petroleum and natural gas high-pressure pipelines, which are aligned within the UPRR easement. Construction activities of the McDevitt Drive extension within the UPRR easement could potentially affect the petroleum and natural gas pipelines, and expose construction workers to potential hazards. In addition, if either of the pipelines leaked in the past, or develop leaks due to construction activities, the potential exists for workers to come into contact with contaminated soils. Because the petroleum and natural gas pipeline could expose the construction workers to hazards, 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

4.9-7(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 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 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.*

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.*

Cumulative Impacts and Mitigation Measures

4.9-8 Long-term hazard-related impacts from the proposed project in combination with existing and future developments in the Wheatland area.

Nichols Grove Tentative Map and Non-Participating Properties

Impacts associated with hazardous materials are site-specific and generally do not affect or are not affected by cumulative development. Cumulative effects could be of concern if the project were, for example, part of a larger development in which industrial processes that would use hazardous materials were proposed. However, this is not the case with this project, and project-specific impacts were found to be less-than-significant with the implementation of the recommended mitigation measures. In addition, surrounding development would be subject to the same federal, State, and local hazardous materials management requirements as would the proposed project, which would minimize potential risks associated with increased hazardous materials use in the community, including potential effects, if any, on the proposed project. Therefore, implementation of

the proposed project would have a *less-than-significant* impact associated with cumulative hazardous materials use.

Mitigation Measure(s)

None required.

Endnotes

¹ *Environmental Site Assessment, Nichols Ranch*, Wallace Kuhl & Associates, March 7, 2003.

² *Site Assessment Update, Powell Property*, Wallace Kuhl & Associates, March 10, 2004.

³ *City of Wheatland General Plan EIR*, July 2006.

4.10

HYDROLOGY AND WATER QUALITY

INTRODUCTION

The Hydrology and Water Quality chapter describes existing drainage pattern and water resources for the project site and the region, and evaluates potential impacts of the project with respect to drainage and water quality concerns. The hydrology and water quality impact analysis is based on information drawn from the *City of Wheatland General Plan*,¹ the *City of Wheatland General Plan EIR*,² the *Draft Drainage Report*³ for the Nichols Grove Tentative Map site, prepared by Civil Engineering Solutions, Inc., and the *Hydraulic Impact Analysis for City of Wheatland General Plan and Nichols Grove Development* prepared by MBK Engineers.⁴

ENVIRONMENTAL SETTING

The following setting information provides an overview of the existing drainage and water quality conditions for the proposed project site and drainage area.

Regional Drainage and Flooding

The City of Wheatland is located within Yuba County on the northern portion of the Sacramento Valley. Yuba County has a climate characterized by wet winters and dry summers. The Wheatland area receives an average annual rainfall of approximately 22 inches, and the majority of the rainfall generally occurs during the months of October through March, with very little rainfall during the remaining months of the year.

The City of Wheatland is relatively flat, sloping gently down toward the west. Soils in the City of Wheatland have a low infiltration rate. The primary natural drainages in the Wheatland area are Dry Creek and Bear River. The Dry Creek and Bear River flow in a northeast to southwest direction.

Flood control systems are typically designed to provide protection against 25-year to 200-year flood events. Examples of these facilities are dams, levees, drainage channels, and pump stations. Flood control for the City of Wheatland is provided by a series of levees. The levees are intended to protect the City of Wheatland and adjacent areas from the following sources of flooding:

- Bear River – Located south of the project area with flows from east to west;
- Dry Creek – Located north of the project area with flows from east to west; and
- San Joaquin Drainage Canal – Located east of the project area with flows from south to north and into Dry Creek northeast of Study Area.

The Reclamation Districts (RD) 2103 and 817 are responsible for maintenance and operation of the Dry Creek levees, Bear River levee, and the San Joaquin Drainage Canal and levees that are

to protect the City and General Plan Area. The three channel levees are outside of the existing City limits.

The deficiencies and potential failure of the levees leave the project site in a flood zone. Portions of the project site are located in a Federal Emergency Management Agency (FEMA) 1986 flood hazard “Zone A.” Zone A is a Special Flood Hazard Area that would be inundated by a 100-year flood. The 100-year flood has a one percent chance of occurring in any given year, and FEMA requires structures built within the 100-year floodplain to be protected.

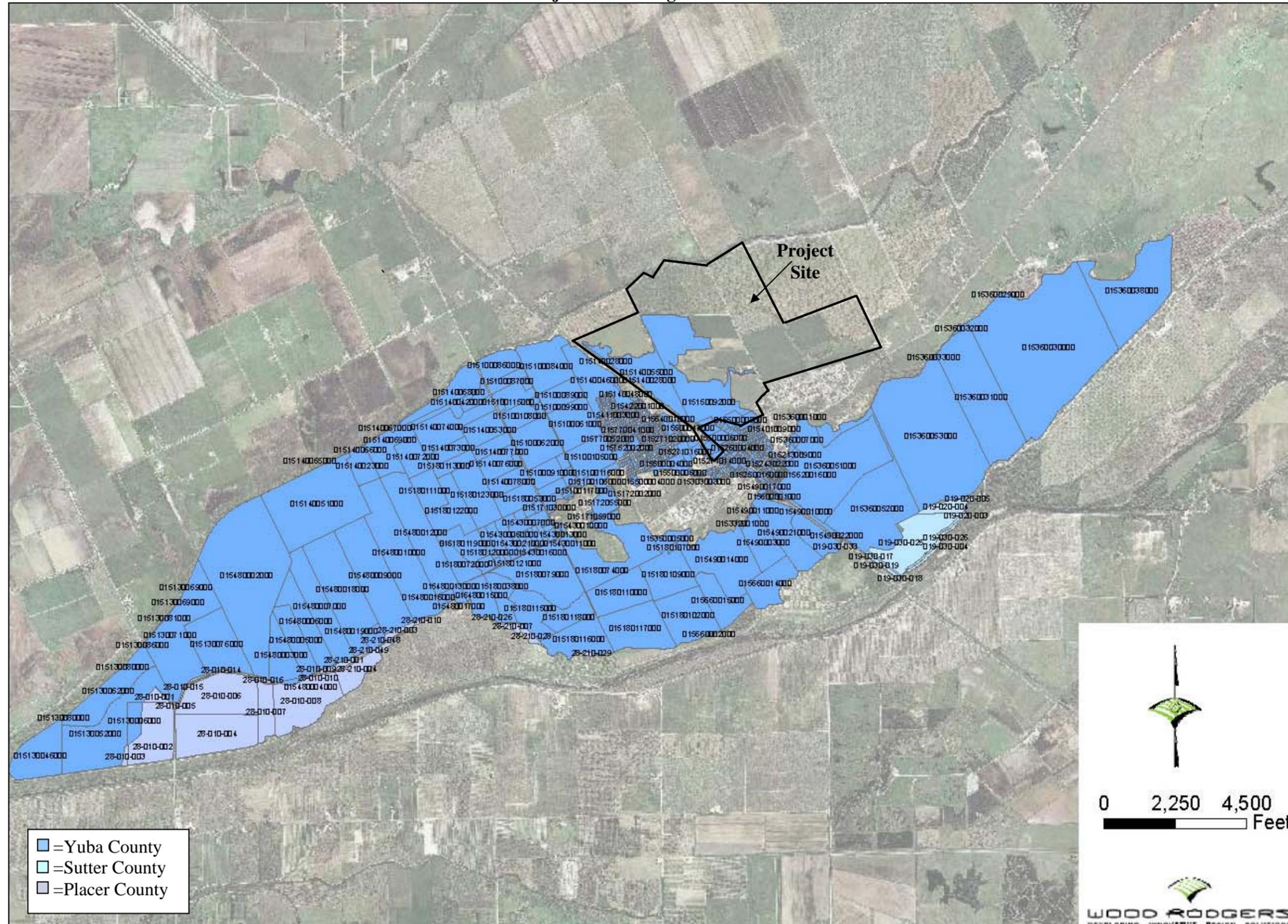
A Letter of Map Revision (LOMR) request, which is a document issued by FEMA that officially removes a structure or an area from the FEMA Special Flood Hazard Area (SFHA), was prepared by Mead & Hunt and submitted to FEMA in 2003. During the review of the LOMR request, the United States Army Corps of Engineers (USACE) released the study entitled “Lower Feather River Floodplain Mapping Study” prepared for the State of California. The USACE study found deficiencies in the Bear River and Dry Creek levees below State Route 65 (SR 65) and the LOMR review was suspended. The Study indicated that the Dry Creek south levee did not have adequate freeboard and part of the proposed project could be inundated if the FEMA levee policy were applied to the levee. The Mead & Hunt LOMR request and the USACE study did not consider the failure of the Bear River levee east of SR 65. A study conducted by Wood Rodgers determined that the Bear River levee does not meet FEMA requirements, and a spill from the Bear River could result in the overtopping of Spenceville Road and inundate portions of the proposed project (See Figure 4.10-1).

The RDs are in the process of developing solutions to the flooding concerns. The problem areas have been divided into three phases. Phase 1 consists of flooding issues associated with the Bear River levee system. Phase 2 consists of flooding issues associated with the Dry Creek levee system, and Phase 3 would address flooding associated with the backup of Bear River and Dry Creek at their confluence with the Feather River. In addition, FEMA has determined that in order for levees to maintain their flood rating all vegetation with a trunk diameter greater than two-inches must be removed. Vegetation removal is anticipated to begin along the Bear River Levee in July 2007.

Phase 1 – Bear River

The existing levee does not meet applicable safety standards for underseepage when analyzed for the 1957 design water surface profile established by the USACE for the project area. As seen in Figure 4.10-1, significant portions of the City of Wheatland, including the project site, would be inundated should the Bear River Levee fail. Slurry walls will be constructed to correct the 1957 design deficiency by limiting underseepage to meet the safety standards by the USACE, and to help qualify the levees for Federal Emergency Management Agency (FEMA) 100-year flood protection certification for the National Flood Insurance Program (NFIP). RD 2103 also proposes to widen an approximately 1,300-foot length of the Bear River North Levee that has been subject to severe waterside erosion. Construction would occur in two phases (Phases 1a and 1b).

Figure 4.10-1
Areas Subject to Flooding – Bear River Levee



Completion of Phase 1a would protect most areas east of SR 65; including, the project site (See Figure 4.10-2). In addition, the levee improvements would include minor improvements to the Grasshopper Slough levee that would include the replacement of corrugated metal culverts under the levee. Phase 1a construction is underway, but would provide only a negligible increase in flood protection from the Bear River until the completion of the Phase 1b portion of the project. Phase 1b has not yet been funded. FEMA would likely release a LOMR for areas subject to Bear River Flooding in early to mid 2009, if construction proceeds as planned.

Phase 2 - Dry Creek

As discussed above, the Dry Creek Levee has been determined to have insufficient freeboard. As shown in Figure 4.10-3, failure of the Dry Creek Levee would subject a large portion of the City of Wheatland, including most of the project site, to flooding. Currently, funding has not been identified to conduct the engineering studies and environmental review necessary to develop detailed construction plans to resolve the Dry Creek Levee insufficiencies. Therefore, neither a permitting or construction timetable is available for improvements to the Dry Creek Levee.

Phase 3 – Feather River Ponding

During high-water flood conditions both the Bear River and Dry Creek can backup from their confluence with the Feather River, resulting in flooding within the City of Wheatland (See Figure 4.10-4). Currently, funding has not been identified to conduct the engineering studies and environmental review necessary to develop detailed construction plans to resolve the improvements required to protect the City of Wheatland from flooding resulting from the ponding of floodwaters. Therefore, neither a permitting or construction timetable is available for the improvements. It is important to note that Feather River ponding would not have an effect on the proposed project (See Figure 4.10-4).

Although an engineering solution has been identified for the Bear River flooding and RD 2103 has begun work on that project, a similar solution has not been identified for either the Dry Creek flooding or the backwater effects. The City has continued to work with Reclamation District 2103 and Reclamation District 817 in order to help identify a feasible solution; however, at this point in time, a first-step levee reconnaissance study has not been completed in order to identify the magnitude of the levee deficiencies, which is required to determine the appropriate engineering solutions to remove the flooding impact from the proposed project site. After identifying the deficiencies, RD 2103 engineers and other staff can then proceed to design and seek funding for the projects to address the Dry Creek and backwater flooding. The approved engineering solutions would need to be completed, or substantial progress made toward construction, and FEMA would need to remove the flood designation from the project area prior to the City being able to allow any development to occur on the project site. The costs associated with the reconnaissance study, design and construction of the necessary Dry Creek levee improvements will be substantial and likely exceed \$21 million dollars. Costs associated with the improvements necessary to address backwater flooding (Phase 3) could likely equal in excess of \$34 million dollars.

Figure 4.10-2
Areas Subject to Flooding – Bear River Levee Following Completion of Phase 1A

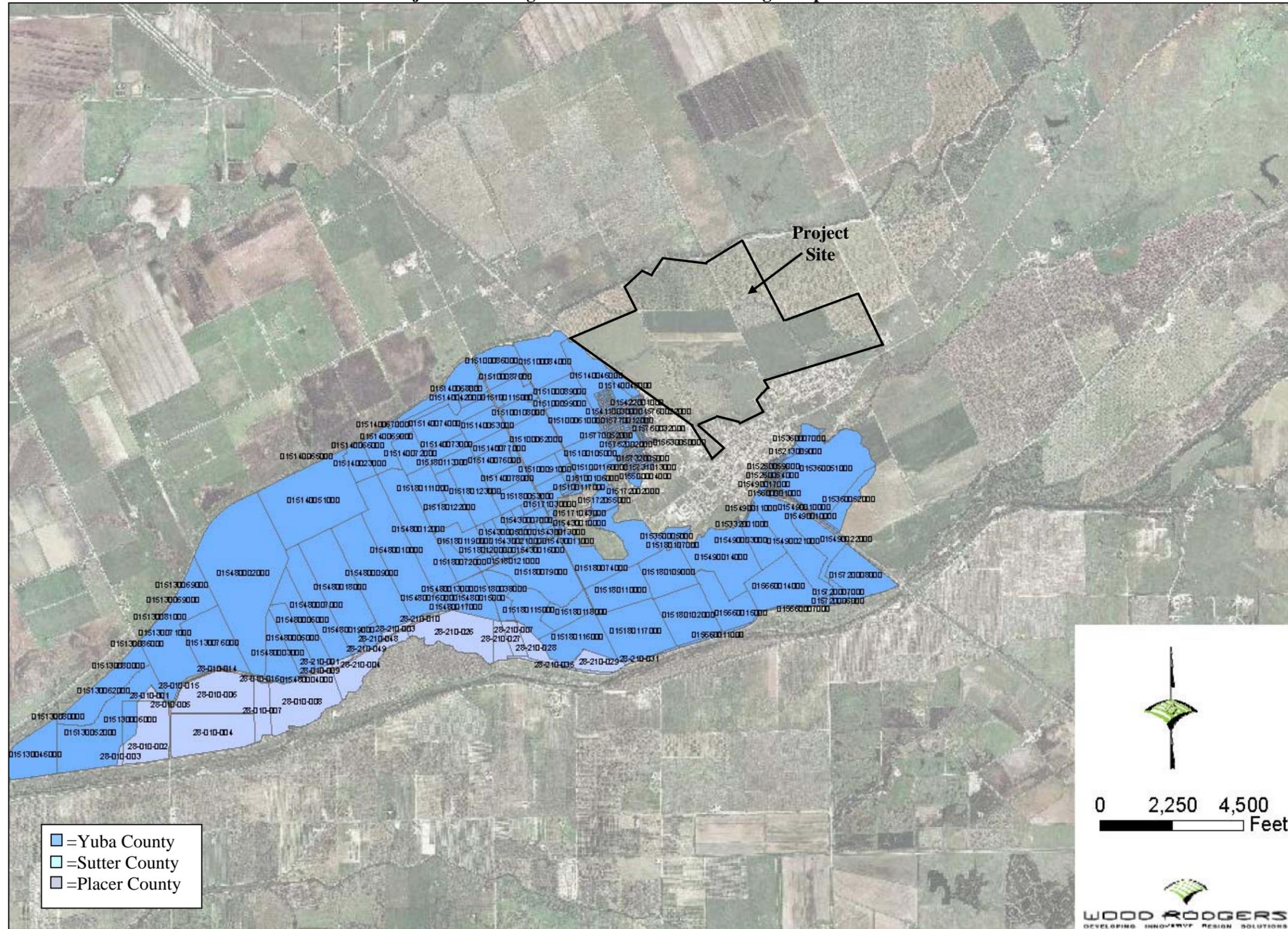
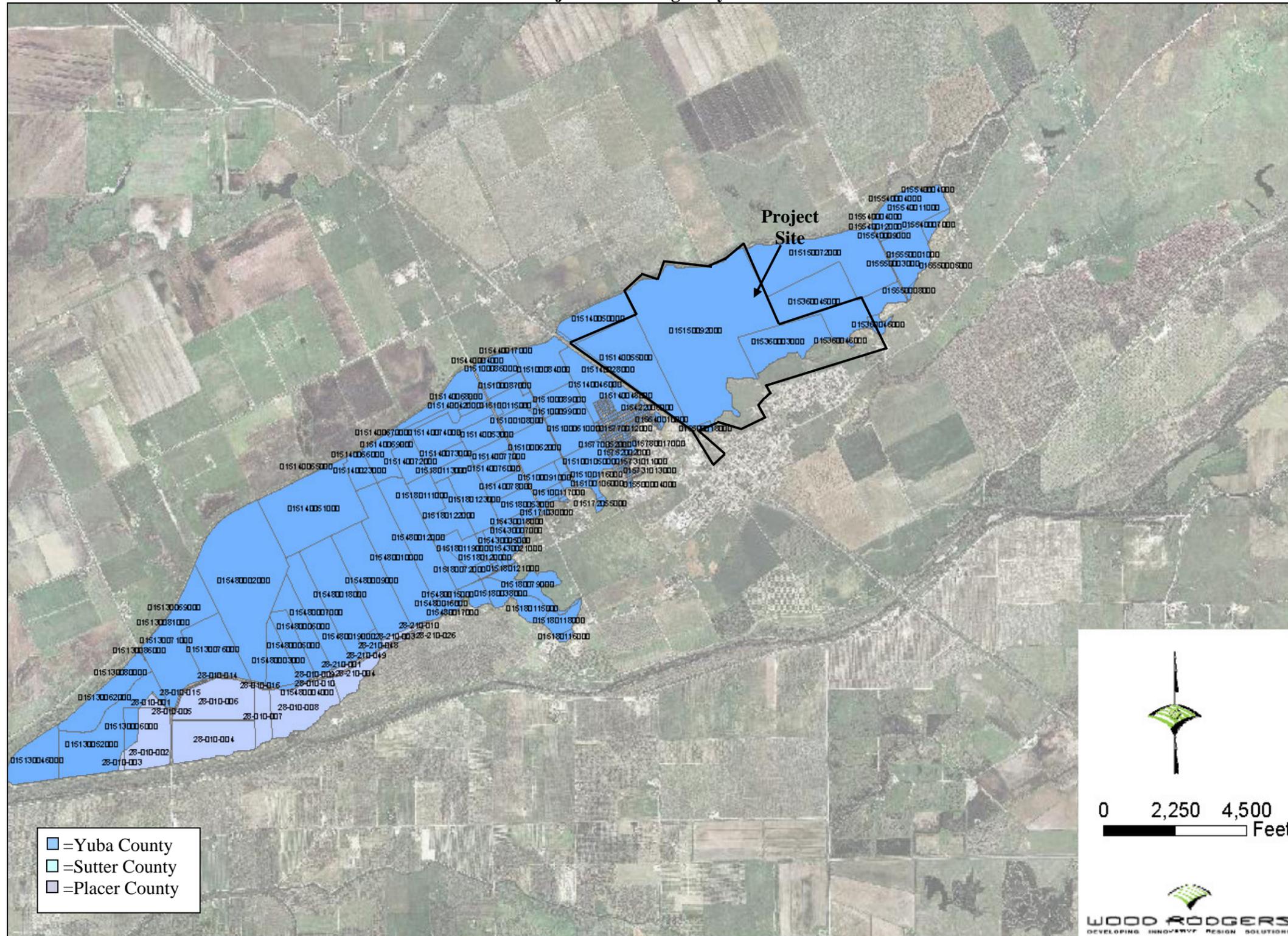


Figure 4.10-3
Areas Subject to Flooding - Dry Creek Levee



Local Drainage

The Nichols Grove Tentative Map site is located east of SR 65 and is directly adjacent to the northern City limits. The northern and southern branches of Grasshopper Slough drain the project site. As stated above, the project site is located in a Special Flood Hazard Area, Zone A. The flood zone is based on the best available information from FEMA and the Reclamation Districts.

Tributary 1 of the North Branch of Grasshopper Slough

The Tributary 1 of the north branch of Grasshopper Slough conveys runoff from areas northeast of the City, in a northwesterly direction to Dry Creek, east of SR 65 (See Figure 4.10-5). The channel does not have the capacity to handle the 100-year event for the watershed. In a 100-year event, water would overtop the south levee and waters would travel southwards to the south branch of Grasshopper Slough. Three existing culvert crossings exist in the channel within the Nichols Grove Tentative Map project site.

Tributary 2 of the North Branch of Grasshopper Slough

Tributary 2 of the north branch of Grasshopper Slough drains some areas of the City of Wheatland, but mostly drains agricultural land and rural areas north of the City through an open channel system east of the Union Pacific Railroad (UPRR) and SR 65 (See Figure 4.10-5). Runoff from Grasshopper Slough ponds in a clay mining area and a low field area south of Tributary 1. A single culvert crossing exists within the channel along the western boundary of the project site. The crossing consists of one 12-inch reinforced concrete pipe (RCP) and one 18-inch corrugated metal pipe (CMP) that cross both the UPRR and SR 65 at the existing bridge structures.

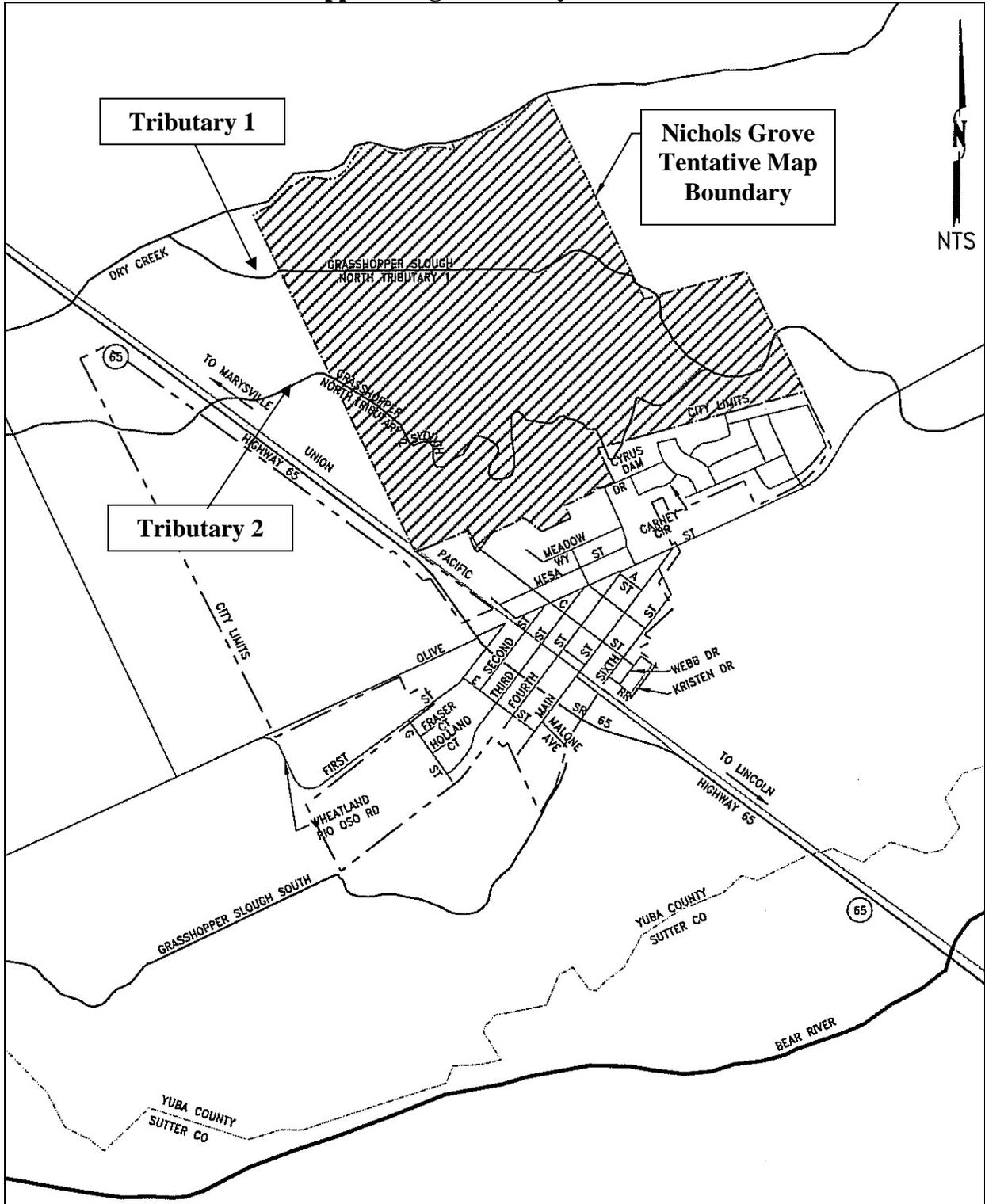
Local Flooding

The Federal Emergency Management Agency (FEMA) indicates that portions of the proposed project site would be within the 100-year flood zone. The FEMA produced Flood Insurance Rate Map (FIRM) for the proposed project consists of Community Panel Number 0604270400-B (See Figure 4.10-6). The FIRM maps identify portions of the proposed project site as Zone A and Zone C. Zone A and Zone C are defined as follows:

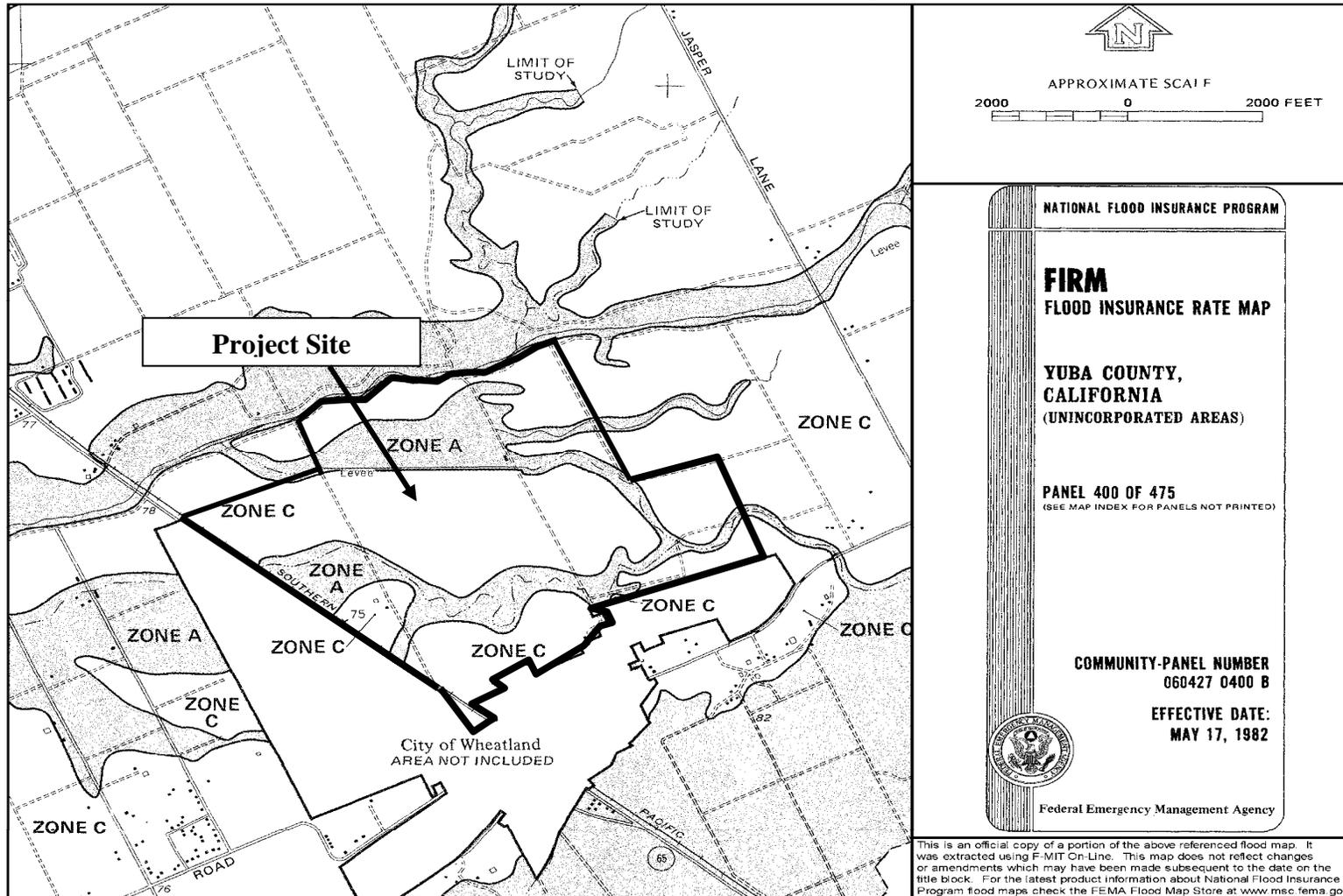
- Zone A is a flood insurance rate zone that corresponds to an area within the 100-year floodplain and base flood elevations and flood hazard factors are not determined; and
- Zone C is a flood insurance rated zone that corresponds to an area of minimal flooding.

In addition to the potential flooding from Grasshopper Slough, the recent re-evaluation of the Dry Creek and Bear River levees indicates that the project site is subject to flooding from both Dry Creek and Bear River during 100-year storm conditions.

**Figure 4.10-5
Grasshopper Slough Tributary 1 and 2 Location**



**Figure 4.10-6
 FEMA Flood Insurance Rate Map**



Water Quality

Given the existing land use in the City of Wheatland, water quality of stormwater runoff would be typical of urban watersheds as well as agricultural/open space watersheds. The pollutants found would typically originate from non-point sources such as pesticides, herbicides, fertilizers, industrial/commercial wastes, custodial/household products, building/home maintenance supplies, oil and grease from automobiles, heavy metals found in exhaust, weathered paint, tires, and other constituents associated with current land use in the incorporated area.

REGULATORY CONTEXT

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

Federal

Federal Emergency Management Agency (FEMA)

The Federal Emergency Management Agency is responsible for determining flood elevations and floodplain boundaries based on USACE studies. The Federal Emergency Management Agency is also responsible for distributing the Flood Insurance Rate Maps (FIRMs), which are used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas, including the 100-years floodplains.

Federal Emergency Management Agency allows non-residential development in the floodplain; however, construction activities are restricted within the flood hazard areas depending upon the potential for flooding within each area. Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations (CFR). These standards are implemented at the State level through construction codes and local ordinances; however, these regulations only apply to residential and non-residential structure improvements. Roadway construction or modification is not explicitly addressed in the FEMA regulations. However, the California Department of Transportation (Caltrans) has also adopted criteria and standards for roadway drainage systems and projects situated within designated floodplains. Standards that apply to floodplain issues are based on federal regulations (Title 23, Part 650 of the CFR). At the State level, roadway design must comply with drainage standards included in Chapters 800-890 of the Caltrans Highway Design Manual.

National Pollutant Discharge Elimination Systems (NPDES)

The National Pollutant Discharge Elimination System permit system was established in the Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the U.S. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that Environmental Protection Agency (EPA) must consider in setting effluent limits for priority pollutants.

The federal Clean Water Act prohibits the discharge of pollutants to navigable water from point and non-point sources unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Point source discharges generally pertain to discharges from wastewater treatment facilities or other identifiable dischargers. Non-point discharges generally pertain to areawide or stormwater discharges. Point source discharges are generally regulated by general NPDES permits that have been issued to states by the EPA. Permits issued under NPDES contain discharge prohibitions, effluent limitations, and necessary specifications and provisions that ensure proper treatment, storage, and disposal of wastewater.

State

Inland Surface Water Plan

In March 2000, the State Water Resources Control Board (SWRCB) adopted Inland Surface Water Plan / Enclosed Bays and Estuaries Program (ISWP/EBEP) Phase I water quality objectives for inland surface waters. Included among the provisions of these objectives are: (a) that all point and nonpoint discharges must comply with identified water quality objectives; and (b) that effluent limits are to be imposed, either through National Pollutant Discharge Elimination System (NPDES) permits or Waste Discharge Requirements (WDRs), such that water quality objectives shall not be exceeded in the receiving water outside a designated mixing zone. The Central Valley Regional Water Quality Control Board (CVRWQCB) is responsible for ensuring that stormwater discharges meet the adopted numerical objectives within the Wheatland General Plan Update Study area.

California General Construction Activity Stormwater Permit

The U.S. Environmental Protection Agency (U.S. EPA) and the SWRCB regulate point sources of pollution, such as construction sites, that have the potential to discharge pollutants into the waters of the United States. This is accomplished through the issuance of NPDES stormwater discharge permits. NPDES Phase II regulations took effect in March 2003, requiring that applicants proposing construction activities involving disturbance of from one to five acres, and associated stormwater discharge, must obtain a NPDES permit from the State. Construction activities larger than five acres were already regulated, under NPDES Phase I (1990). (Phase II also required that small [population < 100,000] municipal separate storm sewer system [MS4] operators obtain a NPDES permit.) Landowners are responsible for applying for coverage under the permit and complying with permit requirements, but may delegate specific duties to developers and contractors by mutual consent.

Permit applicants are required to prepare, and retain at the construction site, a Storm Water Pollution Prevention Plan (SWPPP), which describes the site, erosion and sediment controls, means of waste disposal, implementation of local plans, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-stormwater management control. Dischargers are also required to inspect construction sites before and after storms to identify stormwater discharge from construction activity, and to identify and implement controls where necessary.

According to the California Department of Water Resources (DWR), basic information for many of the State's groundwater basins is lacking. To this end, the California Legislature mandated in the Budget Act of 1999 that the Department of Water Resources prepare:

"... the statewide update of the inventory of groundwater basins contained in Bulletin 118-80, which includes, but is not limited to, the following: the review and summary of boundaries and hydrographic features, hydrogeologic units, yield data, water budgets, well production characteristics, and water quality and active monitoring data; development of a water budget for each groundwater basin; development of a format and procedures for publication of water budgets on the Internet; development of the model groundwater management ordinance; and development of guidelines for evaluating local groundwater management plans."

Groundwater use in the Sacramento Valley Groundwater Basin is largely unregulated, although some local agencies in the Sacramento Valley have chosen to write groundwater management plans based on AB 3030, the Groundwater Management Act of 1992 (*California Water Code Sections 10750-10756*). The Groundwater Management Act provides a systematic procedure for an existing local agency to develop a groundwater management plan.

2007 Flood Control Reforms

In October 2007, Governor Schwarzenegger signed a package of six bills aimed at strengthening local governments, flood control agencies, and flood protection in California. The bills established new flood requirements and deadlines to meet the requirements for cities, counties, and state agencies. Together the bills establish a comprehensive approach to floodplain planning and management at the state, regional, and local levels.

The six bills, in order of signing, are described briefly below:

SB 5 – Enacts the Central Valley Flood Protection Act of 2008. Requires the Department of Water Resources and the Central Valley Flood Protection Board (previously known as the State Reclamation Board) to prepare and adopt a Central Valley Flood Protection Plan by 2012. Establishes the 200-year protection as the minimum urban level of flood protection. Sets deadlines for cities and counties in the Central Valley to amend general plans and zoning ordinances to conform to the Plan within 24 months and 36 months, respectively, of adoption of *SB 5*. Restricts approval of development agreements and subdivision maps in flood hazard zones, once the general plan and zoning ordinance amendments have been enacted, unless certain findings are made. Obligates Central Valley counties to develop flood emergency plans within 24 months of adoption of the Plan. The legislative intent is also found in *AB 5* and *AB 156*.

SB 17 – sets compensation for the members of the Central Valley Flood Protection Board. Establishes the duties of the Board. The *SB 17* provisions were also enacted by *AB 5*.

AB 5 – Establishes the Central Valley Flood Protection Board and duties of the Board. Sets out requirements and deadlines for reports on the flood control system to be prepared by DWR and

the Board, including levee flood zone protection maps to be prepared by DWR. The same requirements are also enacted by AB 156.

AB 70 – Provides that cities and counties will share liability with the state in the case of litigation over unreasonably approved new development on agricultural lands. This would not apply where the city or county has amended its general plan and zoning, and otherwise makes land use decisions consistent with the Central Valley Flood Protection Plan. “Unreasonably approving” is defined as approval without appropriate consideration of known significant risks of flooding.

AB 156 – Requires DWR and the Board to adopt a schedule for mapping flood risk areas within the Central Valley. Sets out requirements for reports on the flood control system to be prepared by DWR and the Board, including levee flood zone protection maps to be prepared by DWR by December 31, 2008. DWR is to provide yearly notices to owners of property within a levee protection zone, beginning September 1, 2010. The requirements are also enacted by AB 5.

AB 162 - Requires cities and counties to amend the land use, conservation, safety, and housing elements of their general plans to address flood-related matters. The amendments are required to be made by the next scheduled revision of the housing element after January 1, 2009.

Local

Yuba County Water Agency

The Yuba County Water Agency (YCWA) has prepared a Groundwater Management Plan for Yuba County. The purpose of the YCWA’s Groundwater Management Plan is to build on and formalize the historically successful management of the County’s groundwater resource and develop a framework for implementation of future activities.

Wheatland General Plan

The City of Wheatland General Plan established the following General Plan, Environmental Resources Chapter, recommendations and goals regarding hydrology and water quality.

Goal 8.A To protect and enhance the natural quantity and qualities of the Wheatland area’s rivers, creeks, sloughs, and groundwater.

Policy 8.A.1. The City shall cooperate with Yuba County in the conservation of Bear River and Dry Creek for the protection of water resources and open space qualities.

Policy 8.A.2. The City shall monitor any activities that may degrade the aquifers of Bear River or Dry Creek as it impacts city water supply and shall support the maintenance of high water quality in these water bodies.

Policy 8.A.3. The City shall cooperate with other jurisdictions in jointly studying the potential for using surface water sources to balance the groundwater supply so as to protect against aquifer over drafts and water quality degradation.

Policy 8.A.5. The City shall require proposed developments to comply with streambed alteration and watershed protection regulations as administered by the California Department of Fish and Game and regulations adopted by the Environmental Health Department.

Policy 8.A.7. The City shall endeavor to protect, preserve and improve riparian corridors.

Goal 9.C To protect the lives and property of the citizens of Wheatland from hazards and manage floodplains for their open space and natural resources values.

Policy 9.C.1. The City shall continue to implement floodplain zoning and undertake other actions required to comply with State floodplain requirements, and to maintain the City's eligibility under the Federal Flood Insurance Program.

Policy 9.C.2. The City shall require evaluation of potential flood hazards prior to approval of development projects. The City shall require proponents of new development to submit accurate topographic and flow characteristics information.

Policy 9.C.3. The City shall not allow development in areas subject to flooding unless adequate mitigation is provided to include project levees designed for a standard project flood.

Policy 9.C.5. The City shall prohibit the construction of facilities essential for emergencies and large public assembly in the 100-year floodplain, unless the structure and road access are free from flood inundation.

Policy 9.C.7. The City shall preserve floodways and floodplains for non-urban uses, except that development may be allowed in a floodplain with mitigation measures that are in conformance with the City's Flood Protection Master Plan and Internal Source Drainage Master Plan.

Policy 9.C.10 The City shall require that roadway systems for areas protected from flooding by levees be designed to provide multiple escape routes for residents in the event of a levee failure.

Policy 9.C.12 The City shall coordinate with and support the efforts of Reclamation Districts 2103 and 817, to provide flood protection to the new development of the city.

Flood Plain Management Ordinance

The City of Wheatland has adopted Ordinance Number 380, which provides the city's floodplain management regulations. The purpose of the ordinance is to promote the health and safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas of the city. The ordinance provides direct and specific requirements for development within the floodplain, including that all building pad elevations must be raised to at least one-foot above the base flood elevation.

IMPACTS AND MITIGATION MEASURES

The impacts to hydrology and water quality regarding the proposed project are analyzed and assessed in this section.

Standards of Significance

A hydrology or water quality impact would be significant if the proposed project were to:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge;
- Result in adverse impacts from the construction of new (or expanded) drainage facilities;
- Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff;
- Substantial reduction in the flood carrying capacity in an existing waterway (100-year flood event);
- Substantial flooding, erosion or siltation; or
- Substantially degraded water quality (i.e., through sedimentation or pollutant loading).

Method of Analysis

The hydrology and water quality impact analysis below is primarily based on information provided by Civil Engineering Solutions, Inc. in the *Draft Drainage Report* for the Nichols Grove site, as well as additional information provided by the Reclamation Districts and the City of Wheatland. The storm drainage and water quality infrastructure designs proposed for the project are evaluated below and impacts are identified if the above standards of significance would be exceeded as a result of the proposed designs.

The Hydrologic modeling for the Nichols Grove site was performed using the USACE Hydrologic Engineering Center's program, HEC-1. Both an existing conditions model and a future conditions model were developed. Flows were computed for the 10-year and 100-year 24-

hour storm events. A theoretical balanced storm precipitation methodology based on the precipitation/frequency curves from the City of Wheatland gauge was utilized to develop the analysis, and rainfall intensity-duration values were obtained from Yuba County Improvement Standards.

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.

4.10-1 Impact from project stormwater runoff.

Nichols Grove Tentative Map

Currently surface runoff on the project site enters into Tributary 1 and Tributary 2 of the north branch of Grasshopper Slough, and discharges into Dry Creek. The Nichols Grove Tentative Map site involves the development of a 485.5-acre project, consisting of 1,427 single family residential lots, one 5.7-acre high density residential lot that could contain up to 91 dwelling units, one 11.4-acre commercial mixed use lot, seven park and open space lots containing parks and landscape corridors totaling 70.5 acres, four well lots, two school lots, and 30 miscellaneous lots for roadways and other infrastructure. The project site currently consists of active farmland with only a two percent impervious area, and implementation of the Nichols Grove Tentative Map site would add impervious surfaces to the area. Post-project conditions would result in 38 percent of the project site being covered in impervious surfaces.

Proposed On-Site Drainage System

The Nichols Grove Tentative Map site would consist of necessary infrastructure to accommodate 100-year design storm flows, including setbacks and six detention basins. The detention basins are intended to maintain, or reduce, post-project peak flows in Grasshopper Slough as compared to the pre-project flows. The detention basins would include areas that would not be filled under most storm conditions (See Figure 4.10-7 and Figure 4.10-8).

Two detention basins would be located adjacent to the eastern boundary of the project site along Tributary 1 of Grasshopper Slough. Detention Basin DNR-2C would be located south of Tributary 1 in an area historically used for clay mining. Additionally, a small area northeast of Tributary 1 and directly adjacent to the eastern boundary of the project site would be developed as the DNR-1B detention basin.

The area between the two tributaries, located in the western portion of the project site (where Gladding McBean recently conducted clay mining), would be filled in except for an 8.5-acre area along the western boundary of the project site and north of Tributary 2. The 8.5-acre area would be excavated and developed into the DNR-2D detention basin to meet NPDES requirements. In addition, detention basin DNR-3A would be developed adjacent to the western boundary of the project site, south of the Tributary 2.

Figure 4.10-7
Post Project Conditions Under 100-Year Storm Conditions

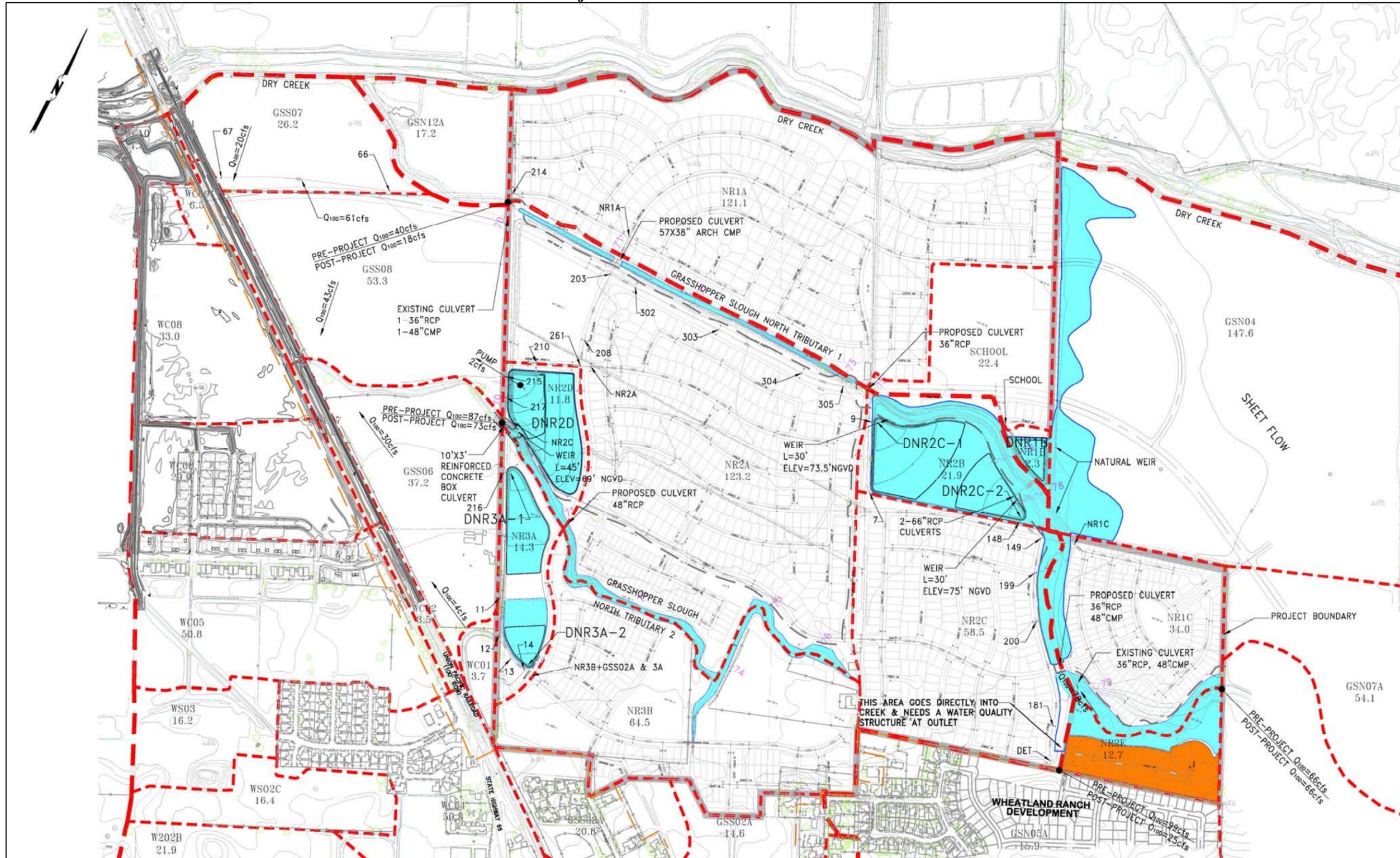
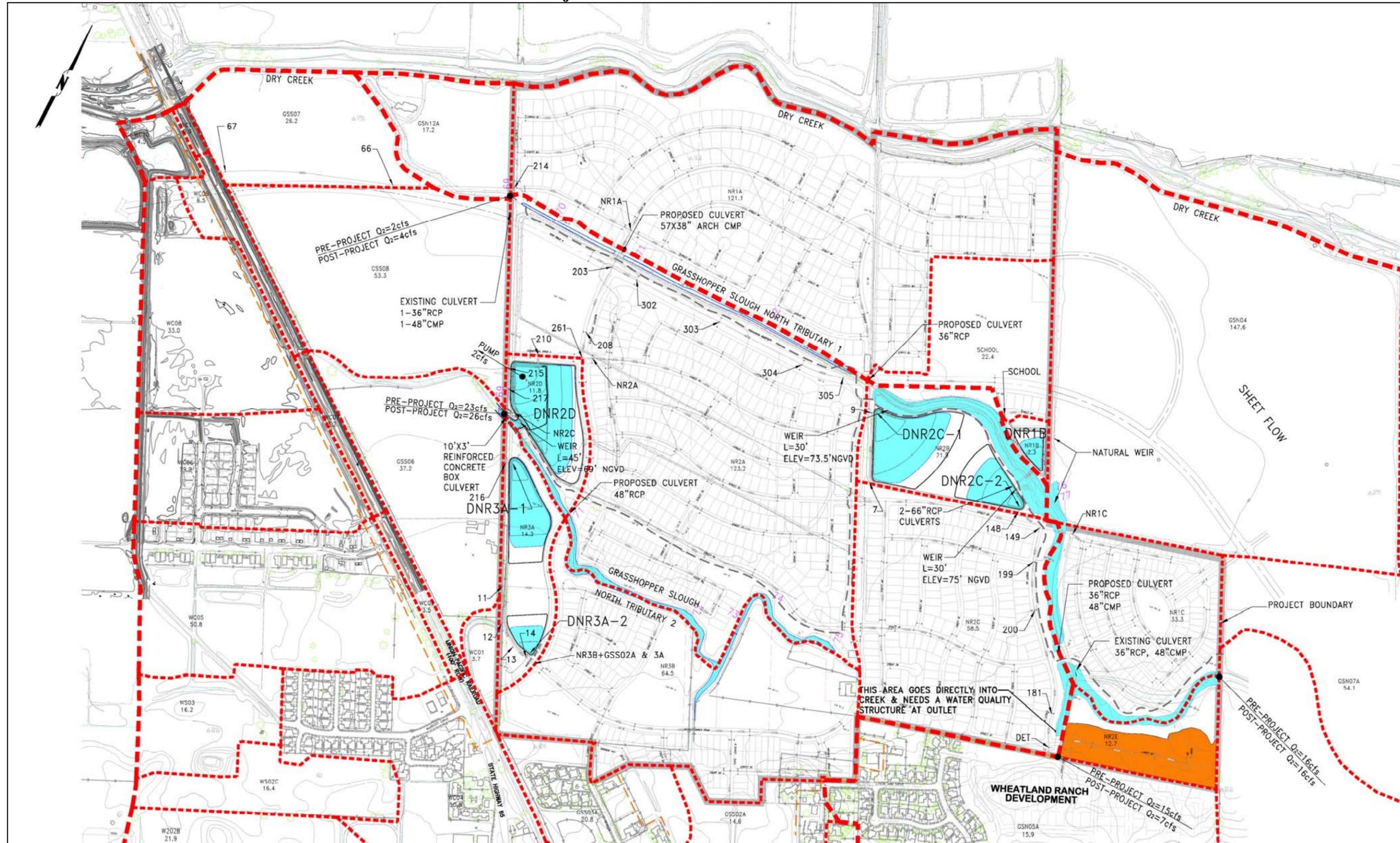


Figure 4.10-8
Post Project Conditions Under 2-Year Storm Conditions



Off-site sheet flow currently generated east of the Nichols Grove Tentative Map site would drain into the DNR-1B detention basin. Two parallel 66-inch Reinforced Concrete Pipes (RCP) under Tributary 1 of Grasshopper Slough would connect the DNR-1B detention basin with the DNR-2C detention basin. The pipes would be sized to accommodate the 100-year flow of approximately 400 cubic feet per second (cfs). In addition, a proposed 30-foot weir structure would allow flow from the Tributary 1 of Grasshopper Slough to spill from the channel into the DNR-2C detention basin.

Offsite flow from the Wheatland Ranch detention basin, located south of the project site would be conveyed via a storm drain pipe to the DNR-2C detention basin. The outflow of the DNR-2C detention basin would be conveyed via a 66-inch to 72-inch diameter storm drain pipe along Ring Road A to the DNR-2D detention basin located in the western portion of the project site.

The area north of Ring Road "A" would drain through a storm drain system, which would be designed for the 100-year flow, would cross under the Tributary 1 of Grasshopper Slough at the McDevitt Drive extension and discharge into the DNR-2D detention basin. Additionally, the portion of the project located between the Tributary 1 and Tributary 2 of Grasshopper Slough would drain into the DNR-2D detention basin. Outflow from the DNR-2D detention basin would be conveyed to the existing City detention basin south of Dry Creek, west of SR 65, via a 60-inch diameter RCP.

The area south of Tributary 2 of Grasshopper Slough would drain into the DNR-3A detention basin, and outflow from the DNR-3A detention basin would be conveyed to DNR-2D detention basin via a 48-inch diameter storm drain pipe. As outlined above, flows from the DNR-2D detention basin would flow to the existing detention basin along Dry Creek, west of SR 65, via a 60-inch diameter RCP.

As indicated in the Drainage Report, the capacity of the proposed detention basins would reduce post-construction peak flows to at or below existing peak flows. Table 4.10-1 shows the pre-project and post-project 100-year flow rates for Tributary 1 and Tributary 2 of Grasshopper Slough.

The North Branch of Grasshopper (Tributary 1) passes through the Nichols Grove Tentative Map project and flows through the adjacent private property (non-participating property APN 015-140-056) and into Dry Creek. Currently Tributary 1 conveys approximately 40 cfs during the 100-year storm. With development of the Nichols Grove Tentative Map, which includes detention facilities, the flow in Tributary 1 during the 100-year storm would be reduced to approximately 18 cfs (See Table 4.10-1). Additionally, the peak flow rate at the SR 65 crossing for Tributary 2 would be reduced from the existing rate of 93 cfs (10-year flow) and 143 cfs (100-year flow) to 65 cfs and 126 cfs respectively. Therefore, development of the Nichols Grove Tentative Map site would result in reduced peak flows in waters downstream of the project site, which would ensure that post-development stormwater flows do not adversely affect the private property located directly west of the project site. In addition, the detention basins and drainage system have been designed to accommodate stormwater flows that sheet flow

onto the project site, and ensures the flows would not back up or flood either the Wheatland Ranch Development to the south, or the vacant land to the east. However, according to the drainage report, the detention ponds would require regular maintenance.

Table 4.10-1 Pre-Project and Post-Project 10-Year and 100-Year Peak Flow Rates					
Location	HEC-RAS River Mile	Pre-Project 10-Year Flow (CFS)	Post Project		Change (CFS)
			Before Mitigation (CFS)	After Mitigation (CFS)	
Tributary 1					
Upstream Boundary	0.36	33	33	33	0
Downstream Boundary	0.001	27	55	11	-16
Tributary 2					
Downstream Boundary	0.001	53	106	32	-21
Highway 65 Crossing	0.00006	93	142	65	-28
Location	HEC-RAS River Mile	Pre-Project 100-Year Flow (CFS)	Post Project		Change (CFS)
			Before Mitigation (CFS)	After Mitigation (CFS)	
Tributary 1					
Upstream Boundary	0.36	66	66	66	0
Downstream Boundary	0.001	40	123	18	-22
Tributary 2					
Downstream Boundary	0.001	87	173	77	-10
Highway 65 Crossing	0.00006	143	232	126	-17
Note: Flow through 60-inch flow pipe to existing Wheatland detention basin plus flow from the southern branch of Grasshopper Slough.					
Source: Civil Engineering Solutions, Inc., 2007.					

Off-Site Drainage Facilities

The City of Wheatland has an existing detention basin, pump station and overflow spillway that is located downstream of the proposed Nichols Grove project. This facility receives runoff by way of the North Branch of Grasshopper Slough (Tributary 2) and pumps the runoff into Dry Creek with an overland bypass releasing to an open area west of the detention basin. Table 4.10-2 compares the peak stage and storage volumes at the City of Wheatland's existing detention basin along with peak flow rate and discharge volumes discharging over the overland spillway to the west. As noted in Table 4.10-2, the rises in peak stage, storage volumes and discharge volumes could be mitigated by improving the pump station to discharge an additional 19.5 cfs to Dry Creek. The mitigation provided by the proposed project would reduce peak flowrates and peak volume to the Bypass; however, in order to eliminate the 100-year flow over the overland spillway, 71 cfs capacity would need to be added to the pump station.

Table 4.10-2 Storage at City's Existing Detention Facility and Bypass Flow Rate and Volume Spilling West				
Drainage Facility	Wheatland GP	Nichols Grove Tentative Map without 19.5 CFS Mitigation at Existing Detention	Nichols Grove Tentative Map with 19.5 CFS Mitigation at Existing Detention	Change with 19.5 CFS Mitigation
100 Year Event				
Detention				
Peak Stage (ft)	68.13	68.14	68.11	-.02
Peak Volume (ac-ft)	106.92	107.06	106.65	-.27
Bypass				
Peak Flowrate(CFS)	72.3*	98.3	62.8	-9.5
Peak Volume (ac-ft)	39.4*	74.6	35.8	-3.6
10 Year Event				
Detention				
Peak Stage (ft)	N/A	67.54	65.55	-1.99
Peak Volume (ac-ft)	N/A	94.37	75.93	-23.44
Bypass				
Peak Flowrate(CFS)	N/A	0	0	
Peak Volume (ac-ft)	N/A	0	0	
2 Year Event				
Detention				
Peak Stage (ft)	N/A	64.40	64.38	-0.02
Peak Volume (ac-ft)	N/A	62.89	62.62	-0.27
Bypass				
Peak Flowrate(CFS)	N/A	0	0	
Peak Volume (ac-ft)	N/A	0	0	
* Figures obtained from "Wheatland General Plan, Internal Drainage Study, dated November 2005. Source: Civil Engineering Solutions, Inc., 2007.				

Volumetric Changes in Stormwater Discharge to Dry Creek

In addition to the flooding risks posed by peak flow increases that result from development, an increase in the total volume of water when Dry Creek is high could result in increased water surface elevations, and increase flood frequency. A hydraulic analysis was conducted by MBK Engineers to determine if the proposed project would result in an increase in total water volume that would be sufficient to materially raise the downstream water surface elevation (See Appendix O). As shown in Table 4.10-3, the maximum water surface increase during a 100-year storm event due to Wheatland General Plan buildout would be 0.0058 feet at mile 2.68 on Dry Creek, and 0.032 feet at mile 5.91 on the Bear River. The increase due to the Nichols Grove development on the Bear River would be less than 0.002 feet, and would result in a maximum increase of 0.006 at RM 5.162 on Dry Creek. Calculated water surface changes below 0.01 feet are typically considered beyond the ability of the hydraulic model used to resolve, and are therefore considered negligible.

Table 4.10-3			
Existing and Proposed Water Surface Elevations at Key Locations			
Location River Mile	100 – Year Flood Conditions		
	Base Condition (feet)	Project Condition (feet)	
		Wheatland General Plan	Nichols Grove
Bear River			
RM 11.574 <i>u/s Highway 65</i>	98.891	98.903 (+0.012)	98.891 (0.00)
RM 10.75 <i>Location of Additional Wheatland General Plan Flow</i>	95.364	95.389 (+0.025)	95.364 (0.00)
RM 6.934 <i>u/s Pleasant Grove Road</i>	72.663	72.683 (+0.020)	72.664 (+0.001)
RM 5.91 <i>u/s Dry Creek</i>	65.205	65.236 (+0.032)	65.206 (+0.002)
RM 4.00 <i>u/s Western Pacific Interceptor Canal</i>	56.954	56.968 (+0.014)	56.955 (+0.001)
RM 0.67 <i>u/s Feather River</i>	51.919	51.924 (+0.005)	51.919 (0.00)
Dry Creek			
RM 7.33 <i>u/s Jasper Lane</i>	88.774	88.770 (-0.004)	88.774 (0.00)
RM 5.202 <i>u/s Highway 65</i>	75.902	75.900 (-0.002)	75.906 (+0.004)
RM 5.162 <i>Location of Additional Nichols Grove Flow</i>	75.562	75.560 (-0.002)	75.58 (+0.006)
RM 4.70 <i>u/s Oakley Lane</i>	73.235	73.240 (+0.005)	73.240 (+0.005)
RM 4.00 <i>Location of Additional Wheatland General Plan Flow</i>	68.605	68.640 (+0.035)	68.609 (+0.004)
RM 2.00 <i>u/s 40 Mile Road</i>	65.382	65.420 (+0.038)	65.385 (+0.003)
RM 0.78 <i>u/s Bear River</i>	65.204	65.240 (+0.036)	65.206 (+0.002)
<p><i>Source: MBK Engineers, 2008.</i></p> <p><i>Note(s)</i></p> <p><i>River Miles are according to the Lower River Floodplain Mapping Study</i></p> <p><i>Parenthetical values represent changes from the base conditions</i></p> <p><i>“u/s” denotes upstream of.</i></p>			

As a result, implementation of the proposed project would not result in an adverse increase in the surface elevation of either the Bear River or Dry Creek.

Non-Participating Properties

Upon development of the non-participating properties, the surface runoff into Grasshopper Slough or other receiving drainage facilities would increase as a result of the additional impervious surfaces. Runoff from the non-participating properties would increase peak flows and place demands on the drainage system that could result in the flooding of surrounding properties.

Conclusion

Construction of six detention facilities would lower peak flow increases generated by buildout of the Nichols Grove Tentative Map site to at or below pre-project conditions. However, additional pump station capacity would be needed at the City's detention basins to accommodate the project. In addition, the peak flow increases associated with future development of non-participating properties could result in adverse downstream impacts if adequate storm drain systems are not included in the design of future development applications. Therefore, should the recommendations in the *Draft Drainage Report* not be implemented, a ***potentially significant*** impact would occur to the Wheatland drainage system with development of the Nichols Grove Tentative Map and the future development of the non-participating properties.

Mitigation Measure(s)

The following mitigation measures would reduce the above impact to a *less-than-significant* level.

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 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 19.5 cfs of pumping capacity to the existing pump station for the City detention basin south of Dry Creek, for the review and approval of the City Engineer.*

Non-Participating Properties

- 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.

Nichols Grove Tentative Map and Non-Participating Properties

The detention ponds required to accomplish the controlled stormwater release, by detaining stormwater peak flow, would require regular maintenance to clear the accumulated vegetation, sediment, and debris. In addition, maintenance would be required to control pest populations (e.g., mosquitoes). Without regular maintenance, the detention facilities would not perform properly resulting in increased peak flow, sedimentation, and debris being discharged to Dry Creek. Therefore, a ***potentially significant*** impact would occur to water quality.

Mitigation Measure(s)

The following mitigation measures would reduce the above impact to a *less-than-significant* level.

Nichols Grove Tentative Map and Non-Participating Properties

- 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 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.

Nichols Grove Tentative Map

Construction sites are subject to NPDES permitting under the federal Clean Water Act. Contaminants generated by short-term grading and construction activities may include sediment, solvents, fuels, lubricants, and chemical wastes improperly handled or stored on construction sites. These contaminants may be picked up in site runoff and ultimately enter downstream waterways. In addition, during the operational phase of the project, urban pollutants such as solvents, oil, fuel, and common household and landscaping chemicals could also be picked up in stormwater runoff and transported to receiving waters. These latter contaminants are characterized as non-point source pollution, and are not subject to NPDES permitting. The City of Wheatland is responsible for ensuring compliance with all applicable stormwater pollution control standards.

Construction Impacts to Water Quality

The Nichols Grove Tentative Map site would require grading and other earthmoving activities on 485.5 acres in the Dry Creek and Bear River watersheds. Because the Nichols Grove Tentative Map site would require construction activities resulting in a land disturbance of more than one acre, as part of the NPDES process, the applicant is required by the State to obtain a Construction Activities Storm Water General Permit (Construction General Permit). The terms of the General Permit require a project applicant to file a Notice of Intent (NOI) with the SWRCB and prepare a SWPPP for the project site. Compliance with the State Construction Activities Storm Water General Permit would specify the best management practices (BMPs) to reduce erosion of disturbed soils.

Post-Construction Impacts to Water Quality

The Nichols Grove Tentative Map has adopted the Placer Regional Stormwater Coordination Group's "Guidance Document for Volume and Flow-based Sizing of Post-Construction Best Management Practices for Stormwater Quality Protection" for the design methodology for volumetric and flow-based treatment control stormwater BMPs.

The volume based BMP design applies to BMPs where the primary mode of pollutant removal is based on volumetric capacity, such as detention, retention, and infiltration basins.

The drainage area for calculation of the necessary BMP volume is required to include all areas that contribute runoff to the proposed BMP, including: pervious areas, impervious areas, and off-site areas contributing runoff onto the site. Based on the total area, 7.67 acre-feet of water quality detention areas would be required. Because DNR-2D would receive peak flows from the other basins, the DNR-2D would be an ideal location for water quality treatment. The basin would be excavated 1.5 feet below the proposed bottom of the outflow pipe to store the required water quality treatment volume. In addition, a pump station with a capacity of two cfs would be required to drain the detention basin within 48 hours. Additional water quality treatment would be required for the southeast corner of the project area. Currently, detailed design standards for project water quality treatment features have not been submitted to the City.

Non-Participating Properties

During construction, the non-participating properties would be subject to NPDES permitting under the federal Clean Water Act. Without implementation of BMPs, the non-participating properties could decrease water quality in the City of Wheatland. In addition, the non-participating properties would contribute post-construction urban pollutants.

Conclusion

Currently, the non-participating properties have not submitted a drainage report to the City of Wheatland. As a result, verification of compliance with NPDES regulations is not possible. In addition, the Nichols Grove Tentative Map site requires NPDES permits to ensure water quality control. Therefore, a *potentially significant* impact to water quality could 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

- 4.10-3(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 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 and approval of the City Engineer.

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 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.

Nichols Grove Tentative Map and Non-Participating Properties

Creation of impervious surfaces can adversely affect groundwater recharge. The City of Wheatland draws the City's entire water supply from six municipal groundwater wells. The City of Wheatland has evaluated the water availability for buildout of the General Plan. The proposed project is consistent with the type and intensity of development anticipated for the site in the Wheatland General Plan. Although the project would create impervious surfaces on the site, the project site is outside of the surrounding significant groundwater recharge areas, according to Figure 4.8-3, page 4.8-15 of the Wheatland General Plan EIR. The Bear River channel has been identified as a significant groundwater recharge area for Yuba County. Therefore, because the project is outside of the significant recharge area, implementation of the project would have a *less-than-significant* impact to groundwater recharge.

Mitigation Measure(s)

None Required.

4.10-5 Impacts related to regional flooding.

Nichols Grove Tentative Map and Non-Participating Properties

The proposed project is subject to flooding Phases 1 and 2, which include flood hazards associated with failure of the Bear River and Dry Creek levee systems. Reclamation District (RD) 2103 has developed a process to design, permit, finance, and construct regional levee improvements to fix the deficiencies to the Bear River levee, which should be completed prior to the commencement of construction of the proposed project.

However, because of the potential flooding from a Dry Creek levee failure, development of the portions of the project site subject to inundation cannot occur until RD 2103 initiates a process to design, permit, finance, and construct a regional levee improvement project to fix the deficiencies of Dry Creek. At this time, the necessary process has not been initiated; therefore, a schedule of when the improvements could be completed cannot be determined. The type and magnitude of improvements, however, is expected to be of such a significant size and nature that funding of the entire levee project by the Nichols Grove Tentative Map project and the non-participating properties would not be feasible. Therefore, development of the proposed project site is expected to require a significant coordination effort with other landowners, the City, and the reclamation districts.

However, as outlined in the Project Description, the Nichols Grove project has the ability 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.

As shown in Figure 3-7 of the Project Description, the grading of these initial development areas would be accomplished by borrowing dirt from detention basins A and B; as well as Village VII and high points on the project site. Village VII would 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 fill being placed to elevate the Phase 1 development area.

The Phase 1 area has three currently viable points of access that 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 substantiated 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. Implementation of the required drainage infrastructure and elevation of the building pads would ensure that regional flooding would not result in an adverse impact to the Phase I development area of the Nichols Grove project.

However, because the regional solution to flood control that would remove the entire Nichols Grove Tentative Map project site and non-participating properties from the flood plain has not been developed at this time, the completion of the flood control solution is

considered speculative. Without an identified solution to the regional flooding issues affecting the project site, the flooding impact is considered *significant*.

Mitigation Measure(s)

CEQA mitigation measures must be feasible and reasonable. Although implementation of the above mitigation measures might reduce the impacts, the measures are considered infeasible because the scope of the levee projects would require funding beyond the capacity of the project applicant. An unreasonable and excessive burden would need to be imposed on the project applicant as a condition of tentative map approval obligating funding and implementation projects to resolve these major, regional flooding impacts. In addition, with the lack of funding or a funding plan, the processing of the regional solutions is premature and therefore considered speculative. Without an adopted regional levee improvement plan showing how the projects will be funded, designed and constructed, the City of Wheatland cannot be assured that these improvements will ever be constructed.

Furthermore, subdivision and development of the subject site would be inconsistent with the City's subdivision policy concerning land subject to flooding. Wheatland Municipal Code section 17.08.230 provides that, "Land subject to flooding...shall not be platted for residential occupancy." The Phase 1 Grading Plan area outlined above would not be subject to section 17.08.020, as the lands would not be subject to flooding; however, Villages VI through IX would remain subject to flooding. Provisions exist in Section 17.08.230 that allow for subdivision of flood-prone land pursuant to an approved flood control plan; however, at this time, there is not a firm plan that could be implemented in a timely manner that would protect the property and future residents from flooding. Therefore, the impact remains *significant and unavoidable*.

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 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 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 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 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 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.*

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the State *CEQA Guidelines*, “cumulative impacts” refers 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*, Section 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.

4.10-6 Cumulative increases in peak stormwater flows into the existing drainage system.

Nichols Grove Tentative Map

The Nichols Grove Tentative Map project would create impervious surfaces where none currently exist. The addition of impervious surfaces to the project site would reduce infiltration of rainwater and increase peak stormwater flows originating on the project site. The Nichols Grove Tentative Map site in combination with other urban development in the project area could increase peak flows to exceed the existing drainage system capacity and result in flooding downstream.

The project site’s stormwater runoff would be detained with onsite basins, discharged into the City basin (west of SR 65), and finally discharged into Dry Creek. As noted previously, the *Draft Drainage Report* identifies that the peak flows from the onsite tributaries of Grasshopper Slough would be reduced from the existing conditions for both the 10-year and 100-year flows.

Non-Participating Properties

Upon development, the non-participating properties would create impervious surfaces. Therefore, without implementation of proper BMPs development of the non-participating properties in combination with other urban development in the project area could increase the stormwater drainage to the point of overcoming the existing drainage system and causing flooding downstream.

Conclusion

Therefore, the Nichols Grove Tentative Map site would not have an adverse effect on the cumulative impacts to downstream waterways. In addition, future projects, including the non-participating properties, in the City of Wheatland would also be required to detain peak flows to ensure that they are reduced or maintained at their pre-development levels. Therefore, the Nichols Grove Tentative Map site, in combination with other projects in

the Wheatland area, would be considered to have a ***less-than-significant*** impact on cumulative stormwater flows.

Mitigation Measure(s)

None required.

4.10-7 Cumulative adverse impacts to water quality.

Nichols Grove Tentative Map and Non-Participating Properties

Development of the Nichols Grove Tentative Map site in conjunction with buildout of the General Plan would contribute to an increase in the sediment load of area waterways. In addition, stormwater runoff generated in urbanized areas would continue to contribute pollutants to adjoining channels. As such, water quality in the region could be affected on a short-term and long-term basis. The *City of Wheatland General Plan EIR* analyzed these impacts, noting that the implementation of the goals and policies would reduce the impacts of erosion, sedimentation, and subsequent degradation of the surface water quality, but not to a less-than-significant level. The General Plan further states that additional mitigation measures would be required to reduce the impact to a less-than-significant level. The *General Plan EIR* presents the following two mitigation measures:

- The City of Wheatland shall require new development projects to provide onsite or off-site detention sufficient to maintain pre-development levels of peak stormwater runoff at predetermined locations in drainage canals. Detention can occur on the project site or downstream; it can occur above ground in swales or ponds, or below ground, in holding tanks or oversized pipes, in consultation with the affected reclamation or drainage district; and
- For projects that qualify, project applicants and public projects shall be required to obtain Construction Activity Storm Water Permits and prepare Storm Water Pollution Prevention Plans in accordance with the National Pollutant Discharge Elimination System from the Regional Water Quality Control Board prior to construction.

The proposed project design includes the detention of stormwater flows with onsite detention basins maintaining a peak flow rate less than the existing rate, which satisfies the first mitigation measure listed above. Mitigation Measure 4.10-3 included in this section requires NPDES compliance, which satisfies the second mitigation measure above. Consistent with the *City of Wheatland General Plan EIR*, the Nichols Grove Tentative Map site and the non-participating properties would have a ***less-than-significant*** cumulative impact on water quality.

Mitigation Measure(s)

None required.

Endnotes

¹ *City of Wheatland General Plan*, July 2006.

² *City of Wheatland General Plan EIR*, July 2006.

³ *Draft Drainage Report*, Civil Engineering Solutions, Inc., November 2007.

⁴ *Hydraulic Impact Analysis for City of Wheatland General Plan and Nichols Grove Development*, MBK Engineers, May 15, 2008.

4.11

PUBLIC SERVICES AND UTILITIES

INTRODUCTION

This Public Services and Utilities chapter summarizes setting information and identifies potential new demands resulting from the proposed project on water supply, wastewater systems, solid waste disposal, law enforcement, fire protection, schools, libraries, and parks and recreation. Information for this chapter was drawn from project information provided by the *Water Supply Assessment for the Proposed Nichols Grove Project*,¹ the *City of Wheatland General Plan EIR*,² the *City of Wheatland General Plan*,³ and information from the project engineer.

ENVIRONMENTAL SETTING

The environmental setting section describes the existing water supply, wastewater collection and treatment, law enforcement, fire protection, schools, parks and recreation facilities, and other related public utilities.

Domestic Water Supply

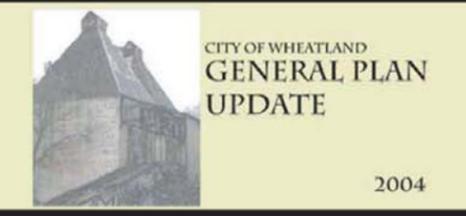
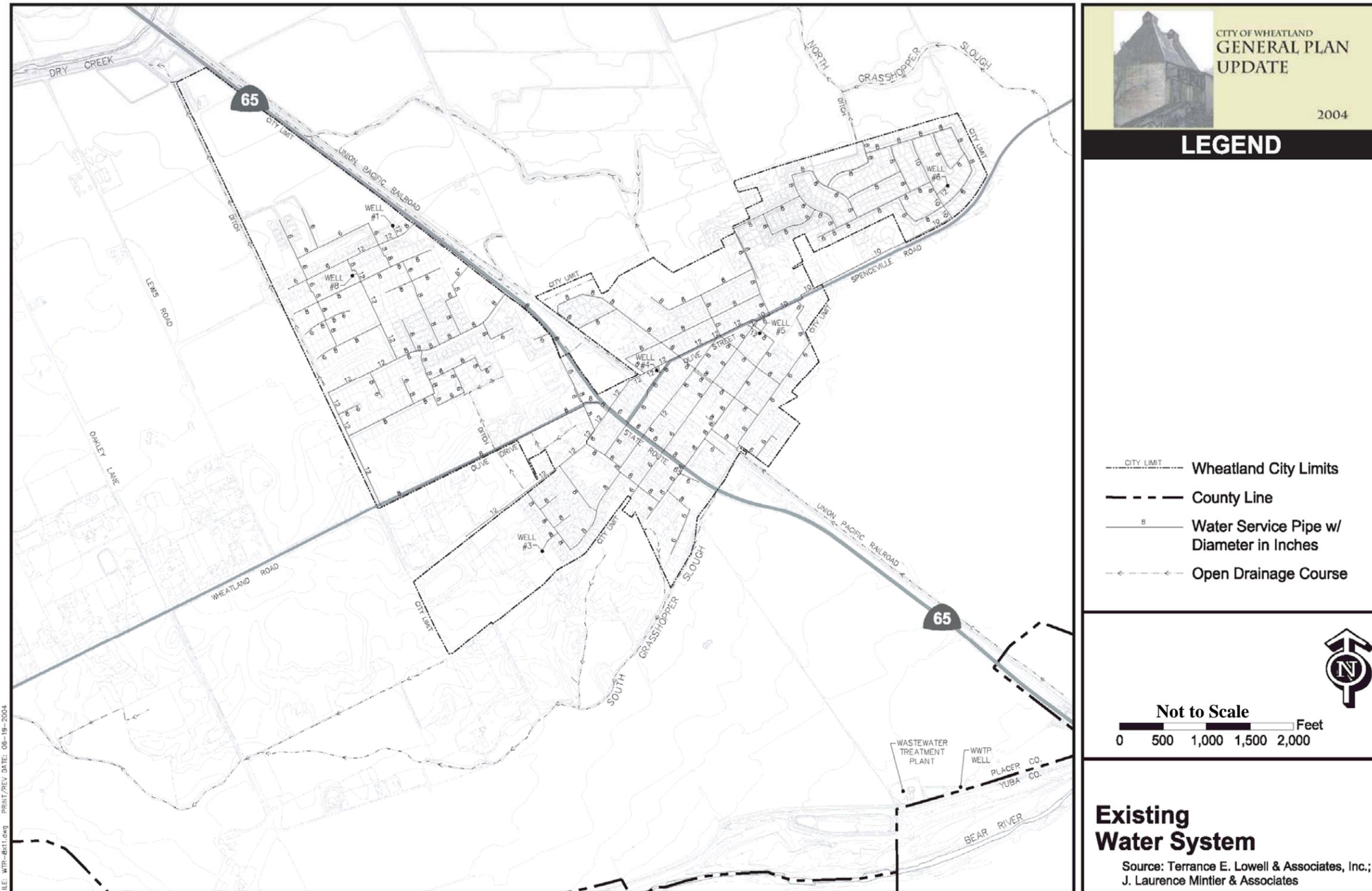
Wheatland Water Works, a private company, originally provided domestic water service in the City. Wheatland Water Works placed the first water lines in 1889, shortly after the City incorporated in 1874. In 1906, the company constructed a 130-foot high water tower. Shortly thereafter, the City purchased the Water Works, forming the Wheatland City Water Department.

Today, the City of Wheatland Public Works Department operates the City's water system and provides water to the entire City, as well as to a few residences outside the City limits. The City's water is derived entirely from groundwater. The quality of the groundwater is good, and low levels of chlorine are added to disinfect the groundwater. The General Plan EIR (page 4.16-28) found that the Yuba South groundwater basin has sufficient water to supply the water needs that would result from buildout of the General Plan area (this evaluation did not include those areas identified as Urban Reserve). The water system and major component locations are shown in Figure 4.11-1.

Supply

From 2001 to 2003, the City used USDA Rural Development loan and grant funds to upgrade the total water system, including: wells, water main replacements, water services, installation of water meters on all services, construction of a 667,000 gallon water tank and booster pumps, and the installation of a Supervisory Control and Data Acquisition (SCADA) system.

**Figure 4.11-1
 Existing Water System**



LEGEND

- CITY LIMIT --- Wheatland City Limits
- County Line
- 8 Water Service Pipe w/
Diameter in Inches
- ← Open Drainage Course



Not to Scale
 0 500 1,000 1,500 2,000 Feet

**Existing
 Water System**

Source: Terrance E. Lowell & Associates, Inc.;
 J. Laurence Mintler & Associates

FILE: WTP-8411.dwg PRINT/REV DATE: 08-19-2004

The SCADA system allows for the continuous monitoring and control of all well sites water tanks and pumps from the City's corporation site control center located at the corner of Fourth Street and B Street. In the event of a problem in the water system, the SCADA system provides warning alarms and notification to the base station, and after-hours to an on-call Department of Public Works employee. The on-call employee has a dedicated laptop computer, which is connected to the base station and can be used to operate the system, if necessary, from a remote location.

The City has six municipal well sites that are all currently active. The wells have capacities ranging from 550 to 800 gallons per minute (gpm) with a total capacity of approximately 4,245 gpm. Four of the well sites have dedicated permanent standby power with automatic switching in case of a power outage. The other two well sites have a receptacle plug available for a portable generator. The depth to ground water is approximately 80 feet to 100 feet with the wells drawing water from depths ranging from 200 feet to 400 feet below grade. The historical five-year average urban domestic water delivery for the City of Wheatland is 853 afa, or 760,876 gallons per day.

Demand

A conservative estimate of the available groundwater supply was based on the historical groundwater pumping within the General Plan Core Area (GPCA) (See Figure 4.11-2). As shown in Table 4.11-1, current groundwater withdrawal within the GPCA is estimated to be approximately 5,300 acre-feet annually (AFA). Current City demand totals approximately 1,200 AFA, resulting in 4,100 AFA available to serve to buildout of the GPCA. The 4,100 AFA supply is a conservative estimate based on there not being any net increase of groundwater withdrawals within the GPCA. Based on a regional decrease of groundwater pumping within the Yuba basin, new equilibrium within in the basin may develop resulting in available groundwater in excess of the 5,300 AFA.

The proposed Nichols Grove Tentative Map site, at 485 acres, represents approximately 12 percent of the total land area within the GPCA. Historically, what is now the Nichols Grove site comprises two properties: the Nichols Ranch property was used for agriculture, primarily to grow almonds, walnuts, alfalfa, and wheat, and has been served by numerous small agricultural wells; portions of Powell Ranch were used to grow alfalfa, and portions of the property were used as pasture and non-irrigated land.

**Figure 4.11-2
General Plan Core Area**

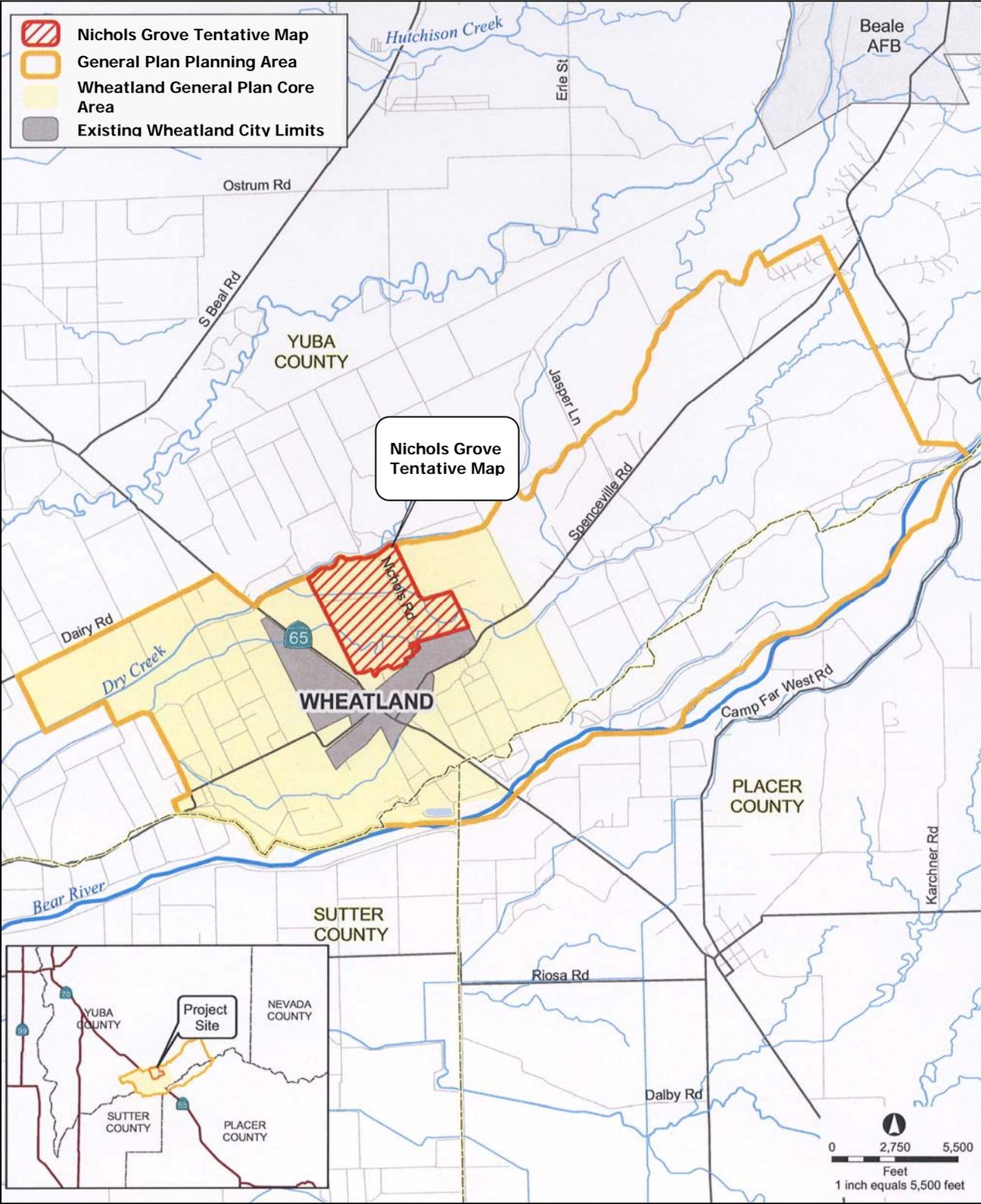


Table 4.11-1 Yuba County - Existing Conditions (2004) Water Use							
Area	Agricultural Uses (AFA)			Urban Uses (AFA)			Total (AFA)
	Surface Water	Groundwater	Total	Surface Water	Groundwater	Total	
North Yuba Groundwater Basin							
North Yuba Agricultural Subarea	188,500	39,000	227,500	0	3,800	3,800	231,300
City of Marysville Subarea	0	300	300	0	3,600	3,600	3,900
Subtotal	188,500	39,300	227,800	0	7,400	7,400	235,200
South Yuba Groundwater Basin							
South Yuba Subarea	170,100	82,700	252,800	0	22,000	22,000	274,800
City of Wheatland Subarea	6,300	4,100	10,400	0	1,200	1,200	11,600
Subtotal	176,400	86,800	263,200	0	23,200	23,200	286,400
Total Plan Area	364,900	126,100	491,000	0	30,600	30,600	521,600
<i>Source: EIP, 2007.</i>							

The project site is within the Wheatland Water District (WWD), but the WWD currently does not supply any surface water to the existing customers. The Nichols Grove area constitutes 56 percent of the existing groundwater use within the GPCA, as considered in the preliminary calculations for the Yuba County Integrated Regional Water Management Plan (IRWMP). Other areas within the GPCA to the west and southeast of the City lie within Camp Far West Irrigation District and Dry Creek Mutual Water Company, and are considered to be at least partially served by surface water. According to these assumptions, a large portion of the historical agricultural groundwater withdrawals within the GPCA, totaling 4,100 AFA, was likely drawn from the Nichols Ranch area. Historical crop use for the project area was used to develop an estimate of groundwater historically used to irrigate the Nichols Ranch project site. Table 4.11-2 provides an estimate of historical water demand for the project site. The supply available to the proposed project, based on this estimate, is approximately 2,300 AFA.

Water system maximum day demand rates by type of land use are shown in Table 4.11-3. The demand rates are used to determine the total maximum day system demands for existing City users and for proposed annexation areas. The maximum day demand factor is between 2.3 to 2.5 times the average day demand. The average day demand is used to determine the amount of annual water supply needed.

Table 4.11-2 Historical and Current Land-Use Based Water Demands			
Agricultural Land Uses	Historical Land Use ^a (acres)	Crop Water Demands ^b (af/acre/year)	Total Historical Water Demand (afa)
Nichols Ranch	382		1463
Almonds	173.9	4.1	706
Walnuts	40.9	4.1	166
Alfalfa	111.2	4.9	539
Wheat	43.5	1.2	52
Unknown	12.5	0.0	0
Powell Ranch	103		430
Alfalfa	57.6	4.9	279
Pasture	27.1	5.5	150
Dryland	18.6	0.0	0
Total	485		2,322
Note: a. Yuba County Agricultural Weights and Measures, 2006. b. DWR Yuba County Water Use Records.			
Source: EIP, 2007.			

Table 4.11-3 Wheatland Domestic Water System Demand Rates					
Use	Description	Unit of Measure	Maximum Day Demand, gpd/unit	Average Day Demand, gpd/unit	Equivalent Dwelling Unit (EDU)/unit
SF	Single Family to 4-plex	Dwelling unit	1150	500	1.00
MF	Multifamily	Dwelling unit	690	300	0.60
P	Park	Acre	9000	3570	7.83
C	Commercial	Acre	5750	2500	5.00
ES	Elementary School	ADA	23	10	0.020
MS	Middle School	ADA	35	15	0.030
HS	High School	ADA	46	20	0.040
Irr	Irrigation	Acre	9000	3570	7.83
Note: a. Average day demand per unit is based on a maximum day factor of 2.3. b. Unit demands are for sizing and projects and may not reflect actual existing unit demands because of different persons/unit for example which can change substantially over time. c. Base on ratio of maximum day demand to a SF use maximum day demand.					
Source: City of Wheatland, General Plan Update, Master Water Plan Technical Report, September 28, 2005.					

Wastewater Collection and Treatment

The Public Works Department operates the City's sanitary sewer collection and wastewater treatment plant (WWTP) system. The collection system consists of gravity collection lines and main lines ranging in size from four inches to 15 inches in diameter, and five sewage lift stations with force mains ranging in size from four inches to 12 inches in diameter. Sewage lift stations are needed due to the relatively flat topography of the City. All sewage must be lifted by sewer

lift stations to reach the WWTP. The WWTP was upgraded and expanded in 1990 and is located at the south end of the existing City limits adjacent to Bear River.

All buildings within the City limits that require wastewater disposal are connected to the City sewer system. Thus, private septic tank/leach field systems do not serve any uses within the City limits. The major components and location of the sewer system are shown in Figure 4.11-3.

Existing Gravity Sewer System

As stated in the General Plan Update EIR, page 4.16-9, with the exception of the Jones Ranch and Heritage Oaks Estates subdivisions, excess capacity does not exist to provide service to any additional proposed annexation areas outside the City. Except for new gravity sewer lines recently installed in the Wheatland Ranch, Park Place, and Ryantown subdivisions, most of the sewer gravity lines predate 1962. The oldest sewer system lines primarily consist of clay pipe with cement joints. Some of these lines have broken joints and the cement has deteriorated. Several portions of older lines are asbestos cement pipe (ACP). In one location in Hooper Street, the ACP gravity line is located under the Spruce lift station force main and was found to be in a deteriorated condition. A small portion of this line was replaced in 2003. Some rear yard sewer mains have maintenance problems due to sags in the line, dislocated joints, and the intrusion of tree roots.

Existing Sewage Lift Stations and Force Main System

A total of five sanitary lift stations are located in the City. Two of the lift stations (Spruce and Malone) lift the entire City's sewage to the City's WWTP.

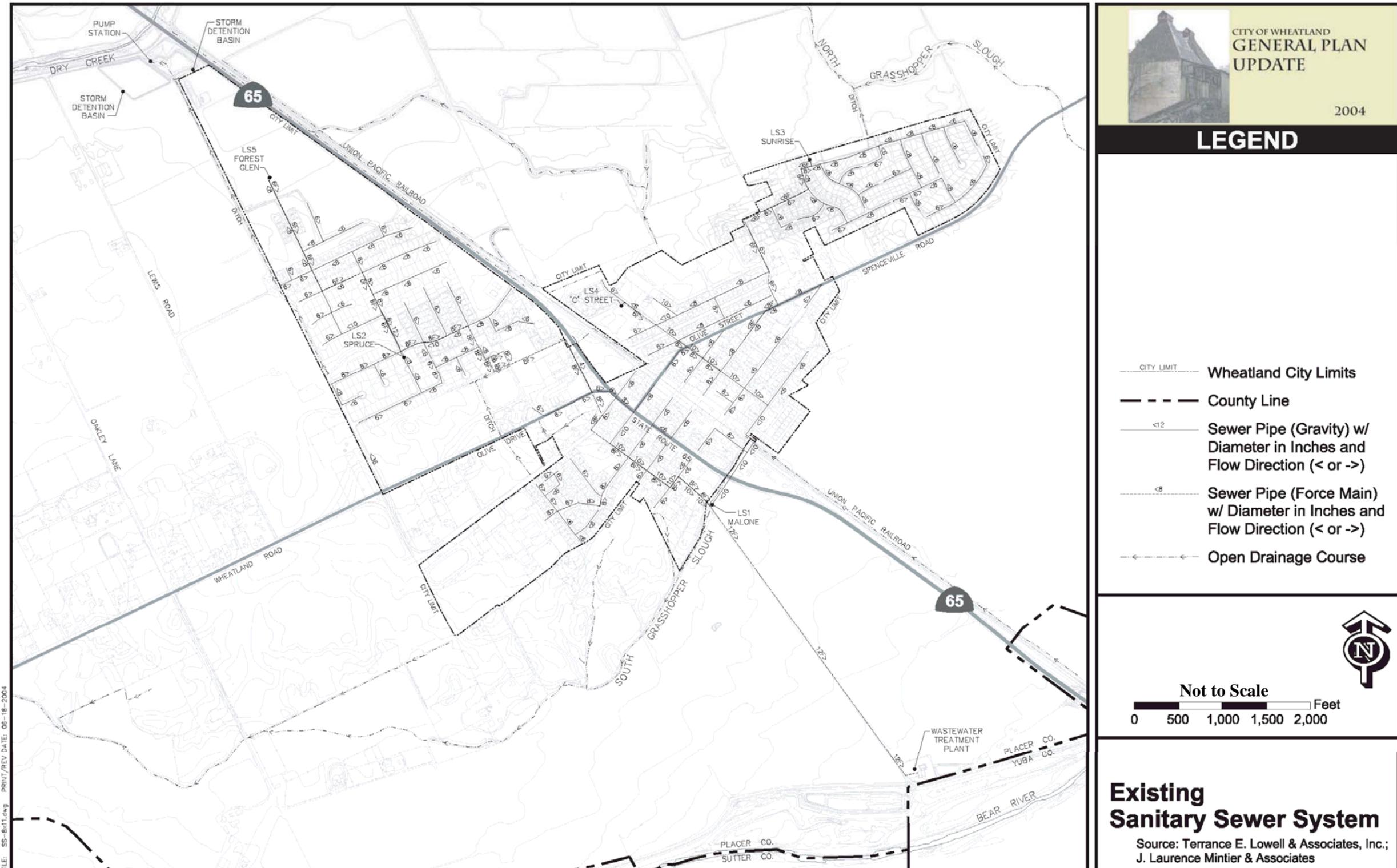
Malone Lift Station

The 12-inch Malone force main discharges directly to the WWTP, and is connected to the Spruce eight-inch force main. The Malone lift station pump and electrical panel was updated in 2003. The panel has an old standby power unit but not an automatic transfer switch in case of power outage.

Spruce Lift Station

The Spruce lift station was completely rebuilt in 2003 and provided with standby power and automatic transfer switch. The portion of force main from the lift station to Hooper Street is an eight-inch diameter Asbestos Cement Pipe (ACP) force main installed in 1962. The force main is in relatively good condition. The force main was extended as an eight-inch diameter Polyvinyl Chloride (PVC) force main from Hooper Street to the Malone Lift Station in 2003, and is in excellent condition. With the 2003 improvements, the Spruce eight-inch force main is connected into the 12-inch Malone force main, which discharges directly to the WWTP.

**Figure 4.11-3
 Existing Sewer System**



Sunrise Lift Station

The Sunrise lift station was completely rebuilt in 2002 (except for relining of the inside of the lift station tank). The lift station now has a non-automatic transfer switch. The force main consists of an eight-inch pipe and during construction activities in 2001 was determined to be in good condition. The force main discharge termination manhole was replaced in 2002 with a specially lined manhole with protective coating to prevent deterioration that had occurred in the previous manhole.

Forest Glen Lift Station

The Forest Glen lift station was installed in 1992. The lift station is in fair condition, has a receptacle for connection to standby power, but does not have standby power at the site. The four-inch diameter PVC force main is in good condition and a portion of the length was eliminated with the construction of the Park Place Subdivision Improvements (2002/04). The four-inch force main now extends from the lift station to a manhole near Redwood Street and Carpenter Street. The main from the Forest Glen lift station is PVC pipe installed in 1992 and appears to be in good condition. The force main discharge termination manhole was replaced in 2002 with a manhole lined with protective coating to prevent the deterioration that occurred in the previous manhole.

C Street Lift Station

The “C” Street lift station was installed in 1990. The lift station is in fair condition but does not have standby power. The four-inch force main is of unknown material and condition. The force main discharge termination manhole is in fair condition but needs to be replaced with a manhole lined with protective coating to prevent further deterioration.

Wastewater Treatment Plant

The WWTP is located adjacent to the Bear River and west of State Route 65 (SR 65). The WWTP facility is located outside of the Bear River levee and not in the floodplain. However, the discharge percolation and evaporation ponds are located within the Bear River levee.

The City of Wheatland WWTP is a well-operated “no discharge” treatment plant that is in compliance with the RWQCB requirements. The WWTP has a permitted design capacity of 0.62 million gallons per day (mgd) average day dry weather flow (ADDWF). The ADDWF for the existing WWTP as of September 2004 was 0.29 mgd. The WWTP’s last expansion occurred in 1990 when the plant was expanded from 0.21 mgd to 0.62 mgd ADDWF capacity. The expansion to 0.62 mgd ADDWF is adequate to meet the WWTP demands within the existing City limits at buildout, but is not sized to provide for any substantial new proposed annexation development areas.

The Regional Water Quality Control Board (RWQCB) has indicated that the City’s current method of wastewater disposal (into rapid infiltration basins located within the levees of the Bear River) is not a viable long-term option. The General Plan EIR (page 4.16-33) found that buildout

of the City of Wheatland General Plan Study Area would result in an additional wastewater demand of approximately 4.45 mgd. Therefore, additional wastewater treatment facilities will be required.

The City of Wheatland has identified potential sites for a new wastewater treatment facility. The preferred site is located outside the City’s Sphere of Influence, north of Dairy Road. In 2006, the City retained CH2MHill to conduct the preliminary design and environmental work for the City’s new wastewater treatment plant. CH2MHill has prepared a preliminary design report⁴ for the City of Wheatland. The report found that the membrane bioreactor process would be the best option for the City. However, subsequent review by the Regional Water Quality Control Board raised concerns related to potential for effluent to increase the already high salinity levels in Dry Creek. Therefore, the project design is being modified to deal with the salinity issue. In addition, funding constraints have slowed progress on the design of the wastewater treatment plant. Therefore, a project design and implementation schedule does not exist at this time.

Sewer System User Demand Rates and Equivalent Dwelling Units

Sewer system average day dry weather demand rates by type of land use are shown in Table 4.11-4. These rates are used to project the system demands for existing City users and proposed annexations. The City design standards provide for a peak flow demand factor varying between 2.3 to 4.5 times the ADDWF.

Table 4.11-4 Wheatland Domestic Sewer System Demand Rates				
Use	Description	Unit of Measure	ADDWF ^a gpd/unit ^b	EDU/unit ^c
SF	Single Family to 4-plex	Dwelling unit	350	1.000
MF	Multifamily	Dwelling unit	250	0.710
P	Park	Acre	30	0.086
C	Commercial	Acre	1750	5.000
ES	Elementary School	ADA	7	0.020
MS	Middle School	ADA	10	0.029
HS	High School	ADA	12	0.034
I	Industrial	Acre	2500	7.140
Notes: a. ADDWF = Average Day Dry Weather Flow. b. Unit demands are for sizing projects and may not reflect actual existing unit demands because of different persons/unit for example which can change substantially over time. c. EDU/unit is based on the ADDWF of a use divided by the ADDWF of a single-family use. Peak Flow factor varies from 2.3 to 4.5 depending on total flow to portion of system being studied. The smaller the ADDWF in a system, the larger the Peak Flow factor.				
<i>Source: Wheatland General Plan, July 2006.</i>				

Solid Waste

Yuba-Sutter Disposal, Inc. (YSDI), a division of Norcal Waste Systems, Inc., provides residential and commercial garbage collection, debris box service, green waste, commercial cardboard recycling, and recycling services for the incorporated and urbanized unincorporated areas of the County including residents of Beale Air Force Base, Live Oak, Marysville, Yuba City, Wheatland, and the counties of Yuba and Sutter.

The company also operates a materials recovery facility to extract recyclables from the waste stream; two transfer stations, one household hazardous waste collection facility, one buy-back center and a pilot composting facility. Yuba-Sutter Disposal, Inc. serves more than 30,000 residential customers and 5,000 commercial customers and collects more than 100,000 tons of materials annually. Collected material is taken to the company's transfer station located at 3001 North Levee Road in Marysville. Waste is then transferred to the Ostrom Road Sanitary Landfill located at 5900 Ostrom Road near Wheatland.

The Regional Waste Management Authority administers the City and County's waste reduction/waste diversion program. Inspection and enforcement activities are handled by the Yuba County Environmental Service Department.

Norcal Waste Systems operates the Ostrom Road Sanitary Landfill near Wheatland. The Landfill is located approximately five miles east of SR 65 adjacent to the southern boundary of Beale Air Force Base. The Ostrom Road facility currently encompasses an area of approximately 261 acres, with 225 acres available for disposal. The facility has been in operation since 1995, and to date, approximately 35 acres of the 225 total disposal area have been constructed. The landfill facility provides disposal services for both municipal and commercial customers. In addition to accepting municipal solid waste, Ostrom Road Landfill accepts a variety of commercial and industrial waste streams. Ostrom Road Landfill is not open to residential customers.

In March of 2002, the Yuba County Board of Supervisors granted Yuba-Sutter Disposal, Inc. an amendment to the existing permit to allow more tonnage at the Ostrom Road Landfill, and allowing an eventual capacity of 3,000 tons per day in 2030, up from the current 1,000 tons per day. The Ostrom Road Landfill currently has at least 59 years of capacity based on existing and projected waste streams. The closure date for the facility is estimated to occur in the year 2066.

Electricity

Pacific Gas & Electric (PG&E) is the primary service provider in Yuba County for natural gas and electricity for homes and businesses and is regulated by the California Public Utilities Commission (CPUC). The service area covered by PG&E extends from Eureka to Bakersfield (north to south) and from the Sierra Nevada to the Pacific Ocean (east to west).

Power plants and natural gas fields in northern California, as well as energy purchased outside the PG&E service area and delivered through high voltage transmission lines, provide energy supplies to PG&E. Pacific Gas and Electric purchases both gas and electrical power from a variety of sources, including utility companies in other western states and Mexico (CEC, 2003).

Law Enforcement

Wheatland Police Department (WPD) was established with the City's incorporation in 1874. The City of Wheatland is currently small enough to allow an officer to reach anywhere within the City within two minutes. Two minutes is an exceptional response time; however, response times can be affected by traffic congestion on SR 65 and trains traveling through the City. The traffic congestion may slow responses, but slow or stopped freight trains halt responses until the train passes. Train-caused response delays are not common, but have occurred in the past and remain a potential problem.

Departmental Staffing and Work Load

According to the General Plan EIR (page 4.13-2), the minimum recommended ratio of police officers to population is 1.7 per 1,000 persons. This staffing ratio is currently considered to be an acceptable staffing level, but due to a variety of local conditions many police departments operate at a lesser ratio while others operate with a higher ratio. The optimum ratio depends on the incident activity levels, response times, and officer safety factors. Such ratios also are dictated by what the community determines to be an acceptable level of service.

Based on the current number of reserve patrol officers (six), police officers (three), police corporal (one), police sergeant (one), and chief of police (one), the ratio of officers per thousand residents is 3.4 (assuming an estimated current resident population of 3,513⁵). This ratio currently is necessary to maintain 24/7 coverage and to allow for some overlap. Wheatland's officers are currently assigned to work 12-hour shifts, which allows for maximum coverage and often permits two officers to be on duty at the same time. When two officers are on duty at the same time, officers can perform ancillary duties usually performed by other civilian support staff. Currently, the Department has three marked patrol cars and two unmarked patrol cars.⁶

Fire Protection

The Wheatland Fire Department (WFD) functions from one fire station located at 313 Main Street. The fire station has three apparatus bays that house four vehicles. The WFD provides emergency response to all emergencies within the City. The WFD also provides additional response to the Plumas-Brophy Fire Protection District for single incidents that require multiple fire engines or for multiple emergencies requiring multi-agency responses. The Plumas-Brophy Fire Protection District is staffed and equipped in a similar manner to the WFD, and the department headquarters is located on Dairy Road (off SR 65 and approximately two miles north of Main Street in Wheatland). The District responds to Wheatland emergencies in the same manner as the WFD does for the District.

The Wheatland and Plumas-Brophy Fire Districts generally operate as one under joint policies and procedures governing training and operations. The districts share one paid full-time Fire Captain. Both departments have stated that they rely on each other to operate, and that if one was disbanded, the other would have great difficulty functioning effectively. Effective January 1, 2006, Plumas-Brophy Fire District and the WFD merged operations under a joint powers

agreement. The joint powers agreement established a Joint Powers Authority (JPA) called the Wheatland Fire Authority (WFA), which operates as a regional fire protection agency.

Departmental Staffing and Work Load

Both fire departments recruit, train, and depend on volunteer staff from the same area of Yuba County. As is common with many other areas, volunteers can only give limited amounts of their time and the shallow pool of potential volunteers appears also to be a limiting factor to increasing the number of volunteers in each department. The increasing number of residents who commute out of the immediate response area during most daytime work hours further limits the agencies' capabilities.

In 2007, the Wheatland Fire Department had 17 volunteer personnel distributed by rank as follows:⁷

- One Fire Chief;
- One Assistant Fire Chief;
- Three Fire Captains;
- Nine Engineer/Firefighters; and
- Three Probationary Firefighters.

Vehicles and Equipment

The Wheatland and Plumas-Brophy Fire Districts use the National Fire Protection Association (NFPA) standards as a guide for equipping their departments to respond to structural and open space emergencies. Specialized rescue equipment is divided between each department.

The Department's quantities of response vehicles are as follows:

- Wheatland Fire Station - four vehicles;
- Plumas-Brophy Station 1 - six vehicles; and
- Plumas-Brophy Station 2 - three vehicles.

Schools

Four school districts serve the Wheatland area; however, the Wheatland School District and the Wheatland Union High School District serve the majority of the General Plan Study Area. Most of the school facilities within the City of Wheatland and in the surrounding area are currently operating below capacity. Table 4.11-5 shows the enrollment numbers for the Wheatland School District and Wheatland High School.

School	Grade Level	Enrollment	Capacity
Wheatland Elementary ¹	K-5	451	529
Lone Tree Elementary	K-5	436	1,020
Bear River Middle School	6-8	480	946
Wheatland Charter Academy ¹	K-12	160	160
Pre-school	Pre-K	104	n/a
Wheatland High School	9-12	704	994
Total		2,335	3,753

Notes: 1. Wheatland Charter Academy is housed on the Lone Tree School Campus.

Source: *Wheatland Elementary School District and Wheatland Union High School District, October 2006.*

The following are brief descriptions of the schools operated by the two school districts serving Wheatland.

Wheatland School District

The Wheatland School District (WSD) operates two schools within the City. As of October 2006, total WSD enrollment was 1,631 and total capacity was approximately 2,495. However, both schools within the City (Wheatland Elementary School, grades K-3 and Bear River School, grades 4-8) are near capacity, with portable classrooms being used.

Wheatland School District estimates the current “yield rate” for grades K-8 at 0.553 students per single-family dwelling (See Table 4.11-6). The District’s Master Plan establishes the optimal capacity of K-5 elementary schools at 600 students and 6-8 middle schools at 800 students. Among the District’s concerns are that planning for the new subdivisions consider the size of schools planned, the District’s yield rate, and State Department of Education school siting criteria. Similarly, new development planning should provide for footpaths, bicycle trails, and safe bus routing needs to ensure safe transport for students to and from school. The District would welcome the opportunity to purchase school sites in new developments that meet State Board of Education criteria.

Grade Levels	Student Generation Factor per Household
K-8	0.553
9-12	0.180

Source: *City of Wheatland General Plan, July 2006.*

Wheatland Union High School District

Wheatland Union High School District operates Wheatland High School, which is located on Wheatland Road at the western edge of the City. The High School District also operates the Academy for Career Excellence, a charter school providing alternate education options to high school-age students.

As of October 2006, the District's enrollment was approximately 704. Total capacity is estimated at approximately 1,000 students. The capacity was designed to accommodate students from Beale Air Force Base, but enrollment has fluctuated with changes in Base operations. Currently, overcrowding is not a problem, and the campus has capacity to accommodate enrollment increases. However, the High School District will soon be accommodating new students from both the Heritage Oaks Estates and Jones Ranch housing developments in Wheatland, as well as from three subdivisions in the Plumas Elementary School District, which does not currently have a high school.

The Wheatland Union High School District projects an average of 0.18 high school students (grades 9-12) per new household. The District expects that new high schools eventually will be needed as a result of growth and development. Each new high school would serve approximately 1,300 to 1,400 students, and would require between 40 and 45 usable acres.

Other Public Utilities

Other public utilities include telephone, cable, and internet services.

Telephone Service

American Telephone & Telegraph (AT&T) is the primary local telephone service provider for Yuba County, including the City of Wheatland. Long distance access for a limited portion of Yuba County is provided by AT&T; however, Sprint, and MCI also provide long distance service in accordance with the rules of the Federal Communications Commission (FCC). Modern telephone facilities that include digital transmission of voice and data communications have been installed in Yuba County by AT&T. Approximately 22,000 residences and 4,000 businesses are served by AT&T, and 5,000 other lines exist in Yuba County for AT&T internal communications, government, and special services (such as the California Lottery). The company is confident that AT&T has the capabilities to expand facilities and service capacity to meet future County needs (General Plan EIR, page 4.13-13).

Cable & Internet Service

Comcast Corporation provides television and internet services in the Wheatland area, including state-of-the-art services such as digital cable and high-speed internet access.

REGULATORY CONTEXT

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

State

Water

SB 610

SB 610 made changes to the Urban Water Management Planning Act to require additional information in Urban Water Management Plans if groundwater is identified as a source available to the supplier. The information required includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if non-adjudicated, whether the basin has been identified as being over drafted or projected to be overdrafted in the most current California Department of Water Resources (DWR) publication on that basin. If the basin is in overdraft, that plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that any project subject to the California Environmental Quality Act supplied with water from a public water system be provided a specified water supply assessment, except as specified in the law.

SB 221

SB 221 prohibits approval of subdivisions consisting of more than 550 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). The regulatory requirement also applies to increases of 10 percent or more of service connections for public water systems with less than 550 service connections. The law defines criteria for determining "sufficient water supply" such as using normal, single-dry, and multiple-dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses. Rights to extract additional groundwater, if used for the project, must be substantiated.

Parks

Quimby Act

In 1965, the State Legislature enacted the Quimby Act. The Quimby Act allows local agencies to establish ordinances requiring residential subdivision developers to provide land or pay in-lieu fees for park and recreation purposes. The City established a Parkland Dedication and In-Lieu Fee Ordinance in November 1979, and subsequently amended the ordinance in September 1981.

The Quimby Act was amended in 1982, to establish general standards to determine the amount of land or fees to be collected. The standards are based on the amount of existing parkland in the jurisdiction, a maximum number of acreage per 1,000 population, and a formula based upon population estimates or dwelling units.

The Quimby Act provides for a maximum of three acres per 1,000 persons as the maximum standard for park dedication and fee collection, unless the amount of existing neighborhood and community parkland exceeds that limit. Because the City of Wheatland exceeds that standard, the City may use the higher standard of five acres per 1,000 persons. The City has revised the Parkland Dedication and In-Lieu Fee Ordinance in accordance with parkland dedication standards set forth in the Open Space Element of the City's General Plan. The collection fees are used for the facilities that the City Council, with support of the community, has determined are of the greatest recreational need.

Schools

California Law

The California Code of Regulations, Title 5 and Education Code govern all aspects of education within the State.

Proposition 1A/Senate Bill 50

Proposition 1A/Senate Bill (SB) 50 (Chapter 407, Statutes of 1998) is a school construction measure authorizing the expenditure of State bonds totaling \$9.2 billion through 2002, primarily for modernization and rehabilitation of older school facilities and construction of new school facilities. \$2.5 billion is for higher education facilities and \$6.7 billion is for K-12 facilities. Proposition 1A/SB 50 implemented significant fee reforms by amending the laws governing developer fees and school mitigation:

- Establishes the base (statutory) amount (indexed for inflation) of allowable developer fees at \$1.93 per square foot for residential construction and \$0.31 per square foot for commercial construction.
- Prohibits school districts, cities, and counties from imposing school impact mitigation fees or other requirements in excess of or in addition to those provided in the statute.
- Suspends for a period of at least eight years (2006) a series of court decisions allowing cities and counties to deny or condition development approvals on grounds of inadequate school facilities when acting on certain types of entitlements.

Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "legislative or adjudicative act...involving ...the planning, use, or development of real property" (Government Code 65996(b)). Additionally, a local agency cannot require participation in a Mello-Roos for school facilities; however, the statutory fee is reduced by the amount of any voluntary participation in a Mello-Roos. Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation." The law identifies certain circumstances under which the statutory fee can be exceeded, including preparation and adoption of a "needs analysis," eligibility for State funding, and satisfaction of two of four requirements (post-January 1, 2000) identified in the law including year-round enrollment, general obligation bond measure on the ballot over the last four years that received 50 percent plus one of the votes cast, 20 percent of the classes in portable classrooms, or specified outstanding debt. Assuming a district qualifies for

exceeding the statutory fee, the law establishes ultimate fee caps of 50 percent of costs where the State makes a 50 percent match, or 100 percent of costs where the State match is unavailable. District certification of payment of the applicable fee is required before the City or County can issue the building permit.

Proposition 55

Proposition 55 is a school construction measure passed in 2004 authorizing the sale of approximately \$12.3 billion in bonds to fund qualified K-12 education facilities to relieve overcrowding and to repair older schools. Funds target areas of the greatest need and must be spent according to strict accountability measures. These bonds would be used only for eligible projects. Approximately ten billion dollars would be allocated to K-12 schools, with the remaining 2.3 billion allocated to higher education facilities.

Department of Education Standards

The California Department of Education published the Guide to School Site Analysis and Development to establish a valid technique for determining acreage for new school development. Rather than assigning a strict student/acreage ratio, this guide provides flexible formulas that permit each district to tailor its ratios as necessary to accommodate its individual conditions. The Department of Education also recommends that a site utilization study be prepared for the site, based on these formulas.

Local

City of Wheatland General Plan

The following applicable goals and policies are from the City of Wheatland General Plan, *Public Facilities and Services* Element:

- Goal 5.A. To ensure the timely development of public facilities and services, the maintenance of specified service levels for public facilities, and that adopted facility and service standards are achieved and maintained through the use of equitable funding methods.
- Policy 5.A.1. Where new development requires the construction of new public facilities, new development shall fund its fair share of the construction of those facilities.
 - Policy 5.A.5. Through fiscal revenues generated by new development, the City shall expand, as needed, general government services (e.g. City administrative services) in connection with new development.
- Goal 5.C. To ensure a safe and reliable water supply sufficient to meet the future needs of the City.

Goal 5.D. To ensure adequate wastewater collection and treatment and the safe disposal of effluent.

Goal 5.E. To collect and dispose of stormwater in a manner that protects the City's residents and property from the hazards of flooding, manages stormwater in a manner that is safe and environmentally sensitive, and enhances the environment.

Policy 5.E.6. Future drainage systems requirements shall comply with applicable federal and State pollutant discharge requirements.

Goal 5.F. To ensure the safe and efficient disposal or recycling of solid waste generated in Wheatland.

Goal 5.G. To deter crime and to meet the growing demand for police services associated with increasing population and commercial/employment development in the City.

Policy 5.G.1. Within the City's overall budgetary constraints, the City shall Strive to maintain a staffing ratio of 2.0 personnel per 1,000 residents (0.5 non-sworn and 1.5 sworn).

Goal 5.H. To protect residents, employees, and visitors in Wheatland from injury and loss of life and to protect property from fires.

Policy 5.H.2. The City shall, through adequate staffing and patrol arrangements, endeavor to maintain the minimum feasible response times for fire and emergency medical service.

The following applicable goals and policies are from the City of Wheatland General Plan, *Recreation, Educational, and Community Services* Element:

Goal 6.A. To establish and maintain a public park system, recreational, and civic facilities suited to the needs of Wheatland residents, employees, and visitors.

Policy 6.A.4. The City shall require new development to provide a minimum of 5 acres of parkland for every 1,000 new residents.

Goal 6.D. To provide for the educational needs of all Wheatland residents.

Policy 6.D.1. The City shall work with the Wheatland School District and Wheatland Union High School District in providing quality educational facilities that will accommodate projected student growth.

Goal 6.E. To ensure that adequate school facilities are available and appropriately located to meet the needs of Wheatland residents.

Policy 6.E.2. The City's land use planning shall be coordinated with the planning of school facilities and shall involve the Wheatland School District and Wheatland Union High School District in the early stages of the land use planning process.

Yuba County Integrated Regional Water Management Plan

The Yuba County Water Agency and the affiliated Management Group, which is composed of water providers in Yuba County, including the City of Wheatland, recently completed development of the Yuba County Integrated Regional Water Management Plan (YCIRWMP). The YCIRWMP contains goals, objectives, priorities, and strategies for achieving improvements to flood management, water supply reliability, water recycling, water quality, ecosystem restoration, recreation and public access. The planning horizon for the YCIRWMP will be from the present conditions to the year 2030. The Yuba County Water Agency adopted the final YCIRWMP in January 2008, and submitted the final YCIRWMP to the Department of Water Resources in February 2008.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

An impact to public services and utilities in the proposed project area would be considered significant if the proposed project would:

- Increase demand on existing water supply and distribution facilities, such that the facilities cannot meet the demand;
- Adversely impact the wastewater delivery system and increase the wastewater capacity beyond the ability of the wastewater treatment plant;
- Increase the demand for additional law enforcement or fire protection services beyond the ability of the existing departments to provide adequate service;
- Increase the total number of students beyond the capacity of the three local school districts;
- Increase the demand for recreational uses beyond the existing or proposed parks and recreational facilities; or
- Exceed the available provisions of local solid waste disposal/recycling agencies.

Method of Analysis

The following section evaluates the impacts of the proposed project on the existing public services and utilities that would occur if the project as currently proposed is approved and implemented. Impact significance is determined by comparing project conditions to the existing conditions, using the above significance criteria.

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.

4.11-1 Adequate water supply and delivery for new residents.

Nichols Grove Tentative Map

A Water Supply Assessment (WSA) conducted by EIP, has been prepared in accordance with the Guidebook for Implementation of SB 610 and SB 221, prepared by the California Department of Water Resources. Data for the assessment has been adapted from the Wheatland General Plan and the Yuba County Regional Water Availability Analysis, which analyzed the projected demands for the entire Yuba groundwater basin. An estimate of the demand based on population projections for the whole water system on a 20-year time horizon or “as far as data is available” is required for a WSA. For projecting demands for buildout of the City of Wheatland Land Use Diagram, plans do not exist beyond the Wheatland General Plan horizon of 2025. Furthermore, the water-demand difference between development 18 years and 20 years from this point is unpredictable, and very likely to be within the margin of error for long-term water demand forecasts. Therefore, the water supply analysis will evaluate the availability of water through 2025.

Water Supply

The WSA used a conservative estimate of the available groundwater supply that is based on the historical groundwater pumping within the City of Wheatland’s General Plan Core Area (GPCA) (See Figure 4.11-2). As previously discussed, the City of Wheatland solely relies on groundwater from the Yuba basin for water supply. Historical groundwater withdrawal within the GPCA is estimated to be approximately 5,300 acre-feet annually (afa). The existing City demand is estimated to be approximately 1,200 afa; therefore, approximately 4,100 afa of water is available to serve buildout of the GPCA. It should be noted that the water supply is a conservative estimate based on zero net increase of groundwater withdrawals within the GPCA over the next 20 years. As land is converted from agricultural uses to urban uses the decreased demand for agricultural water is expected to offset the increased demand for potable water. Furthermore, based on the regional decrease in groundwater pumping as other jurisdictions convert to surface water within the Yuba basin, a new equilibrium within the basin may develop resulting in groundwater availability in excess of 5,300 afa.

The proposed 485.5-acre Nichols Grove Tentative Map site represents approximately 12 percent of the total land area within the GPCA. The Nichols Grove Tentative Map site is comprised of two properties: the Nichols Ranch property, which was used primarily to grow almonds, walnuts, alfalfa and wheat, and was served by numerous small agricultural wells; and the Powell property, which was used to grow alfalfa, and portions of the property were used as pasture and non-irrigated land. A large portion of the

historical agricultural groundwater withdrawals within the GPCA, totaling 4,100 afa, was drawn from the Nichols Ranch area. According to these assumptions, the Nichols Grove area constitutes 56 percent of the existing groundwater use within the GPCA.

For the project-level analysis of the Nichols Grove Tentative Map, historical crop use for the Nichols Grove Tentative Map area was used to develop an estimate of groundwater historically used to irrigate the Nichols Grove Tentative Map site. Table 4.11-2 provides an estimate of historical water demand for the Nichols Grove Tentative Map site, calculated based on the historical agricultural use for the property. The supply available to the Nichols Grove Tentative Map site, based on historical agricultural uses, is estimated to be approximately 2,300 afa (See Table 4.11-2).

Nichols Grove Tentative Map Demand

The estimated demand projections for the proposed Nichols Grove Tentative Map project, which are based on land use designations, are summarized in Table 4.11-7. In addition, Table 4.11-8 gives a comparison of the historical and projected water demands for the property, which are summarized by water-use sector in five-year increments.

The proposed Nichols Grove Tentative Map project is planned to be constructed in one phase; therefore, the assumption can be made that all historical agricultural demand from the property would be discontinued when construction begins, and would be replaced within the next five to 10 years by the proposed Nichols Grove Tentative Map demand. Additionally, once the project has been constructed, the water supply demand is projected to be consistent from year to year.

As seen in Table 4.11-8, the projected demand of the project in the year 2030 is estimated to be approximately 1,320 afa. The Nichols Grove Tentative Map demand represents approximately 14 percent of the City's total GPCA projected demand for water supply, which is estimated as 9,400 afa by the studies conducted for the Yuba County Integrated Regional Water Management Plan.

The projected proportion of demand slightly exceeds the project's proportion of the City's GPCA land area, which is 12 percent. However, the Nichols Grove Tentative Map project is primarily residential, and therefore may use larger amounts of water per acre than other projects with a relatively larger proportion un-irrigated open space or lower water demand land uses.

**Table 4.11-7
 Nichols Grove Water Demand - Average Day (Domestic + Irrigation)**

Site No.	Land Use	Ac	DU/EDU	Density	Demand Factor ¹	Unit	Gallons/Day	Equivalent afa
	Well Sites	2.0			0	0	0	0
	Open Space	59.6			0	0	0	0
	Major Roads ²	18.9	0.35		1,750	gal/ac/day	11,576	13
	Elem School	11.6			2,610	gal/ac/day	30,276	34
	Middle School	16.9			2,710	gal/ac/day	45,799	51
	Park/Detention	70.5			4,170	gal/ac/day	293,985	329
	Subtotals	179.5					381,636	428
1	LDR	11.0	60	5.5	500	gal/day	30,000	34
2	LMDR	13.6	76	5.6	500	gal/day	38,000	43
3	LDR	28.2	147	5.2	500	gal/day	73,500	82
4	LMDR	29.2	143	4.9	500	gal/day	71,500	80
5	MDR	25.1	197	7.8	500	gal/day	98,500	110
6	MDR	8.9	72	8.1	500	gal/day	36,000	40
7	LMDR	71.7	332	4.6	500	gal/day	166,000	186
8	LDR	55.8	191	3.4	500	gal/day	95,500	107
9	LDR	45.3	209	4.6	500	gal/day	104,500	117
HDR	HDR	5.7	91	16.0	300	gal/day	27,300	31
CMU	Commercial Mixed Use	11.5	0		2,500	gal/ac/day	28,750	32
	CMU (residential units)		91		300	gal/day	27,300	31
	Subtotals	306.0	1,609				796,850	893
	Grand Totals	485.5				Average Daily Demand =	1,178,486	1,320

Notes:

1. Demand factors from Table II, Master Water Plan for City of Wheatland GPU by TLA, September, 28, 2005
2. Estimated that Major Roads are 35% landscaped. Used park water demand for landscape.

Source: EIP, 2007.

Table 4.11-8 Proposed Nichols Grove Existing and Projected Demand						
Water-Use Sector	Demand (afa)					
	2004^a	2010^b	2015	2020	2025	2030
Single Family	0	0	799	799	799	799
Multi-family	0	0	61	61	61	61
Commercial	0	0	32	32	32	32
Schools	0	0	85	85	85	85
Parks / detention	0	0	329	329	329	329
Roads/Transportation	0	0	13	13	13	13
Open Space / well sites	0	0	0	0	0	0
Agriculture	2,300	0	0	0	0	0
Total	2,300	0	1,320	1,320	1,320	1,320

Notes:
a. Available supply based on estimated historical agricultural water use for the property. Supply delivered to project will be dependent on constructed well size and yield.
b. Existing land/water use will cease during project construction; no demand is anticipated prior to well completion.

Source: EIP, 2007.

Nichols Grove Tentative Map Supply-Demand Comparison

Table 4.11-9 shows a comparison of the Nichols Grove Tentative Map available supply and expected demand. With historically available supply estimated to be approximately 2,322 afa, and a project demand estimated to be approximately 1,320 afa, the supply is adequate to provide for the project in the future. However, a Water Supply Verification would be required to ensure that the proposed infrastructure is able to provide the project with at least 1,320 afa.

In the context of the City of Wheatland GPCA’s overall demands, the 4,100 afa of groundwater, which is historically shown to be available to the GPCA, is also adequate to provide for the Nichols Grove Tentative Map demand.

Table 4.11-9 Proposed Nichols Grove Supply, Demand, and Supply-Demand Comparison for All Year-Types					
	Average Water Year	Single Dry Water Year	Multiple Dry Water Years		
			Year 1	Year 2	Year 3
Historical Supply (afa) ^a	2,322	2,322	2,322	2,322	2,322
Projected Demand (afa) ^b	1,320	1,320	1,320	1,320	1,320
Surplus (afa)	1,002	1,002	1,002	1,002	1,002

Notes:
a. Available supply based on estimated historical agricultural water use for the property. Supply delivered to project will be dependent on constructed well size and yield.
b. See Table 4.11-6.

Source: EIP, 2007.

Dry Year Supply

Groundwater is generally not considered subject to supply reductions in drought years, and is used in Yuba County by many purveyors as a supplementary source when surface water allocations are reduced. Therefore, shortages in water supply to the Nichols Grove Tentative Map project are not anticipated in dry or multiple-dry years.

Pumping and Supply Infrastructure

Areas annexed into the City are required, prior to development, to provide engineered improvement plans to the City for all water system improvements needed, including water system design, supply calculations, wells, tanks, pumps, water lines, water services, and water meters.

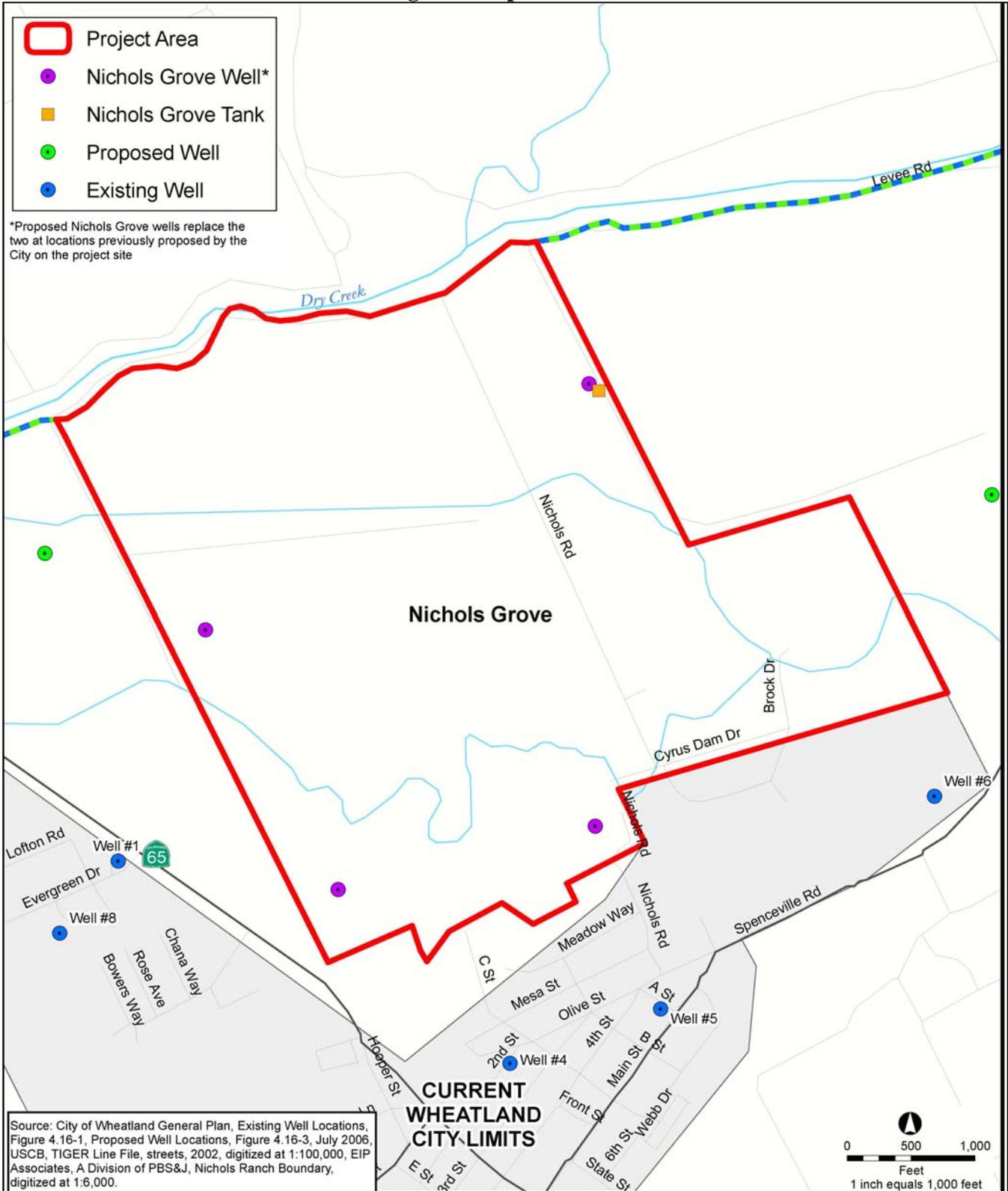
Facilities required by the Nichols Grove Tentative Map project include four wells of approximately 200-300 feet in depth and one storage tank to maintain fire-flow and adequate water pressure (See Figure 4.11-4). At 200-300 feet, the proposed wells will draw from the upper portion of the South Yuba groundwater sub-basin aquifer, which is relatively well characterized and not considered by the Department Water Resources (DWR) to be in a state of overdraft.

The project would also include the construction of associated water mains to provide the development with water and the appropriate connections to the existing Wheatland water system. The Nichols Grove Tentative Map site would be served wholly using groundwater; however, water from the existing Wheatland water supply network of six wells would not be used as a supply for the Nichols Grove Tentative Map project. Once the Nichols Grove Tentative Map water system has been constructed, the system's operation would be turned over to the City and the new wells and mains would become a fully-integrated part of the Wheatland water system.

Detailed yield calculations would be required as a part of the Water Master Plan and design engineering of the project's water system, including sizing of the wells and pumps. If the Nichols Grove Tentative Map wells are sized similar to the City's existing wells and provide similar yields, the yield of the four proposed wells would be approximately 1,600 afa. 1,600 afa is less than the historically-available supply on the property, so size and yield of the proposed wells, rather than the historically-available supply of 2,300 afa, is likely to be the limiting factor in supplying water to the Nichols Grove Tentative Map site.

Once the wells and project have been constructed, the supply available to the Nichols Grove Tentative Map site is anticipated to be consistent from one year to the next. If recycled water becomes available, the total groundwater demand can be reduced.

**Figure 4.11-4
 Existing and Proposed Well Sites**



Source: EIP, 2007.

Non-Participating Properties

Upon development, the non-participating properties would increase daily water demand. Using the domestic water system demand rates by types of land use provided in Table 4.11-3, the water demand for the non-participating properties would increase with development. However, the water supply demand for the non-participating properties has been anticipated in the General Plan water demand analysis, and the demand is included in the total General Plan Update buildout demand estimate of 9,400 AFA. Therefore, as sufficient water is available to serve buildout of the General Plan area, sufficient water is also available to serve development of the non-participating properties. In addition, future developers would be required to construct the needed water supply and delivery infrastructure to provide service to the non-participating properties.

Cumulative Water Demand

City of Wheatland

Existing urban water demands in the City of Wheatland are estimated at approximately 1,200 AFA. In addition to urban uses, the Wheatland GPCA also contains land currently used for agriculture. Table 4.11-1 shows the existing agricultural use for the Wheatland Subarea as 10,400 AFA. Surface water is delivered to the Dry Creek MWC and Camp Far West ID; historical crop uses and water demands were used to estimate the historical surface water use at 6,300 AFA in 2004. Agricultural groundwater use was estimated at 4,100 AFA using similar methods, for areas that do not receive surface water, such as the area within Wheatland Water District. The Wheatland GPCA agricultural and urban demand in 2004 was 11,600 AFA.

Projected demand levels for the City of Wheatland General Plan Buildout are also shown in Table 4.11-10. This projection from the Sacramento Valley Integrated Regional Water Management Plan (IRWMP) projects buildout of the City of Wheatland Subarea by 2016, based on an assumption of aggressive development and the intent of providing a conservative estimate of future demand. The General Plan Update, however, is based on a 2025 planning horizon; this document assumes that buildout of the current General Plan will occur by 2025, which would be more consistent with historical patterns in the region.

As presented in Table 4.11-10, the City's GPCA supply is based on the historic pumping from within the GPCA. The historic groundwater supply is sufficient to meet demands of some of the development proposed in the current General Plan Update, but may not be able to provide for all of the proposed development. Current understanding of proven historical supplies show there is potential for a 4,100 AFA shortfall. As more data quantifying the aquifer yield and recharge become available, additional groundwater withdrawals could be proven sustainable.

Table 4.11-10					
City of Wheatland Projected Demands – General Plan Buildout					
Year	2005	2010	2015	2020	2025
Historical Groundwater Supply	5,300	5,300	5,300	5,300	5,300
Production (AFA)	1,200	3,250	5,300	7,350	9,400
Surplus (Deficit)	4,100	2,050	0	(2,050)	(4,100)
Note: Assumes evenly-distributed growth through 2025.					
Source: EIP, 2007.					

Regional Water Demand

Within Yuba County, most water use has been for agriculture, either through shallow groundwater wells or surface water deliveries. YCWA currently delivers approximately 310,000 AFA of surface water to the YCWA's Member Units from the Yuba River, to meet agricultural demands. According to the preliminary data from the Yuba County IRWMP, total Yuba County water use in 2004 was 521,600 AFA for both North and South Yuba groundwater sub-basins (Table 4.11-1). The use in the South Yuba groundwater sub-basin totals 286,400 AFA, 110,000 AFA of which is groundwater use. All urban water use in both North and South Yuba sub-basins is derived from groundwater sources, and totals 30,600 AFA.

With the conversion of agricultural land to residential uses, as well as the introduction of surface water supplies by YCWA, pumping from the shallow aquifer has declined considerably in the past 20 years. Over this period of time, reduction in groundwater pumping has allowed water levels in the upper aquifer to recover and stabilize (EIP, 2007). In recent years, water table levels have been recorded as shallow as 10 feet below the ground surface in southwestern Yuba County. The conversion of water supply to surface water or deeper groundwater is anticipated to continue, and there is potential for water levels to rise further. This could, in turn, possibly cause drainage problems in some areas of the South Yuba sub-basin.

Preliminary data from the Yuba County IRWMP predict that the total demand in the Yuba County area in 2016 will be 527,600 AFA, with 291,000 of that demand occurring in the South Yuba groundwater sub-basin (See Table 4.11-11). This represents only a 6,000 AFA, or 1.1 percent, increase over existing demands in the County. The Yuba County General Plan predicts that agricultural activities in southern Yuba County will decline over the next 20 years.

Table 4.11-11							
Yuba County - Future Conditions (2016) Water Use							
Area	Agricultural Uses (AFA)			Urban Uses (AFA)			Total (AFA)
	Surface Water	Groundwater	Total	Surface Water	Groundwater	Total	
North Yuba Groundwater Basin							
North Yuba Agricultural Subarea	188,100	39,000	227,100	0	5,600	5,600	232,700
City of Marysville Subarea	0	300	300	0	3,600	3,600	3,900
Subtotal	188,100	39,300	227,400	0	9,200	9,200	236,600
South Yuba Groundwater Basin							
South Yuba Subarea	210,900	21,200	232,100	0	49,500	49,500	281,600
City of Wheatland Subarea	0	0	0	0	9,400	9,400	9,400
Subtotal	210,900	21,200	232,100	0	58,900	58,900	291,200
Total Plan Area	399,000	60,500	459,500	0	68,100	68,100	527,600

Source: EIP, 2007.

Groundwater use for agricultural purposes will decrease by 65,600 AFA, while groundwater use for urban purposes is anticipated to increase by 37,500 AFA. This leaves a net decrease in the amount of groundwater pumping regionally of 28,100 AFA. Groundwater pumping from the North Yuba sub-basin is anticipated to increase slightly, by 1,800 AFA; a net decrease in groundwater use of 29,900 AFA is expected in the South Yuba sub-basin.

The time horizon stated in the Sacramento Valley IRWMP for Yuba County, however, is 2016. Regional demand projections beyond that year are not currently available, as the County General Plan has not yet been revised to show land use or population projections beyond 2016. The County General Plan is currently being updated, which will provide longer-term population and land-use information.

Regionally, an increase in demand of 6,000 AFA is anticipated by approximately 2016; this represents only a 1.15% increase over the historical supplies of 521,600 AFA. In a simply volumetric sense, this change in total water use is minimal. Basin-wide, groundwater use is expected to decrease overall by 28,100 AFA, while surface water use will increase by 34,100 AFA.

Although the overall increase in demand is unlikely to outpace the regional water supplies, the regional pattern of water use is anticipated to change significantly. Yuba County's water use is predicted to change from relatively geographically-homogenous

use of groundwater and surface water, to concentrated urban use of groundwater. While the basin is anticipated to see an overall reduction in the use of groundwater, concentration of urban wells may result in local cones of depression, and possibly water quality problems in some areas where freshwater overlies poorer quality groundwater, like the Wheatland area. The region may be faced with adequate regional water supply, but localized supply or distribution problems.

Conclusion

The City Engineer and Director of Public Works review plans for conformance with City and State standards. City costs incurred for water system plan review, processing, and construction are borne by the project proponent. Upon completion of the improvements to the satisfaction of the City, the water system improvements would be accepted as part of the City water system. In areas where a developer is required to install a system larger than required for the project, the developer would be reimbursed by subsequent projects or other methods for oversizing. Although an adequate water supply is available to serve the Nichols Grove Tentative Map site daily average demand, the Nichols Grove Tentative Map site would contribute to greater cumulative demands on the existing water system at buildout of the GPCA, which could contribute to localized cone depressions, possibly adversely affecting existing groundwater users or resulting in a decrease in water quality. In addition, development of the non-participating properties would increase the daily water demand. The 2025 Wheatland General Plan water demands projected sufficient historic groundwater supply to meet demands of some of the development proposed in the current General Plan Update buildout, but may not be able to provide for all the proposed development. Therefore, the Nichols Grove Tentative Map site and non-participating properties would contribute to an increase of local water demand and 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

- 4.11-1(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 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.*

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 the City Engineer. The applicant shall be required to implement recommended mitigation measures from the WSA, for review and approval of the City Engineer and the Public Works Director.*

4.11-2 Adequate wastewater facilities for new residents.

Nichols Grove Tentative Map and Non-Participating Properties

Wastewater Capacity

The existing WWTP is located adjacent to the Bear River, and west of SR 65. The WWTP has a permitted design treatment capacity of 0.62 mgd ADDWF. The ADDWF for the existing WWTP, as of September 2004, was 0.29 mgd. The last expansion of the WWTP occurred in 1990 when the plant was expanded from 0.21 mgd to 0.62 mgd ADDWF capacity. The expansion to 0.62 mgd ADDWF is adequate to meet the WWTP demands within the existing City limits when buildout occurs; this includes serving the Heritage Oaks Estates and Jones Ranch projects, which were recently annexed to the City. However, the WWTP is not sized to provide for any substantial new proposed annexation development areas.

As mentioned previously, the current capacity of the WWTP is 0.62 mgd, and the ADDWF for the existing WWTP is 0.29 mgd. As shown in Table 4.11-12, The Nichols Grove site would generate an additional 0.52 mgd, thus exceeding the existing WWTP capacity. The existing plant capacity is insufficient to accommodate the Nichols Grove site and the buildout of the General Plan Land Use Diagram. Furthermore, the Regional Water Quality Control Board (RWQCB) has indicated that the City's current method of wastewater disposal (into rapid infiltration basins located within the levees of the Bear River) is not a viable long-term option. The buildout of the City of Wheatland would have an additional wastewater demand of approximately 4.45 mgd, including the proposed Nichols Grove project (General Plan EIR, page 4.16-32). Therefore, in order for adequate wastewater service to be provided for the Nichols Grove project, a new WWTP would need to be constructed. As previously discussed, the Wheatland General Plan identified the need for a new WWTP and selected locations where the plant could be constructed. Although the City has retained CH2MHill to design the new WWTP, progress has slowed due to funding complexities. The new WWTP will have to be operable prior to the occupancy of the proposed project.

Upon development, the non-participating properties would generate additional wastewater. The non-participating properties are outside of the current City limits; therefore, adequate capacity does not exist at the current WWTP to serve the future development.

**Table 4.11-12
Nichols Grove Tentative Map Wastewater Generation**

Site No.	Land Use	Ac	DU	Person/Du	Population	Unit Flow gal/ac/day	gal/day
	Well Sites	2.0				0	0
	Open Space	59.6				0	0
	Major Rds	18.9				0	0
	Elem School	11.6				2,500	29,000
	Middle School	16.9				2,500	42,250
	Park/Detention	70.5				275	19,388
	Subtotals	179.5					90,638
						gal/cap/day	
1	LDR	11.0	60	3.0	180	90	16,200
2	LMDR	13.6	76	3.0	228	90	20,520
3	LDR	28.2	147	3.0	441	90	39,690
4	LMDR	29.2	143	3.0	429	90	38,610
5	MDR	25.1	197	3.0	591	90	53,190
6	MDR	8.9	72	3.0	216	90	19,440
7	LMDR	71.7	332	3.0	996	90	89,640
8	LDR	55.8	191	3.0	573	90	51,570
9	LDR	45.3	209	3.0	627	90	56,430
HDR	HDR	5.7	91	1.5	137	90	12,285
CMU	CMU	11.5	0			1,750	20,125
	CMU (res units)		91	1.5	137	90	12,285
	Subtotals	306.0	1,518				429,985
	Grand Totals	485.5					520,623

Source: Wheatland Wastewater Master Plan by CH2MHILL, 2004.

Wastewater Distribution

In order to collect wastewater from the proposed on-site residences, six- and eight-inch gravity sanitary sewer lines would be constructed in the project's residential areas, eight-, 10-, and 12-inch gravity sanitary sewer lines would be constructed in the project's collector streets, and 10-, 15-, 18-, and 21-inch gravity sanitary sewer lines would be constructed in the project's main thoroughfares.

The existing City of Wheatland WWTP has limited capacity for expansion and, at current capacity, would not be able to provide service to the Nichols Grove Tentative Map project or any non-participating property. All wastewater from the Nichols Grove Tentative Map site and the non-participating properties would be transported to the

proposed WWTP, which is currently proposed to be located west of SR 65 and north of Dry Creek. The Sewer Collection System Master Plan Technical Report anticipated that an off-site infrastructure improvement project would include the construction of a trunk sewer system from the proposed WWTP easterly to the Nichols Grove Tentative Map western boundary. Consistent with the Wheatland General Plan Update Sewer Collection System Master Plan, the conceptual trunk sewer location is in the east-west arterial, also known as the Ring Road. The project applicant will be required to pay a fair share toward the total cost of the infrastructure project to be carried out by the City.

Based on flow rate factors from the Wheatland Wastewater Master Plan by CH2MHILL, wastewater generation for the Nichols Ranch property is estimated to be 0.52 mgd. This is the average dry weather flow to be treated at the proposed WWTP. The Nichols Grove Tentative Map sanitary sewer system would include small diameter local collector sewers that would connect to the trunk sewer system. The Nichols Grove sewer trunk line would be sized to accept future developed flows from the adjacent sites, consistent with the sizing determined in the Sewer Collections System Master Plan Technical Report for the General Plan.

Upon development, the non-participating properties would increase daily wastewater generation. However, the wastewater generation by the non-participating properties has been anticipated in the Wheatland Wastewater Master Plan. Furthermore, developers of the non-participating properties would be responsible for constructing the necessary sewer infrastructure to ensure needed sewer service, and would be required to pay a fair share toward the total cost of the infrastructure project to be carried out by the City.

Conclusion

The proposed project is located within the City of Wheatland's Sphere of Influence and the proposed uses are consistent with the General Plan Land Use Designation Map; therefore, the proposed project would not be expected to generate wastewater flows beyond what has been anticipated for buildout of the General Plan area. However, as a new WWTP and delivery infrastructure has not yet been constructed to serve the project and other development in the General Plan Study Area, a *significant* impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact; however, because a program has not been established to determine adequate funding sources and schedule of completion, the construction of a new WWTP is uncertain. Therefore, a *significant and unavoidable* impact would remain.

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.*

4.11-3 Need for additional waste disposal/recycling services.

Nichols Grove Tentative Map and Non-Participating Properties

The increase in population associated with the proposed project would increase the generation of solid waste. The *City of Wheatland General Plan EIR* states that the implementation of Wheatland's Source Reduction and Recycling Element would reduce the impact on the landfills resulting from General Plan buildout.

The solid waste from Wheatland is disposed of at the YSDI landfill located in Yuba County. Currently, the capacity of the landfill is sufficient to handle the waste of Wheatland and neighboring jurisdictions. Wheatland also has access to other landfills. The YSDI landfill, which began receiving solid waste in 1995 is located on Ostrom Road in Yuba County has at least 59 years of capacity; thus, collectively, the landfill would be able to accept Wheatland's future solid waste, including that of the proposed project.

The City is also required by AB 939 to ensure that the project achieves and maintains the diversion and recycling mandates of the State. The project would include new construction that will have materials leftover from woodcutting, concrete pours, and pipe work. If these materials are placed in the sanitary landfill, the waste generated could cause the City to violate State regulations. Recycling and reuse of these materials would divert the materials from going to the landfill, and thus help the City stay in compliance with AB 939 mandates. However, failure to recycle and reuse waste generated during construction of the proposed project would result in a *potentially significant* impact.

Mitigation Measure(s)

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

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.*

4.11-4 Project impact on electricity distribution.

Nichols Grove and Non-Participating Properties

Residential and future commercial activities associated with the Nichols Grove Tentative Map project would increase the demand for electricity. Development of the project would occur in a location that is adjacent to electricity and gas service. The Nichols Grove Tentative Map project would increase electricity and natural gas consumption, but not to a level that would be considered substantial in relation to regional or statewide energy supplies.

The Nichols Grove Tentative Map project would be subject to the standards of Title 24, California's Energy Efficiency Standards. Title 24 measures consist of developing an energy budget for structures and designing the structures to use less than or equal to the energy that is budgeted. Improved site planning and building design as well as energy conservation measures, as outlined in Title 24, would minimize the potential for wasteful, inefficient, or unnecessary consumption of energy. The project would be subject to the minimum energy conservation requirements of Title 24 of the California Code of Regulations, which are applicable to all building construction.

The Nichols Grove Tentative Map project would also be required to construct the necessary infrastructure in order to connect to existing electrical lines in the project vicinity. Development plans should also provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities. Because the project could result in impacts to current PG&E facilities, a *potentially significant* impact would result.

Mitigation Measure(s)

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

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 needed to serve the project. The Improvement Plans for the project(s) shall incorporate the necessary easements and improvements 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.

Nichols Grove Tentative Map

The Nichols Grove Tentative Map site is located within the jurisdiction of, and is currently provided services by, the Wheatland Police Department. The development of the project site would not expand the Police Department's district boundaries. The Nichols Grove Tentative Map site would add 1,609 residential units to the City of Wheatland. Applying the Wheatland standard of 3.02 average persons per household (*City of Wheatland General Plan*, p. 4-2), the Nichols Grove Tentative Map site would add approximately 4,859 residents to the City of Wheatland (1,609 units x 3.02 average persons per household unit = 4,859 residents). In order to maintain a ratio of 1.7 officers per 1,000 people in the City of Wheatland, an additional 8.26 officers would be required.⁸

In communication with the Wheatland Police Department, the Police Chief has indicated that in order to adequately serve the Nichols Grove site, the following would be needed:

- One Police Sergeant;
- One Police Corporal;
- Two Police Officers;
- One Community Service Officer;
- One Records Clerk;
- One Fully Equipped Marked Emergency Police Vehicle;
- Five Portable Radios; and
- Five Sets of Safety Equipment Assigned to Staff.

Accordingly, the Nichols Grove Tentative Map project would generate additional demand for the Wheatland Police Department.

Non-Participating Properties

Upon development, the non-participating properties would generate additional demand for the Wheatland Police Department. Residential and commercial land uses increase demand due to the expected increase of crime and traffic. Additional officers would be required to maintain the desired officer-to-population ratio.

Conclusion

Development of the Nichols Grove Tentative Map site or any of the non-participating properties would generate additional demand for the Wheatland Police Department. Without the addition of officers and related equipment, the increase in service requirements 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

4.11-5 *Prior to issuance of building permits, the applicant shall be required to pay The City's Police Development Impact Fees.*

4.11-6 Adequate fire protection services available to new residents.

Nichols Grove Tentative Map

The Nichols Grove Tentative Map site is located within the jurisdiction of and is currently provided services by the Wheatland Fire Department and the Plumas-Brophy Fire Protection District as a joint power called the Wheatland Fire Authority. The Wheatland and Plumas-Brophy Fire Districts generally operate as one under joint policies and procedures governing training and operations. The Wheatland Fire Department has a station located at 313 Main Street and the Plumas-Brophy Fire Protection District has a station located on Dairy Road.

Applying the Wheatland standard of 3.02 average persons per household, the Nichols Grove Tentative Map site would add approximately 4,859 residents (1,609 total dwelling units x 3.02 average persons per household unit = 4,859 new persons). Policy 5.H.2. of the Wheatland General Plan states, "The City shall, through adequate staffing and patrol arrangements, endeavor to maintain the minimum feasible response times for fire and emergency medical service." As a result of the introduction of 4,859 new residents to the City, additional fire protection services would be required in order to maintain WFA's goal of a one to four minute emergency response time within the Wheatland City limits. The WFA does not have a staffing standard; however, the WFA has indicated that in order to adequately serve the Nichols Grove Tentative Map site, the WFA would require three full-time staff at the time of buildout of the Wheatland General Plan.⁹

Non-Participating Properties

Upon development, the non-participating properties would generate additional demand for the WFA. The Wheatland Fire Authority provides fire protection to the City and region surrounding Wheatland. Construction of buildings within the non-participating properties, currently outside the Wheatland City limits, would create additional demand for fire services. The Wheatland General Plan EIR, Mitigation Measure 4.13-2, found on page 4.13-17, requires new development project proponents to pay applicable fire development fees.

Conclusion

The increase in service requirements for the WFA that would be created by the Nichols Grove Tentative Map project and the development of any non-participating properties 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

4.11-6 *Prior to issuance of building permits, the applicant shall be required to pay the City's Fire Protection Development Impact Fees.*

4.11-7 Number of enrolled students exceeding capacity.

Nichols Grove Tentative Map

The project site would be located within the Wheatland School District and Wheatland Union High School District. Using the generation rates from the City of Wheatland General Plan, as previously discussed, the Nichols Grove site would generate approximately 1,180 additional students; 890 K-8 students, and 290 9-12 students (1,609 dwelling units x Student Generation Factor: K-8 = 0.553 and 9-12 = 0.18). The Nichols Grove site would create additional demand for school services provided by the Wheatland School District and Wheatland Union High School District.

As shown in Table 4.11-4, an excess capacity of approximately 1,418 students exists in the Wheatland school system; however, development of the recently annexed Jones Ranch and Heritage Oaks Estates projects will significantly reduce the excess capacity. As a result, student generation resulting from buildout of the Nichols Grove Tentative Map would exceed the current school capacity. However, the Nichols Grove Tentative Map includes land dedicated for the construction of an Elementary School and a Middle School. Assuming that the schools are built to capacities similar to the existing Lone Tree Elementary and Bear River Middle School, development of the school sites would create the capacity for 1,966 students. In addition, the district currently imposes impact fees on residential and commercial development occurring within district boundaries. The fees are intended to offset the potential impacts developments would have on school facilities. Pursuant to SB 50, residential development cannot be restricted based on the total number of students exceeding existing school capacity.

Non-Participating Properties

Upon development, non-participating properties would generate additional students, creating an additional demand for school facilities. The non-participating properties are not within the current City limits, and would create additional demand on school facilities. The Wheatland General Plan EIR, Mitigation Measure 4.13-3, found on page 4.13-20, requires new development project proponents to pay applicable school impact fees to the Wheatland School District and the Wheatland Union High School District.

Conclusion

Because the Nichols Grove Tentative Map project and non-participating properties could generate a student population that would exceed the existing capacity of the Wheatland School District and Wheatland Union High School District, a *potentially significant* impact would result.

Mitigation Measure(s)

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

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.*

4.11-8 Adequate provision of parks and recreation space for new residents.

Nichols Grove Tentative Map

Development of the project site would result in new residences and consequently would increase the demand for neighborhood, community, and regional parks and other recreation facilities. The Nichols Grove Tentative Map site includes 1,609 total dwelling units, a commercial site, and two school lots. Applying the current Wheatland standard of 3.02 average persons per household, the Nichols Grove Tentative Map site would generate approximately 4,859 additional residents. The *City of Wheatland General Plan* recommends five acres of park per 1,000 residents. Therefore, the project would require approximately 24.29 acres of park space for the additional residents. The Small Lot Tentative Map (See Chapter 3, Project Description, Figure 3-4) for the Nichols Grove Tentative Map site indicates that several public park sites are proposed within the Nichols Grove Tentative Map site. Two of the parks would be designed as a combination of open space and detention basins. Park lot 1 (DNR-2D and 3A) would total 23.7 acres and Park Lot 3 (DNR-1B and 2C) would total 25 acres. The open space/detention basins would total 48.7 acres. The total acreage of the two open space/detention basins would exceed the City of Wheatland's requirement of 24.29 acres for the Nichols Grove Tentative Map site. In addition, the overall park acreage for the proposed project would total 70.5 acres. Therefore, a less-than-significant impact would result.

Non-Participating Properties

Upon development, the non-participating properties would generate additional demand for parks and recreation. The City of Wheatland General Plan Policy 6.A.4 requires new development project proponents to provide a minimum of five acres of parkland for every 1,000 new residents. However, with project specific site plans ensuring compliance with the park requirements is not possible.

Conclusion

The Nichols Grove Tentative Map site would exceed the requirement for open space/detention basins and would have a *less-than-significant* impact. Upon development, the non-participating properties would be consistent with current General Plan land use designations and residential uses would be located throughout the non-participating properties. The City of Wheatland recommends a ratio of five acres of park

per 1,000 residents. Should future residential development not comply with this General Plan land use policy, a **potentially significant** impact would occur.

Mitigation Measure(s)

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

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 or pay in lieu fees, for the review and approval of the City Engineer.*

Cumulative Impacts and Mitigation Measures

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.

Nichols Grove Tentative Map and Non-Participating Properties

The proposed project is located outside the City limits, but is located within the Wheatland Sphere of Influence. The proposed project includes annexation to the City of Wheatland. Implementation of the proposed project would contribute to an increased demand for public services and facilities in the City of Wheatland. Public service and facility needs for the City of Wheatland were evaluated in the *City of Wheatland General Plan EIR* to ensure that adequate services would be available for buildout of the General Plan, according to the Land Use Diagram. The analysis found that with implementation of the General Plan policies and additional mitigation measures included in the *General Plan EIR*, impacts to public services and utilities from buildout of the General Plan Study Area would be less-than-significant. In addition, as demonstrated in this Draft EIR, with the incorporation of mitigation measures impacts to public services and facilities as a result of the proposed project would be reduced to less-than-significant. Therefore, the proposed project's cumulative contribution to the City's public services and facilities needs would not be cumulatively considerable. Furthermore, similar to the proposed project, other future development projects would be required by the City to pay fair-share fees toward the expansion and creation of public services and facilities. Therefore, cumulative impacts associated with public services and facilities would be considered **less-than-significant** with the incorporation of the mitigation measures identified above.

Mitigation Measure(s)

None required.

Endnotes

- ¹ *Water Supply Assessment for the Proposed Nichols Grove Project*, EIP Associates, March 2007.
- ² *City of Wheatland General Plan EIR*, July 2006.
- ³ *City of Wheatland General Plan*, July 2006.
- ⁴ *City of Wheatland Wastewater Treatment Plan, Technical Memoranda 1-21*, CH2MHill, December 2006.
- ⁵ *EI: City County Population Estimates January 1, 2007*, Department of Finance website (www.dof.ca.gov), October 2007.
- ⁶ Email communication with Wheatland Police Department Police Chief Dan Boon, November 8, 2006.
- ⁷ Email communication with Wheatland Fire Department Captain Art Paquette, January 29, 2007.
- ⁸ Email communication with Wheatland Police Department Police Chief Dan Boon, November 8, 2006.
- ⁹ Email communication with Wheatland Fire Department Captain Art Paquette, January 29, 2007.

5

ALTERNATIVES ANALYSIS

INTRODUCTION

The primary intent of the alternatives evaluation in an EIR, as stated in Section 15126.6(a) of the CEQA Guidelines, is to “[...] describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives [...].”

The following project objectives were provided by the project applicant, with the intent that any alternative project should meet most of the objectives of the project:

1. Make efficient urban use of marginal quality agricultural lands immediately adjacent to existing urban uses;
2. Develop a project for which it is economically practical for reasonably paced, balanced growth to help stabilize the community’s housing market over the build out 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 Nichols Grove 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, will primarily reinforce the existing commercial downtown core of Wheatland and function as a fully integrated part of the overall community.

SELECTION OF ALTERNATIVES

Alternatives that are included and evaluated in this EIR must be feasible alternatives. According to the CEQA Guidelines Section 15126.6(f), "[...] the alternatives shall be limited to those that would avoid or substantially lessen any of the significant effects of the project [...]." In addition, Section 15126.6(f)(1) states that the feasibility of an alternative may be determined based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control.

Furthermore, Section 15126.6 (f) states, "[...] The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice [...]."

The CEQA Guidelines (§15126.6 (e)(1)) state that a 'no project' alternative should be evaluated along with its impact. Specifically, the Guidelines state:

The specific alternative of the "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project. The no project alternative analysis is not the baseline for determining whether the Proposed Project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline.

In addition, Section 15126.6 (d) of the CEQA Guidelines states that "[...] If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed."

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS

Consistent with CEQA requirements, primary consideration was given to alternatives that could reduce significant impacts, while still meeting most of the project objectives. Those alternatives that would have impacts identical to or more severe than the Proposed Project, and/or that would not meet any or most of the project objectives were rejected from further consideration. The rejected alternatives are discussed below.

The City of Wheatland considered and dismissed “Offsite Alternative” or “Alternate Location Alternative.” The development of the Offsite Alternative would result in the development of the project at a location other than the site proposed. The resulting development project emulating an approximately 486-acre project containing approximately 1,600 dwelling units, parks, open space and school sites, commercial site, and associated streets, pedestrian paths and related infrastructure, would result in impacts (i.e. from grading and other construction activities), regardless of the location of the project site. Property of sufficient size and configuration to accommodate the project with fewer resulting impacts than those that would occur on the proposed site is unavailable within the City Sphere of Influence. In addition, the applicant, Nichols Ranch LP, does not control another site in Wheatland with the potential to accommodate the Proposed Project. Therefore, the Offsite Alternative or the Alternate Location Alternative would be infeasible, would not reduce the impacts, and is dismissed from further consideration in this DEIR.

ALTERNATIVES CONSIDERED IN THIS EIR

The following alternatives are included for discussion in order to attempt to minimize or eliminate the potentially significant and unavoidable impacts identified in the Draft EIR. This Draft EIR determined that significant and unavoidable impacts would occur in the following five resource sections as a result of the project: Land Use and Agriculture, Aesthetics, Transportation and Circulation, Air Quality, and Hydrology and Water Quality as a result of the project. All other potentially adverse impacts are reduced to less-than-significant through the implementation of mitigation measures. Each of the chosen alternatives must strive to fulfill the stated objectives of the Proposed Project, while striving to avoid or reduce environmental impacts.

Table 5-2 at the end of this Chapter provides a comparison of potential impacts for each resource section.

No Project/No Build Alternative

CEQA requires the evaluation of the comparative impacts of the “No Project” alternative (CEQA Guidelines Section 15126.6 (e)). The No Project Alternative is defined in this instance as “no action taken on the proposed project” or “no build” on the project site. A No Project alternative in this case means that the site would remain located in Yuba County, and remain in its current state; therefore, the development activity associated with the Proposed Project would not occur. The project site would continue to carry the current City of Wheatland General Plan designations, but without approval of annexation to the City, as well as the approval of other entitlements, the project cannot occur. A “no action taken on the proposed project” or the “no

build” alternative is the type of No Project Alternative that is evaluated below for the Proposed Project. Therefore, under the No Project / No Build Alternative, the project would remain in its current state of partial agricultural production, with portions of the site in oak woodland and open native grassland. While this alternative would not meet the project objectives, CEQA requires the alternative to be analyzed.

Aesthetics

The Draft EIR determined that construction of the project would have an impact on the current appearance of the subject site based on three considerations. The aesthetic impacts were based on potential changes to the visual character of the site, the propensity to add or increase elements of light and glare, and the potential to alter the agricultural character of the site. Impact 4.1-2, related to light and glare, through the implementation of mitigation measures is reduced to less-than significant. Impacts 4.1-1 and 4.1-4 related to the agricultural character of the site and the visual character of the site both remain significant and unavoidable. The No Project/No Build Alternative would not result in the development of the project site. Therefore, the site would remain agricultural and open views would be preserved for motorists traveling along State Route 65 and other local roadways. Identifiable increases in light and glare would not occur, nor would there be any change to the agricultural character of the site. The No Project/No Build Alternative would not result in significant and unavoidable aesthetics impacts.

Land Use/Agricultural Resources

The Draft EIR determined that the Proposed Project would result in significant impacts via changes to land use and the conversion of agricultural land to urban uses. The construction of homes, commercial business, parks, and other urban uses removes the likelihood of continued agricultural activity and introduces a change in land use to something other than Prime Farmland. The Draft EIR identified project-level land use compatibility impacts associated with project implementation under Impact 4.2-1, and project-level and cumulative significant and unavoidable impacts associated with Prime Farmland conversion under Impacts 4.2-6 and 4.2-7, respectively. Because the No Project/No Build Alternative would not result in the conversion of the project site from agricultural land to urban uses, the No Project Alternative would not result in the conversion of Prime Farmland. Furthermore, because the No Project/No Build Alternative would not place residential uses on the site, incompatibility conflicts would not occur between the project site and existing agricultural operations occurring to the north of the project site. However, it should be noted that existing incompatibilities are present and would remain between on-site agricultural operations and adjacent residential areas to the south. Overall, the No Project/No Build Alternative would have fewer impacts to agricultural resources compared to the Proposed Project.

Transportation and Circulation

The Draft EIR determined that implementation of the Proposed Project has the potential to add significant traffic to the existing roadway system. Other forms of transportation including rail, which runs through the center of Wheatland and along the edge of the project site, and pedestrian and bicycle traffic, also will be impacted by implementation of the project. Needed upgrades to

existing facilities and construction of new facilities necessary to serve increases in the population have the potential to be significant. For example, construction of the Proposed Project will result in the elimination of two existing at-grade rail crossings and the construction of one new at-grade crossing. The Draft EIR determined that impacts associated with intersections and roadway segments would be significant and unavoidable for the Existing Plus Nichols Grove and Five Year Existing Plus Approved Projects Plus Nichols Grove Scenarios. The No Project/No Build Alternative would not result in the construction of any residential, commercial, public or other uses and would therefore not cause an increase in trips to the existing local roadway traffic volumes. However, it is important to note that many intersections and roadway segments are already operating at unacceptable levels without the Proposed Project. The No Project/No Build Alternative, unlike the Proposed Project, would not cause a traffic increase in the surrounding area, and would have fewer traffic impacts than the Proposed Project.

Noise

The Draft EIR determined that construction of the project could expose new residents of the development to noise in excess of limits identified in the General Plan; however, all potential impacts would be reduced to less-than-significant levels with mitigation measures. The No Project/No Build Alternative would not result in the construction of any residential, commercial, or public uses on the project site. Therefore, this alternative would not expose new residents to noise associated with traffic, the shopping center component, or any other project components, as would the Proposed Project. This alternative would likewise not result in the generation of vehicle trips and resultant traffic noise affecting off-site uses in existing neighborhoods to the south of the project site. Therefore, implementation of the No Project/No Build Alternative would result in fewer noise impacts than would the Proposed Project.

Air Quality

The Nichols Grove Tentative Map project site consists of approximately 486 acres located within Yuba County, adjacent to and outside the Wheatland City limits. In addition, 10 non-participating properties are included in the annexation limits for the project, totaling approximately 110 acres. The Nichols Grove Tentative Map site is currently used for agricultural operations. Most of the non-participating properties are utilized for agricultural operations as well. The Draft EIR concludes that construction emissions associated with grading and clearing would be considered a nuisance to nearby residential areas and would have a significant and unavoidable impact to air quality. The Draft EIR also determined that the Proposed Project would generate project-level and cumulative operational emissions, which would be considered significant and unavoidable. In addition, the Proposed Project would result in the emission of greenhouse gases, which the DEIR determined would have a significant and unavoidable impact relative to Global Climate Change. Implementation of the No Project/No Build Alternative would not result in a change in land use designation for the site, nor would it result in substantially increased airborne pollutant emissions from construction of new residential, commercial, and other uses on the site, as would the Proposed Project. Therefore, implementation of the No Project/No Build Alternative would not exceed Feather River Air Quality Management District significance criteria, and would be considered to have minimal impacts to air quality as compared to the Proposed Project.

Biological Resources

The Draft EIR identified potential impacts to sensitive species and species habitat as a result of construction of the Proposed Project. However, all potential impacts are reduced to less-than-significant with the implementation of mitigation measures. For example, potential impacts to Valley elderberry longhorn beetles and Swainson's hawk, are reduced to less-than-significant levels through satisfactory mitigation. The No Project/No Build Alternative would not result in development of the project site and consequently would not disturb any of the existing biological resources. The No Project/No Build Alternative would therefore have fewer impacts than the Proposed Project.

Cultural Resources

The Draft EIR has determined the potential for cultural (Native American) resources (both artifacts and human remains) to be present on the project site. Mitigation measures in place during construction would help ensure that impacts to resources are reduced to less-than-significant levels. However, the No Project/No Build Alternative would not have resultant changes in the current land use (agricultural production) on the project site. Therefore, a lack of disturbance of site soils by construction activity would ensure that any unearthed resources would not be damaged. Further, because the site soils have been continuously disturbed by agricultural activities for decades, it is unlikely that continuing such activities would result in additional impacts to buried cultural resources. Under the No Project/No Build Alternative, construction-related disturbances to previously undiscovered cultural resources would not occur.

Geology and Soils

The Draft EIR determined that the moderately expansive soils would have a potentially significant impact on the structures proposed for the project (See Impact 4.8-1). The No Project/No Build Alternative would not result in potential impacts to structures via expansive soils because the Alternative would not involve the development of any on-site structures. Impact 4.8-4 of the Draft EIR indicates that the Proposed Project would have a potentially significant impact to downstream water quality due to soil erosion. The No Project/No Build Alternative would maintain the agricultural condition of the project site. Because the site is currently farmed (partially), soils are loosened during farming operations, which are subject to wind and water erosion. Therefore, similar to the Proposed Project, the No Project/No Build Alternative would result in soil erosion. Overall, due to the decreased number of structures, the No Project/No Build Alternative would have fewer geological impacts compared to the Proposed Project.

Hazards

The Draft EIR identified hazards associated with the existing residence, pesticide shed and other outbuildings in the southern portion of the site, including the septic tank, the potential for pesticide residues, the potential for lead-based paints, and potentially asbestos-containing materials. In addition, development of the project site has the potential to impact a natural gas pipeline located in the railroad right-of-way. Non-participating parcels rezoned for development

would pose additional similar potential hazards upon development, specific impacts of which would require further analysis under separate environmental review. The No Project/No Build Alternative would not result in the introduction of additional people to the site. Therefore, potentially significant hazards identified in the Draft EIR, such as on-site wells and other infrastructure associated with structures would not pose a risk under the No Project/No Build Alternative. However, the potential hazards associated with the existing residence and outbuildings would also be considered potentially significant under the No Project/No Build Alternative because of their ability to impact occupants of the existing residence. For example, should the existing residence contain lead-based paints or asbestos-containing materials, dilapidation of the structure over time could expose residents to hazardous materials. Nevertheless, because the natural gas pipelines, groundwater monitoring, and agricultural wells, as well as on-site asbestos and pesticide-laden soils would not impact people under the No Project/No Build Alternative, the Alternative would be expected to have fewer impacts from potential hazards.

Hydrology and Water Quality

The Draft EIR determined that impacts associated with hydrology and water quality would be less-than-significant with implementation of mitigation measures. Less-than-significant impacts include impacts to groundwater levels, drainage and runoff, and water quality. Impacts associated with regional flooding, however, remain significant and unavoidable. The No Project/No Build Alternative would not result in construction that could change the existing drainage pattern for the project area. In addition, the No Project/No Build Alternative would not generate urban runoff that would degrade water quality in the area. Therefore, the No Project/No Build Alternative would not result in the need to treat stormwater runoff, as would the Proposed Project, nor would the No project/No Build Alternative create the need for additional potable water from groundwater or other sources. In addition, implementation of the No Project/No Build Alternative would not result in the placement of structures and people in any potential danger of flooding. Overall, compared to the Proposed Project, the No Project/No Build Alternative would result in decreased impacts on hydrology and water quality.

Public Services and Utilities

The Draft EIR determined that most impacts to public services and utilities would be less-than-significant with the implementation of mitigation measures. However, impacts related to the adequate provision of wastewater services would be significant and unavoidable. Extensions of existing services systems including electrical lines, water distribution lines, and increases in service levels of fire and police services would be necessary as a result of the Proposed Project. However, the No Project/No Build Alternative would not result in the construction of new homes requiring additional public services and utilities in the project area, such as additional water, wastewater, and stormwater infrastructure, the extension of power lines, and other municipal infrastructure necessary to serve the development. Nor would the No Project/No Build Alternative add residents that would need schools, police, or fire protection or other municipal services. Therefore, the No Project/No Build Alternative would result in fewer impacts associated with public services and utilities. The existing rural residence and associated outbuildings would continue to provide its own “self”-service for water, solid waste disposal and

drainage through the maintenance of site-specific systems (such as septic). Other services such as law enforcement services and road maintenance for continued access to the property would continue to be provided by Yuba County, resulting in very small measures of service requirements on the County. Overall, compared to the Proposed Project, the No Project/No Build Alternative would result in decreased impacts on public services and utilities.

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. 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. The commercial center, parks, and other public sites included in the Proposed Project would be included as part of this Alternative. The following breakdown (Table 5-1) lists the number and type of units included in the Reduced Intensity Alternative.

Table 5-1	
Number of Units for Reduced Intensity Alternative	
Housing Type	Total Number of Units
Single Family Detached	720
Single Family Attached	170
Multiple Family	55
Mixed Use	55
Commercial Center	-
Parks	-
Total	1,000

In addition, the 10 non-participating properties would remain part of the Proposed Project under the Reduced Intensity Alternative. For the purposes of this analysis, it is assumed that the non-participating properties would be developed pursuant to their respective General Plan land use designations.

Aesthetics

The Draft EIR determined that construction of the project would have an impact on the current appearance of the subject site based on three considerations. The aesthetic impacts were based on potential changes to the visual character of the site, the propensity to add or increase elements of light and glare, and the potential to alter the agricultural character of the site. Impact 4.1-2, related to light and glare, through the implementation of mitigation measures is reduced to less-than significant. Impacts 4.1-1 and 4.1-4 related to the agricultural character of the site and the visual character of the site both remain significant and unavoidable. The Reduced Intensity Alternative would result in the development of 1,000 residential units on the project site, as well as dedication of the neighborhood commercial, park, and school lots. Although the intensity of

development would be reduced under this Alternative, existing character of agricultural lands on the site would still be converted to an urban setting, which would be considered a significant and unavoidable impact under the Wheatland General Plan Update EIR criteria. Therefore, although aesthetics impacts would be reduced under this Alternative, the project-level and cumulative impacts would remain significant and unavoidable.

Land Use/Agricultural Resources

The Draft EIR determined that the Proposed Project would result in significant impacts via changes to land use and the conversion of agricultural land to urban uses. The construction of homes, commercial business, parks, and other urban uses removes the likelihood of continued agricultural activity and introduces a change in land use to something other than Prime Farmland. The Draft EIR identified project-level land use compatibility impacts associated with project implementation under Impact 4.2-1, and project-level and cumulative significant and unavoidable impacts associated with Prime Farmland conversion under Impacts 4.2-6 and 4.2-7, respectively. The Reduced Intensity Alternative would still result in development of the entire project site; however, the possibility exists that the single-family homes could be clustered to reduce the amount of land that is converted to urban uses and reduce incompatibilities with existing operations. However, those lands that remained would not be suitable for farming. As a result, a similar amount of Prime Farmland would be converted to non-farming uses via the implementation of the Reduced Intensity Alternative as compared to the Proposed Project. In addition, similar to the Proposed Project, the Reduced Intensity Alternative would result in land use incompatibility impacts pertaining to ongoing agricultural activities, situated east and west of the Nichols Grove Tentative Map Site. Therefore, the Reduced Intensity Alternative would likely result in similar impacts to agricultural resources and land use compared to the Proposed Project.

Transportation and Circulation

The Draft EIR identified that construction associated with the Proposed Project has the potential to add significant traffic to the existing roadway system. Other forms of transportation including rail, which runs through the center of Wheatland and along the edge of the project site, and pedestrian and bicycle traffic, also will be impacted by construction of the project. Needed upgrades to existing facilities and construction of new facilities necessary to serve increases in the population have the potential to be significant. The Draft EIR determined that impacts associated with intersections and roadway segments would be significant and unavoidable for the Existing Plus Nichols Grove and Five Year Existing Plus Approved Projects Plus Nichols Grove Scenarios. Traffic levels generated by the Reduced Intensity Alternative would be reduced overall, from 25,186 average daily trip ends to approximately 19,555 average daily trip ends. The lower number of residential units on the project site would reduce the level of traffic in the area. However, the development of the Reduced Intensity Alternative would nevertheless increase the traffic level above existing conditions. Therefore, similar to the Proposed Project, the Reduced Intensity Alternative would result in traffic-related impacts, although the impacts are expected to be fewer than those identified for the Proposed Project.

Noise

The Draft EIR determined that construction of the project could expose new residents of the development to noise in excess of limits identified in the General Plan; however, all potential impacts would be reduced to less-than-significant levels with mitigation measures. Because only 1,000 dwelling units would be constructed on the project site under the Reduced Intensity Alternative, the population introduced to the area would be accordingly reduced as compared to the Proposed Project. As a result, fewer sensitive receptors would be affected by noise impacts due to traffic, and UPRR (rail) operations. In addition, the reduced number of residences would allow for clustering of the units, which could be used to increase the size of buffers separating residences from the UPRR operations. However, because the entire project site would be developed as with the Proposed Project, residents would still be exposed to noise from a variety of sources. In addition, impacts to off-site sensitive receptors resulting from project-generated traffic would increase, although not to the extent that would occur with implementation of the Proposed Project. Therefore, although the Reduced Intensity Alternative would be expected to have fewer noise impacts, the impacts resulting from this Alternative would be similar to the Proposed Project overall.

Air Quality

The Draft EIR concludes that construction emissions associated with grading and clearing would be considered a nuisance to nearby residential areas and would have a significant and unavoidable impact to air quality. The Draft EIR also identified that the Proposed Project would generate project-level and cumulative operational emissions, which would be considered significant and unavoidable. The Reduced Intensity Alternative would involve the construction of 1,000 residential units on the 486-acre project site, with potentially larger lot sizes. The commercial center and public uses would also be included with this Alternative. Because of the reduced number of homes, airborne pollutant emissions resulting from construction and operation of the Alternative would be reduced, though not to a less-than-significant level, as compared to the Proposed Project. Because the Reduced Intensity Alternative involves grading and clearing of the same size area, the same amount of fugitive dust would be generated as compared to the Proposed Project. However, the Reduced Intensity Alternative does not include the same number of residential units included in the Proposed Project; therefore, operational emissions would be less for the Reduced Intensity Alternative as compared to the Proposed Project, resulting in overall fewer impacts to air quality.

Biological Resources

The Draft EIR identified potential impacts to sensitive species and species habitat as a result of construction of the Proposed Project. However, all potential impacts are reduced to less-than-significant with the implementation of mitigation measures. For example, potential impacts to Valley elderberry longhorn beetles and Swainson's hawk, are reduced to less-than-significant levels through satisfactory mitigation. The Reduced Intensity Alternative would reduce the number of housing units proposed for the project site. Fewer houses would allow greater flexibility for placement strategies of the houses on the site; therefore, the units could potentially be clustered to maintain sensitive habitat areas. The Reduced Intensity Alternative would result

in the same area of impact (footprint) as the Proposed Project or potentially an even smaller footprint. Therefore, the Alternative would be expected to result in the same or fewer potential for biological impacts as the Proposed Project.

Cultural Resources

The Draft EIR has determined the potential for cultural (Native American) resources (both artifacts and human remains) to be present on the project site. Mitigation measures in place during construction would help ensure that impacts to resources are reduced to less-than-significant levels. The Reduced Intensity Alternative would result in the development of 1,000 residential units on the project site, as opposed to 1,609 units under the Proposed Project. Similar to the Proposed Project, excavation and grading associated with the Reduced Intensity Alternative would have the potential to disturb currently unknown subterranean cultural resource deposits. Therefore, the effects of this alternative would be similar to those of the Proposed Project.

Geology and Soils

As discussed in Impact 4.8-1 of the Draft EIR, the project site's expansive soils would have a potentially significant impact on project construction. However, because the Reduced Intensity Alternative would include 609 fewer residential units than the Proposed Project, potential impacts to structures from expansive soils would be expected to be fewer than with the Proposed Project. Moreover, Impact 4.8-4 of the Draft EIR identified that the Proposed Project would have a potentially significant impact to downstream water quality due to soil erosion caused primarily by construction activities. Although fewer units would be constructed, the Reduced Intensity Alternative could involve the disturbance of a similar amount of topsoil via construction activities, due to grading for larger lot sizes. Therefore, although the Reduced Intensity Alternative would be expected to have fewer geological impacts, the impacts resulting from this Alternative would be similar to the Proposed Project overall.

Hazards

The Draft EIR identified hazards associated with the existing residence, pesticide shed and other outbuildings in the southern portion of the site, including the septic tank, the potential for pesticide residues, the potential for lead-based paints, and potentially asbestos-containing materials. Non-participating parcels rezoned for development would pose additional similar potential hazards upon development, specific impacts of which would require further analysis under separate environmental review. The Reduced Intensity Alternative would result in development of the entire 486-acre project site, albeit with fewer structures proposed for development. As identified in Draft EIR Section 4.9 (Hazards), the potential on-site hazards are associated with the existing residence, pesticide shed and other outbuildings in the southern portion of the site, including the septic tank, the potential for pesticide residues, the potential for lead-based paints, and potentially asbestos-containing materials. The potential for hazardous materials associated with the Reduced Intensity Alternative are not expected to change significantly from those expected with implementation of the Proposed Project. Overall, the

Reduced Intensity Alternative would have hazardous materials impacts similar to those of the Proposed Project.

Hydrology, Water Quality, and Drainage

The Draft EIR determined that impacts associated with hydrology and water quality would be less-than-significant with implementation of mitigation measures. Less-than-significant impacts include impacts to groundwater levels, drainage and runoff, and water quality. Impacts associated with regional flooding, however, remain significant and unavoidable. The Reduced Intensity Alternative involves the construction of 1,000 residential units and also includes the neighborhood commercial shopping center and the public/quasi-public uses. Therefore, fewer structures would be constructed for the Reduced Intensity Alternative compared to the Proposed Project. Although the Alternative would involve the development of fewer structures, essentially the same amount of area would be developed for Alternative (potentially through increased lot sizes) as compared to the Proposed Project. Therefore, this Alternative would still have the potential to cause short-term impacts to water quality due to grading and other construction activities throughout the 486-acre project site. In addition, similar to the Proposed Project, this Alternative would result in an increase in the amount of impervious surfaces on-site. For this reason, the Reduced Intensity Alternative would require the installation of a storm drain system to maintain stormwater runoff flows on the site at pre-development levels. Because the Reduced Intensity Alternative is expected to create the same amount of impervious surfaces compared to the Proposed Project, impacts to short-term and long-term water quality degradation and stormwater flows would be similar to the Proposed Project. In addition, by reducing the total number of units, the Reduced Intensity Alternative would reduce the number of potential residents exposed to flooding; however, the impact would remain significant and unavoidable.

Public Services and Facilities

The Draft EIR determined that impacts to public services and utilities would be less-than-significant with the implementation of mitigation measures. Extensions of existing services systems including electrical lines, water distribution lines, and increases in service levels of fire and police services would be necessary as a result of the Proposed Project. The Reduced Intensity Alternative involves the development of 1,000 residential units and also includes the commercial shopping component, and other public and quasi-public uses. Therefore, public services and utilities impacts (i.e., law enforcement, parks and recreation facilities, water, and wastewater) created by the Reduced Intensity Alternative would be expected to be reduced as compared to the Proposed Project, which includes the development of 1,609 units, a neighborhood commercial center, fire station site, and other public and quasi-public uses. As a result, the overall impacts from the Reduced Intensity Alternative would be fewer compared to the Proposed Project.

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.

Aesthetics

The Draft EIR determined that construction of the project would have an impact on the current appearance of the subject site based on three considerations. The aesthetic impacts were based on potential changes to the visual character of the site, the propensity to add or increase elements of light and glare, and the potential to alter the agricultural character of the site. Impact 4.1-2, related to light and glare, through the implementation of mitigation measures is reduced to less-than significant. Impacts 4.1-1 and 4.1-4 related to the agricultural character of the site and the visual character of the site both remain significant and unavoidable. The Reduced Acreage Alternative would not result in the annexation of all of the non-participating parcels. Although the existing agricultural character would be preserved on the non-participating portion of the site, conversion of the balance of the site from open agricultural fields to an urban setting would still remain a significant and unavoidable impact. Therefore, although aesthetics impacts would be reduced under this Alternative, the project-level and cumulative impacts would remain significant and unavoidable.

Land Use/Agricultural Resources

The Draft EIR determined that the Proposed Project would result in significant impacts via changes to land use and the conversion of agricultural land to urban uses. The construction of homes, commercial business, parks, and other urban uses removes the likelihood of continued agricultural activity and introduces a change in land use on the non-participating parcels to something other than prime farmland. The Draft EIR identified project-level land use compatibility impacts associated with project implementation under Impact 4.2-1, and project-level and cumulative significant and unavoidable impacts associated with Prime Farmland conversion under Impacts 4.2-6 and 4.2-7, respectively. Similar to the Proposed Project, the Reduced Acreage Alternative results in the conversion of Prime Farmland, excepting the 93-acre non-participating parcel (APN 015-140-056), which would not be annexed to the City and not rezoned in accordance with the General Plan land use designations. However, implementation of the Reduced Acreage Alternative would result in similar impacts overall on surrounding land uses as the Proposed Project. Therefore, the Reduced Acreage Alternative would have land use and agricultural impacts similar to those associated with the Proposed Project.

Transportation and Circulation

The Draft EIR determined that construction associated with the Proposed Project has the potential to add significant traffic to the existing roadway system. Other forms of transportation including rail, which runs through the center of Wheatland and along the edge of the project site, and pedestrian and bicycle traffic, also will be impacted by construction of the project. Needed upgrades to existing facilities and construction of new facilities necessary to serve increases in the population have the potential to be significant. For example, construction of the Proposed Project will result in the elimination of two existing at-grade rail crossings and the construction of one new at-grade crossing. The Draft EIR determined that impacts associated with intersections and roadway segments would be significant and unavoidable for the Existing Plus Nichols Grove and Five Year Existing Plus Approved Projects Plus Nichols Grove Scenarios. Traffic levels generated from the Reduced Acreage Alternative would be reduced overall to and from the project site as compared to the Proposed Project; however, development of the Reduced Acreage Alternative would nevertheless increase the traffic level above existing conditions. Therefore, similar to the Proposed Project, the Reduced Acreage Alternative would result in significant and unavoidable traffic-related impacts to intersections and roadway segments, although the impacts are expected to be reduced as compared to the Proposed Project.

Noise

The Draft EIR determined that construction of the project could expose new residents of the development to noise in excess of limits identified in the General Plan; however, all potential impacts would be reduced to less-than-significant levels with mitigation measures. The Reduced Acreage Alternative involves construction of 1,609 residential units, similar to the Proposed Project, without annexation of approximately 93 acres of non-participating parcels. As a result, a similar number of sensitive receptors would be affected by noise impacts due to traffic, and UPRR (rail) operations. In addition, impacts to off-site sensitive receptors resulting from project-generated traffic would increase, although not to the extent that would occur with implementation of the Proposed Project, due to a reduction in the square footage of neighborhood commercial. Therefore, although the Reduced Acreage Alternative would be expected to have slightly fewer noise impacts, the impacts resulting from this Alternative would be similar to the Proposed Project overall.

Air Quality

The Reduced Acreage Alternative involves construction of the same number of residential units (1,609) as the Proposed Project. Impact 4.5-1 of the Draft EIR concludes that construction emissions associated with grading and clearing would be considered a nuisance to nearby residential areas and would have a significant and unavoidable impact to air quality. Because the Reduced Acreage Alternative involves grading and clearing activities for 1,609 residential units, the same amount of fugitive dust would be generated as compared to the Proposed Project.

In addition, the Draft EIR identified that the Proposed Project would generate project-level and cumulative operational emissions, which would be considered significant and unavoidable. Because the Reduced Acreage Alternative excludes the 93-acre non-participating property from

the annexation limits, operational emissions associated with future development of the overall project would be reduced. Although the Reduced Acreage Alternative would generate fewer amounts of fugitive dust, ROG, and NO_x during construction and fewer operational emissions, impacts would still be expected to remain significant and unavoidable.

Biological Resources

The Draft EIR identified potential impacts to sensitive species and species habitat as a result of construction of the Proposed Project. However, all potential impacts are reduced to less-than-significant with the implementation of mitigation measures. For example, potential impacts to Valley elderberry longhorn beetles and Swainson's hawk, are reduced to less-than-significant levels through satisfactory mitigation. The Reduced Acreage Alternative involves the construction of 1,609 residential units. By not annexing the 93-acre non-participating property and not rezoning the property for future development, the potential for disturbance to sensitive species is slightly reduced given the presence of Grasshopper Slough on this property. Therefore, the Reduced Acreage Alternative would be expected to result in the same or possibly fewer biological impacts as the Proposed Project.

Cultural Resources

The Draft EIR has determined the potential for cultural (Native American) resources (both artifacts and human remains) to be present on the project site. Mitigation measures in place during construction would help ensure that impacts to resources are reduced to less-than-significant levels. The Reduced Acreage Alternative would result in the development of 1,609 residential units on the project site. Further, the 93-acre non-participating property is not a part of the project development; therefore, excavation and grading associated with the Reduced Acreage Alternative would further reduce the potential to disturb currently unknown subterranean cultural resource deposits. The reduction in project acreage under the Reduced Acreage Alternative could slightly decrease the likelihood of construction activities disrupting known or unknown cultural resources; however, impacts would remain essentially similar to those of the Proposed Project.

Geology and Soils

As discussed in Impact 4.8-1 of the Draft EIR, the project site's expansive soils would have a potentially significant impact on project construction. The Reduced Acreage Alternative would include the same number of residential units (1,609) as the Proposed Project. Potential impacts to structures from expansive soils would be expected to be the same as the Proposed Project. Moreover, Impact 4.8-4 of the Draft EIR identified that the Proposed Project would have a potentially significant impact to downstream water quality due to soil erosion caused primarily by construction activities. Given the construction of the same number of units, the Reduced Acreage Alternative would involve the disturbance of a similar amount of topsoil via construction activities. Annexation of the 93-acre non-participating property is not included as part of the Reduced Acreage Alternative and would potentially reduce the impacts associated with future grading and soils related work. Therefore, the Reduced Acreage Alternative would be expected to have the same or fewer geological impacts as the Proposed Project overall.

Hazards

The Draft EIR identified hazards associated with the existing residence, pesticide shed and other outbuildings in the southern portion of the site, including the septic tank, the potential for pesticide residues, the potential for lead-based paints, and potentially asbestos-containing materials. Non-participating parcels rezoned for development would pose additional similar potential hazards upon development, specific impacts of which would require further analysis under separate environmental review. The Reduced Acreage Alternative would not result in the annexation and potential future development of the 93-acre non-participating parcel east of SR 65. However, identified structures on the non-participating parcel could be associated with potentially hazardous materials and substances. The potential for hazardous material associated with the Reduced Acreage Alternative are not expected to change significantly from those expected with implementation of the Proposed Project. The Reduced Acreage Alternative would be expected to have the same or fewer hazardous impacts, as the Proposed Project overall.

Hydrology and Water Quality

The Draft EIR determined that impacts associated with hydrology and water quality would be less-than-significant with implementation of mitigation measures. Less-than-significant impacts include impacts to groundwater levels, drainage and runoff, and water quality. Impacts associated with regional flooding, however, remain significant and unavoidable. The Reduced Acreage Alternative would result in the creation of impervious surfaces through the development of residential and commercial uses, and would increase the amount of stormwater runoff generated on the project site, as with the Proposed Project. Therefore, the Reduced Acreage Alternative would require the incorporation of a stormwater drainage system to maintain post-development flows on the site at pre-development levels. In addition, the Reduced Acreage Alternative would result in the short-term degradation of water quality through construction activities, which would require the preparation of a Stormwater Pollution Prevention Plan (SWPPP). The Reduced Acreage Alternative would also result in the long-term degradation of downstream water quality, as would the Proposed Project. However, because the Reduced Acreage Alternative would create nearly the same amount of impervious surfaces compared to the Proposed Project, impacts to short-term and long-term water quality degradation and stormwater flows would be the same or slightly fewer than the Proposed Project.

Public Services and Facilities

The Reduced Acreage Alternative involves the development of 1,609 residential units. Therefore, public services and utilities impacts (i.e., public safety, parks and recreation facilities, wastewater, and water) created by the Reduced Acreage Alternative would be expected to be the same as those created by the Proposed Project. However, because the 93-acre non-participating property is excluded from the annexation limits for this Alternative, a corresponding decrease in demand for public services would result upon full development of the Reduced Acreage Alternative as compared to full development of the Proposed Project. As a result, the overall impacts from the Reduced Acreage Alternative would be the same or slightly less, as compared to the Proposed Project.

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 feature other land uses such as the neighborhood commercial center, the school site, 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 Nichols Grove Project requiring a new at-grade crossing, access would be provided near the north west corner of the project via a planned SR 65 overcrossing located at the City’s northern boundary aligned approximately with the City storm detention ponds. The northern SR 65 overcrossing is designated on the General Plan Circulation Diagram. This overcrossing would continue to provide a westerly location for project traffic to access downtown, in the absence of an extension of McDevitt Drive.

Aesthetics

The Draft EIR determined that construction of the project would have an impact on the current appearance of the subject site based on three considerations. The aesthetic impacts were based on potential changes to the visual character of the site, the propensity to add or increase elements of light and glare, and the potential to alter the agricultural character of the site. Impact 4.1-2, related to light and glare, through the implementation of mitigation measures is reduced to less-than significant. Impacts 4.1-1 and 4.1-4 related to the agricultural character of the site and the visual character of the site both remain significant and unavoidable. Significant and unavoidable impacts to the agricultural character of the site associated with the Modified West Access Alternative would remain. In addition, the Modified West Access Alternative would cause a slight increase in aesthetic impacts as compared to the Proposed Project because the overcrossing would be visible to those traveling on SR 65, as well as adjacent property owners. Potential aesthetics impacts would be greater under this Alternative, although the project-level and cumulative impacts would remain significant and unavoidable.

Land Use/Agricultural Resources

The Draft EIR identified that the Proposed Project would result in significant impacts via changes to land use and the conversion of agricultural land to urban uses. The construction of homes, commercial business, parks, and other urban uses removes the likelihood of continued agricultural activity and introduces a change in land use on the non-participating parcels to something other than Prime Farmland. The Draft EIR identified project-level land use compatibility impacts associated with project implementation under Impact 4.2-1, and project-level and cumulative significant and unavoidable impacts associated with Prime Farmland conversion under Impacts 4.2-6 and 4.2-7, respectively. The Modified West Access Alternative would result in the conversion of Prime Farmland similar to the Proposed Project. However, construction of the new overcrossing may incur the conversion of slightly more Prime Farmland than would the extension of McDevitt Drive, given the larger alignment needed to accommodate the SR 65 overcrossing. However, in terms of land use incompatibility impacts, both the

Modified West Access Alternative and the Proposed Project would have similar impacts. The impacts would occur because the compatibility concerns are primarily related to locating residences adjacent to existing agricultural operations; changing the western access point of the project would not affect this issue. Therefore, the Modified West Access Alternative would have the same or slightly greater land use and agricultural impacts as those associated with the Proposed Project.

Transportation and Circulation

The Draft EIR identified that construction associated with the Proposed Project has the potential to add significant traffic to the existing roadway system. Other forms of transportation including rail, which runs through the center of Wheatland and along the edge of the project site, and pedestrian and bicycle traffic, also will be impacted by construction of the project. Needed upgrades to existing facilities and construction of new facilities necessary to serve increases in the population have the potential to be significant. For example, construction of the Proposed Project will result in the elimination of two existing at-grade rail crossings and the construction of one new at-grade crossing. The Draft EIR determined that impacts associated with intersections and roadway segments would be significant and unavoidable for the Existing Plus Nichols Grove and Five Year Existing Plus Approved Projects Plus Nichols Grove Scenarios. The Modified West Access Alternative has not been designed to necessarily reduce the number of trips on the roadway network that would be generated by the Proposed Project. Rather, the Modified West Access Alternative has been considered in this analysis to provide a westerly access point to the project that involves fewer complexities to receive approval for said access point. For the Proposed Project, the western access point would be the McDevitt Drive extension, which necessitates obtaining a new at-grade crossing from UPRR. As discussed, in the Project Description, Chapter 3 of the Draft EIR, this new at-grade crossing is planned for in the Wheatland General Plan Circulation Diagram. Further, the Circulation Diagram indicates that two existing at-grade crossings in the downtown would be removed. Therefore, consistent with the Circulation Diagram, this project proposes a two-for-one at-grade crossing swap (removal of two existing at-grade crossings and the construction of one new at-grade crossing). However, although this approach is consistent with the approach outlined in the Wheatland General Plan Circulation Diagram, which has been available to the general public and local agencies since December 2005, should the acquisition of the new at-grade crossing to serve the McDevitt Drive extension prove problematic, this Alternative has been designed to provide an optional access point for the project. Therefore, in the absence of the McDevitt Drive extension, a percentage of project vehicles, particularly from project uses within the western project villages, would exit the project and access areas west of SR 65 via the SR 65 overcrossing. However, it should be noted that because the overcrossing would provide a more circuitous route to downtown Wheatland and SR 65 itself, the possibility exists that the overcrossing would not provide as much relief as the McDevitt Drive extension. Therefore, similar to the Proposed Project, the Modified West Access Alternative would result in traffic-related impacts similar to those identified for the Proposed Project.

Noise

The Draft EIR determined that construction of the project could expose new residents of the development to noise in excess of limits identified in the General Plan; however, all potential impacts would be reduced to less-than-significant levels with mitigation measures. The Modified West Access Alternative involves construction of 1,609 residential units, similar to the Proposed Project. A similar number of sensitive receptors would be affected by noise impacts due to traffic, and UPRR (rail) operations despite the relocation of the westerly traffic access point. Although circulation patterns would be altered by installing the overcrossing as opposed to the extension of McDevitt Drive, impacts to off-site sensitive receptors resulting from project-generated traffic would remain similar due to the same number of vehicles driving to and from the site. Therefore, the Modified West Access Alternative would be expected to have noise impacts equal to those of the Proposed Project overall.

Air Quality

The Modified West Access Alternative involves construction of the same number of residential units (1,609) as the Proposed Project, and the same amount of other land uses including neighborhood commercial, parks, open space, schools, and roadways. Impact 4.5-1 of the Draft EIR concludes that PM₁₀ emissions associated with grading and clearing would be considered a nuisance to nearby residential areas and would have a significant and unavoidable impact, in addition to ROG and NO_x emissions generated by the Proposed Project. Because the Modified West Access Alternative involves grading and clearing activities for 1,609 residential units, and an equal amount of area for roadways providing westerly access, although in a different location as compared to the Proposed Project, the same amount of fugitive dust would be generated.

In addition, the Draft EIR identified that the Proposed Project would generate project-level and cumulative operational emissions, which would be considered significant and unavoidable. Because the Alternative would generate an equivalent volume of traffic, albeit utilizing a different westerly access point, operational emissions would be similar for this Alternative as compared to the Proposed Project. The Alternative would generate similar amounts of fugitive dust, ROG, and NO_x during construction and equal operational emissions; therefore, impacts would be expected to remain significant and unavoidable.

Biological Resources

The Draft EIR identified potential impacts to sensitive species and species habitat as a result of construction of the Proposed Project. However, all potential impacts are reduced to less-than-significant with the implementation of mitigation measures. For example, potential impacts to Valley elderberry longhorn beetles and Swainson's hawk, are reduced to less-than-significant levels through satisfactory mitigation. The Modified West Access Alternative involves the construction of an equal number of residential units (1,609) and equal amounts of other neighborhood land uses, while relocating the westerly access to the project. The SR 65 overcrossing would be located, at least partially (i.e., support structures), within the City's stormwater detention basins. The potential to disturb or otherwise impact biological resources within the basins or on surrounding lands would thereby be increased. As a result, the Modified

West Access Alternative would be expected to result in increased biological impacts over the Proposed Project.

Cultural Resources

The Draft EIR has determined the potential for cultural (Native American) resources (both artifacts and human remains) to be present on the project site. Mitigation measures in place during construction would help ensure that impacts to resources are reduced to less-than-significant levels. The Modified West Access Alternative involves the construction of an equal number of residential units (1,609) and equal amounts of other neighborhood land uses, while relocating the westerly access to the project. Because the alignment for the SR 65 overcrossing requires more land than the McDevitt Drive extension, the total area subject to excavation and grading under the Modified West Access Alternative would be greater than under the Proposed Project. As a result, the Modified West Alternative would increase the likelihood that cultural resources would be disturbed as a result of subterranean activities associated with the project. Therefore, the Modified West Access Alternative would have the potential to increase impacts to currently unknown subterranean cultural resource deposits.

Geology and Soils

As discussed in Impact 4.8-1 of the Draft EIR, the project site's expansive soils would have a potentially significant impact on project construction. The Modified West Access Alternative involves the construction of an equal number of residential units (1,609) and equal amounts of other neighborhood land uses, while relocating the westerly access to the project. Potential impacts to structures from expansive soils would be expected to be the same as the Proposed Project. Moreover, Impact 4.8-4 of the Draft EIR identified that the Proposed Project would have a potentially significant impact to downstream water quality due to soil erosion caused primarily by construction activities. Given the construction of a similar but alternative access, the Modified West Access Alternative would involve the disturbance of a similar amount of topsoil via construction activities. Therefore, the Modified West Access Alternative would be expected to have the same geological impacts as the Proposed Project overall.

Hazards

The Draft EIR identified hazards associated with the existing residence, pesticide shed and other outbuildings in the southern portion of the site, including the septic tank, the potential for pesticide residues, the potential for lead-based paints, and potentially asbestos-containing materials. The potential to encounter hazardous materials associated with construction of the Modified West Access Alternative is not expected to change significantly from those expected with implementation of the Proposed Project. Therefore, the Modified West Access Alternative would be expected to have the potential for the same hazardous impacts as the Proposed Project overall.

Hydrology and Water Quality

The Draft EIR identified impacts associated with hydrology and water quality to be less-than-significant with implementation of mitigation measures. Less-than-significant impacts include impacts to groundwater levels, drainage and runoff, and water quality. The one exception to this is impacts associated with regional flooding, which remain significant and unavoidable. The Modified West Access Alternative would result in the creation of impervious surfaces through the development of residential and commercial uses, and the relocated westerly access, and would increase the amount of stormwater runoff generated on the project site, as with the Proposed Project. Therefore, the Modified West Access Alternative would require the incorporation of a stormwater drainage system to maintain post-development flows on the site at pre-development levels. In addition, this Alternative would result in the short-term degradation of water quality through construction activities, which would require the preparation of a Stormwater Pollution Prevention Plan (SWPPP). The Modified West Access Alternative would also result in the long-term degradation of downstream water quality, as would the Proposed Project. However, because this Alternative would create nearly the same amount of impervious surfaces compared to the Proposed Project, impacts to short-term and long-term water quality degradation and stormwater flows would be the same as the Proposed Project.

Public Services and Facilities

The Modified West Access Alternative involves the construction of an equal number of residential units (1,609) and equal amounts of other neighborhood land uses, while relocating the westerly access to the project. A relocated point of access would have a negligible effect on public services and facilities. Therefore, public services and utilities impacts (i.e., public safety, parks and recreation facilities, wastewater and water) created by this Alternative would be expected to be the same as those created by the Proposed Project. As a result, the overall impacts from the Modified West Access Alternative would be the same as compared to the Proposed Project.

Environmentally Superior Alternative

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

For the 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).

Table 5-2 Environmental Impacts					
Resource Section	Proposed Project (PP)	No Project/ No Build Alternative	Reduced Intensity Alternative	Reduced Acreage Alternative	Modified West Access Alternative
Aesthetics	Significant and Unavoidable	Fewer	Fewer	Fewer	Greater
Land Use and Agriculture	Significant and Unavoidable	Fewer	Equal	Equal	Equal or Greater
Transportation and Circulation	Significant and Unavoidable	Fewer	Fewer	Fewer	Fewer or Equal
Noise	Less-Than-Significant With Mitigation	Fewer	Equal	Equal	Equal
Air Quality	Significant and Unavoidable	Fewer	Fewer	Fewer	Equal
Biological Resources	Less-Than-Significant With Mitigation	Fewer	Fewer or Equal	Fewer or Equal	Greater
Cultural Resources	Less-Than-Significant With Mitigation	Fewer	Equal	Equal	Greater
Geology and Soils	Less-Than-Significant With Mitigation	Fewer	Equal	Fewer or Equal	Equal
Hazards	Less-Than-Significant With Mitigation	Fewer	Equal	Fewer or Equal	Equal
Hydrology and Water Quality	Significant and Unavoidable	Fewer	Equal	Fewer or Equal	Equal
Public Services and Utilities	Less-Than-Significant With Mitigation (for all impacts except Wastewater Treatment Plant capacity)	Fewer	Fewer	Fewer or Equal	Equal
Note: Less Than PP = "Fewer" Equal to PP = "Equal" Greater Than PP = "Greater"					

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STATUTORILY REQUIRED SECTIONS

INTRODUCTION

The Statutorily Required Sections chapter includes brief discussions regarding those topics that are required to be included in an EIR, pursuant to CEQA Guidelines Section 15126. The chapter includes a discussion of the proposed project's potential to induce economic or population growth, lists of significant irreversible environmental changes, cumulative impacts, and significant and unavoidable impacts caused by the proposed project.

GROWTH INDUCEMENT

An EIR must discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing in the vicinity of the project, and how that growth would, in turn, affect the surrounding environment (See CEQA Guidelines Section 15126.2[d]). Growth can be induced in a number of ways, including through the elimination of obstacles to growth, or through the stimulation of economic activity within the region. The discussion of the removal of obstacles to growth relates directly to the removal of infrastructure limitations or regulatory constraints that could result in growth unforeseen at the time of project approval.

A number of issues must be considered when assessing the growth-inducing effects of development plans such as the proposed project. These include the following:

Elimination of Obstacles to Growth: The extent to which infrastructure capacity provided to accommodate the proposed project would allow additional development in surrounding areas; and

Economic Effects: The extent to which development of the proposed project could cause increased activity in the local or regional economy.

Development of the Proposed project site would result in the buildout of the Nichols Grove Tentative Map, which consists of approximately 485 acres of agricultural land, which includes the development of 1,609 residential units, the development of a school site and an 11.4-acre commercial/mixed use area. Growth-inducing impacts associated with the Nichols Grove Tentative map project would be considered to be any effects of the project allowing for additional growth or increases in population beyond that proposed by the project or anticipated in the General Plan.

In addition, the proposed project includes the annexation of 10 non-participating properties that are currently outside of the City of Wheatland, the development of the 10 non-participating properties associated proposed project would be expected to result in an increase in the total

number of residential units within the City of Wheatland. However, the Wheatland General Plan anticipates that the non-participating properties would be developed consistent with the uses associated with the proposed project.

Should the proposed project be approved, the project site would require annexation to the City of Wheatland and infrastructure would be extended to the site in order to provide needed services. Some infrastructure currently exists adjacent to the project site, which would allow the project to connect to existing systems. The required improvements would include, but not be limited to, roadways, wastewater infrastructure, domestic water delivery systems, and a stormwater drainage system. However, it should be noted that, other than the sewer line, which would have an enlarged capacity to serve demand beyond that associated with the proposed project, other project infrastructure would be sized to accommodate the proposed project only.

Though the proposed project would result in the annexation of additional properties outside of the current limits of the City of Wheatland, but within the City's Sphere of Influence, the Wheatland General Plan anticipates these areas for planned development uses which would be consistent with the land uses associated with the proposed project. Additionally, at this time, the proposed project would not result in the extension of infrastructure to serve the development of sites beyond those anticipated for development by the City of Wheatland General Plan.

Future developments in the vicinity would be able to connect to the sewer line extension; however, the area to the east of the proposed project site is designated for development in the City of Wheatland General Plan, which anticipates the development of this area. The sewer enlargement associated with the proposed project would be scaled to provide support for additional development that is anticipated by the General Plan. Therefore, the growth-inducing impacts associated with the proposed project would be within the scope anticipated by the General Plan and a less-than-significant impact would result.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

The CEQA Guidelines, Section 15126.2(c), require that an EIR consider significant irreversible environmental changes which would be caused by the proposed project should the project be implemented. An impact would be determined to be a significant and irreversible change in the environment if:

- Development of any of the project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of development would generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- Development of the proposed project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing and eventual development of the project would result in an unjustified consumption of resources (e.g., the wasteful use of energy).

The proposed project would likely result in or contribute to the following irreversible environmental changes:

- Conversion of existing agricultural farmland to suburban land uses, precluding alternate land uses in the future;
- Irreversible consumption of goods and services associated with the future consumers;
- Surfacing important soils with impermeable surfaces associated with urban development;
- Conversion of habitat;
- Commitment of municipal services to new development;
- Irreversible consumption of energy and natural resources associated with the future employees and consumers; and
- Possible demand for and use of goods, services, and resources for this project to the exclusion of projects in other locations.

CUMULATIVE IMPACTS

Background

CEQA Guidelines Section 15130 requires that an EIR discuss the cumulative and long-term effects of the proposed project that adversely affect the environment. “Cumulative impacts” are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” (CEQA Guidelines, § 15355; see also Pub. Resources Code, § 21083, subd. (b).) Stated another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.” (CEQA Guidelines, § 15130, subd. (a)(1).)

“[I]ndividual effects may be changes resulting from a single project or a number of separate projects.” (CEQA Guidelines, § 15355, subd. (a).) “The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.” (CEQA Guidelines, § 15355, subd. (b).)

The need for cumulative impact assessment reflects the fact that, although a project may cause an “individually limited” or “individually minor” incremental impact that, by itself, is not significant, the increment may be “cumulatively considerable,” and thus significant, when viewed together with environmental changes anticipated from past, present, and probable future projects. (CEQA Guidelines, §§ 15064, subd. (h)(1), 15065, subd. (c), 15355, subd. (b).) This formulation indicates that particular impacts may be less-than-significant on a project-specific basis but significant on a cumulative basis, because their small incremental contribution, viewed against the larger backdrop, is cumulatively considerable.

The lead agency should define the relevant geographic area of inquiry for each impact category (id., § 15130, subd. (b)(3)), and should then identify the universe of “past, present, and probable future projects producing related or cumulative impacts” relevant to the various categories, either through the preparation of a “list” of such projects or through the use of “a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact” (id., subd. (b)(1)).

The possibility exists that the “cumulative impact” of multiple projects will be significant, but that the incremental contribution to that impact from a particular project (e.g., Base Project) may not itself be “cumulatively considerable.” Thus, CEQA Guidelines section 15064, subdivision (h)(5), states that “[t]he mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.” Therefore, it is not necessarily true that, even where cumulative impacts are significant, any level of incremental contribution must be deemed cumulatively considerable.

Nichols Grove Cumulative Setting

The geographic scope of the area for the Nichols Grove Draft EIR cumulative analyses includes the City of Wheatland General Plan Study Area. These boundaries have been chosen because the impacts of the project would occur within these planning boundaries of the City of Wheatland. However, it should be noted that the traffic and noise analyses evaluate both the buildout of the General Plan and additional local growth within the City of Wheatland Sphere of Influence. This includes the approximately 9,500 units associated with Johnson Rancho project (See the Chapter 4.3, Transportation and Circulation, of this EIR for more information).

Other Wheatland projects included in the cumulative traffic, air, and noise analyses are Jones Ranch, Heritage Oaks Estates, Almond Estates, and Settler’s Village. Cumulative impacts are analyzed in each section of Chapter 4 and summarized below.

Cumulative Impacts

The following cumulative impacts are identified in Chapter 4 of this Draft EIR:

Aesthetics

The proposed project would contribute to the cumulative change in visual character of the City of Wheatland from agricultural to urban. The properties surrounding the proposed project site consist of agricultural lands to the east and north, and agricultural lands to the south. To the west of the proposed project site, on the opposite side of SR 65, is currently a mix of residential and agricultural properties. 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, and would be consistent with the future buildout associated with the General Plan, which would result in urban developments to the east and west. 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*. As stated in Impact 4.1-4, feasible mitigation is not available for this impact. Therefore, the cumulative impacts associated with aesthetics related to the proposed project would be significant and unavoidable.

Land Use / Agricultural Resources

The EIR found that the proposed project would have a less-than-significant cumulative impact with regard to land use policies and consistency with the General Plan. However, the analysis concluded that the proposed project would result in a significant impact with regard to the loss of prime agricultural land and the conversion of agricultural land to non-agricultural uses. Because adequate mitigation is not available for these impacts, the EIR concluded that the development of the proposed project would result in significant and unavoidable impacts to the conversion of prime farmland and loss of agricultural land.

Transportation and Circulation

The EIR found that in the 25-year cumulative scenario, the proposed project's contribution to traffic impacts would be less-than-significant. Though in the short-term the proposed project would result in a significant impact due to the influx of traffic in the proposed project area, the Wheatland Bypass is assumed to be constructed prior to the 2025 cumulative condition. In addition, the EIR found that the proposed project would result in a potentially significant impact to the intersections of McDevitt Drive/Nichols Grove Drive, McDevitt Drive / Ring Road and Nichols Grove Drive / Ring Road during the cumulative condition. The traffic chapter of this EIR includes mitigation (See Mitigation Measures 4.3-7[a] and [b]), which would reduce these impacts to less-than-significant levels in the long-term cumulative scenario.

Noise

The EIR found that the development of the proposed project would result in a potentially significant impact with regard to cumulative traffic noise impacts on existing residences. However, the EIR includes mitigation measures (See Mitigation Measures 4.4-5[a] and 4.4-5[b]) that would reduce these impacts to a less-than-significant level.

Air Quality

The proposed project was found to have a significant air quality impact. 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. The

proposed project would exceed the FRAQMD thresholds of significance for ROG, NO_x and PM₁₀; therefore, because the proposed project would have a cumulatively considerable contribution to regional air quality, the project would have a significant cumulative impact on regional air quality. Though the mitigation measures included in the EIR would reduce the intensity of these impacts, they would remain significant and unavoidable after the implementation of suggested mitigation measures. In addition, the project's incremental contribution to the cumulatively significant impact to global climate change was conservatively determined to be considerable. As a result, implementation of the proposed project would result in a significant and unavoidable impact to global climate change.

Biological Resources

The Nichols Grove project is located in the northern portion of the City and according to the Jurisdictional Delineation and Special-status Species Evaluation prepared for this project, does not provide high quality habitat for most species. In addition, project-level mitigation has been included to ensure all biological impacts resulting from the project would be less-than-significant. In combination with 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 loss of habitat within the region. Therefore, the project's incremental contribution to biological resources impacts would not be cumulatively considerable.

Cultural Resources

The surfaces of the proposed project site are highly disturbed due to historical agricultural uses. However, the possibility exists for cultural resources to be present under soils in some of these petitory areas and cumulative development could 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. Implementation of the project-level mitigation measures included in this DEIR the project's incremental contribution to the cumulative impact would be less-than-significant.

Geology and Soils

The proposed project would increase the number of people and structures 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 would not combine with similar effects that could occur with other projects in Wheatland. Furthermore, all projects would be required to comply with the CBC, UBC 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. Therefore, the cumulative impact would be considered less-than-significant.

Hazards

Impacts associated with hazardous materials are site-specific and would not affect or are not affected by cumulative development. Cumulative effects could be of concern if the project were, for example, part of a larger development in which industrial processes that would use hazardous materials were proposed. However, this is not the case with this project, and project-specific impacts were found to be less-than-significant with the implementation of the required mitigation measures. In addition, surrounding development would be subject to the same federal, State, and local hazardous materials management requirements as would the proposed project, which would minimize potential risks associated with increased hazardous materials use in the community, including any potential effects, on the proposed project. Therefore, implementation of the proposed project would have a less-than-significant impact associated with cumulative hazardous materials use.

Hydrology and Water Quality

The proposed project would create impervious surfaces where none currently exist and convert existing vacant, agricultural land to urban uses. The development of the proposed project would be expected to result in increased stormwater flows exceeding the capacity of the current drainage system. The Nichols Grove Tentative Map project would include the construction of detention basins, which in conjunction with the required mitigation measures, would reduce this impact to a less-than-significant level. In addition, the non-participating properties associated with the proposed project would also result in an increase in stormwater flows that would be in excess of existing flows. The EIR includes mitigation measures (See Mitigation Measures 4.10-1[a] through 4.10-1[c] and 4.10-5) that would address design issues, reducing the impacts associated with increased drainage on the non-participating properties in the cumulative scenario to a less-than-significant level.

The EIR found that the development of the proposed project in conjunction with the buildout of the General Plan would contribute to an overall increase of sedimentation on local waterways as newly urbanized areas contribute to pollutants in adjoining channels. The mitigation measures included in the City of Wheatland General Plan EIR, which require developments to reduce stormwater runoff to pre-development levels, would mitigate this impact to a less-than-significant level for the Nichols Grove Tentative Map area. The EIR found that the impacts to water quality pertaining to the non-participating properties would result in a potentially significant impact, which would be reduced to a less-than-significant level in the long-term cumulative scenario after the implementation of suggested mitigation measures.

Public Services and Utilities

The proposed project would increase the demand for public services and utilities. The City of Wheatland has adopted development fees consistent with State law in order to facilitate the provision of public services for projects consistent with the buildout of the General Plan. Therefore the payment of City impact fees by the project as well as other future projects would ensure a less-than-significant cumulative impact.

SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

All impacts that have been identified in this EIR would be less-than-significant after incorporation of appropriate mitigation measures except for the following impacts:

Impacts related to altering the existing agricultural character of the project site (Impact 4.1-1 and 4.1-4)

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 included in the General Plan 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 for both the short-term and cumulative conditions.

Impacts related to compatibility with surrounding land uses (Impact 4.2-1)

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. Feasible mitigation does not exist to reduce the impact to a less-than-significant level. 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.

Conversion of Prime Farmland to urban uses and cumulative loss of agricultural land (Impacts 4.2-6 and 4.2-7)

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. The proposed project is consistent with the General Plan and would result in the conversion of agricultural land to urban uses. Therefore, consistent with the conclusions in the General Plan, the development of the proposed project site would result in a significant and unavoidable impact.

Impacts to study intersections, and roadway segments (Impacts 4.3-1 and 4.3-2)

The addition of trips generated by the proposed project would incrementally increase the length of delays experienced at study area intersections. The traffic signals planned by the City at SR 65 / First Street and SR 65 / Main Street intersections would operate at LOS D during the A.M. peak

hour, and LOS E during the P.M. peak hour with buildout of Nichols Grove. The SR 65 / McDevitt Drive intersection would operate at LOS E during the P.M. peak hour. In addition, the proposed project would result in a potentially significant increase in traffic volumes on SR-65, exceeding the two percent threshold for impacts to roadway segments. As a result, a significant impact would occur. Although the mitigation measure presented in the chapter requires the applicant to pay a fair-share fees towards the installation of traffic improvements, the City does not have a program in place to ensure that the improvements will be completed; therefore, the impact would remain significant and unavoidable.

Impacts to intersections and roadways under the Five Year Plus Project scenario (Impacts 4.3-7 and 4.3-8)

The proposed project, in combination with other cumulative development in the project area would result in LOS F conditions at the signalized SR 65 / First Street and SR 65 / Main Street intersections with and without the Nichols Grove project; however, Nichols Grove would result in a substantial increase in delays. 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 Nichols Grove. In addition, the extra trips generated by the proposed project would cause the practical vehicle capacity of SR 65 to be exceeded. Because construction of the Wheatland Bypass prior to full occupancy of the proposed project and other adopted projects is not certain, the overall impact of the proposed project under Five Year Plus Project scenario would remain significant and unavoidable.

Short-term construction-related air quality impacts (Impact 4.5-1)

In the absence of emission controls and mitigations measures, ROG, NO_x and PM₁₀ emissions would exceed the Feather River Air Quality Management District's (FRAQMD) significance threshold. Particulate matter emissions during construction would also have potential to create a local nuisance. Consequently, the emissions would result in a significant impact. The suggested 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 to 75 percent. However, project construction emissions would remain above the FRAQMD thresholds of significance for ROG, NO_x, and PM₁₀; therefore, the impact would remain significant and unavoidable.

Impacts of PM₁₀, ozone precursors, and ROG to local air quality (Impact 4.5-4)

Development of the Nichols Grove Tentative map and Non-Participating properties would result 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 PM₁₀, ROG, and NO_x. The air quality analysis associated with the proposed project found that 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 would also be expected to exceed the FRAQMD thresholds of significance. Therefore, development of the Nichols Grove Tentative Map and non-

participating properties would result in a significant and unavoidable impact to local air quality after the implementation of suggested mitigation measures.

Cumulative impacts to regional air quality (Impact 4.5-5)

Based upon FRAQMD significance criteria, 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 PM₁₀ emissions. Therefore, because the proposed project would have a cumulatively considerable contribution to regional air quality, the project would have a significant and unavoidable cumulative impact on regional air quality after the implementation of mitigation measures included in this EIR.

Project impacts concerning the production of greenhouse gases (Impact 4.5-6)

Greenhouse gas emission estimates from an individual project have a relatively high uncertainty; however, the proposed project would increase the generation of greenhouse gases beyond existing levels. While current and future regulations on CO₂ emissions attributable to the project and cumulative CO₂ emissions from other sources in the State may reduce the emissions, such reductions cannot be quantified. However, a conservative approach has been 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.

Impacts related to regional flooding (Impact 4.10-4)

Because the regional solution to flood control that would remove the proposed project site from the flood plain has not been developed at this time, the completion of the flood control solution is considered speculative. Without an identified solution to the regional flooding issues affecting the project site, the flooding impact is considered significant and unavoidable.

Adequate wastewater facilities for new residents (4.11-2)

Currently, adequate wastewater facilities are not available to serve the proposed project. Mitigation included in the DEIR would require the payment of fees. However, a program has not been established to determine adequate funding sources and a schedule of completion for wastewater facilities. Therefore, impacts to wastewater facilities are considered to be significant and unavoidable.

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REFERENCES

- Association of Environmental Professionals. *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*. June 29, 2007.
- Ballanti, Don, Consulting Meteorologist. *Air Quality Impact Analysis for the Proposed Nichols Grove Project, City of Wheatland*. June 2007.
- Bollard Acoustical Consultants, Inc. *Environmental Noise Assessment*. June 8, 2007.
- Bollard Acoustical Consultants, Inc. *Environmental Noise Assessment*. October 1, 2007.
- California Air Resources Board. *Proposed Methodology to Model Carbon Dioxide Emissions and Estimate Fuel Economy*. 2002.
- California Climate Action Team. *Climate Action Team Report*. March 2006.
- California Climate Change Center. *Our Changing Climate: Assessing the Risks to California*. 2006.
- California Energy Commission. *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*. 2006.
- California Public Resources Code Sections 5097.94, et seq. *California Health and Safety Code Section 7050.5*.
- City of Wheatland. *City of Wheatland General Plan*. July 2006.
- City of Wheatland. *City of Wheatland General Plan EIR*. July 2006.
- Civil Engineering Solutions, Inc. *Draft Drainage Report*. November 2007.
- EIP Associates. *Water Supply Assessment for the Proposed Nichols Grove Project*. March 2007.
- Gallaway Consulting, Inc. *Biological Resource Assessment*. October 2007.
- Governor's Office of Planning and Research, State of California. *CEQA and Archaeological Resources*. 1994.
- KDAnderson & Associates, Inc. *Traffic Analysis Report for Improvements to SR 65 from Main Street to Olive Street*. March 14, 2002.
- KDAnderson & Associates, Inc. *Traffic Impact Analysis for Nichols Grove*. October 5, 2007.

- KDAnderson & Associates, Inc. *Traffic Impact Analysis for Nichols Grove*. September 19, 2007.
- 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. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. 2007.
- MBK Engineers. *Hydraulic Impact Analysis for City of Wheatland General Plan and Nichols Grove Development*, May 15, 2008.
- Peak & Associates, Inc. *Cultural Resources Assessment of the Nichols Grove Project*. March 14, 2007.
- Sierra Nevada Arborists. *Arborist Report and Tree Inventory Summary*. January 2007.
- U.S. Department of Agriculture. *Pacific Southwest MLRA Soil Survey*. May 2005.
- US Department of Agriculture. Natural Resources Conservation Service. *Yuba County Soil Survey*. July 2005.
- Wallace Kuhl & Associates, Inc. *Environmental Site Assessment, Nichols Ranch*. March 7, 2003.
- Wallace Kuhl & Associates, Inc. *Preliminary Geotechnical Engineering Report, Nichols Ranch*. February 28, 2003.
- Wallace Kuhl & Associates, Inc. *Preliminary Geotechnical Engineering Report, Powell Property*. March 9, 2004.
- Wallace Kuhl & Associates, Inc. *Site Assessment Update, Powell Property*. March 10, 2004.
- Yuba County. *Yuba County General Plan, Volume I, Environmental Setting and Background*. May 1994.

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NICHOLS GROVE

SCH# 2006102089

DRAFT ENVIRONMENTAL IMPACT REPORT



PREPARED FOR
THE CITY OF WHEATLAND

AUGUST 2008

PREPARED BY
RANEY PLANNING & MANAGEMENT, INC.



**Nichols Grove Project
Draft
Environmental Impact Report**

SCH# 2006102089

Prepared For
the City of Wheatland

Prepared By
Raney Planning & Management, Inc.
Sacramento, CA

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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 rezoning 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 appraises 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:

<p><u>Aesthetics</u> (c.f. Chapter 4.1)</p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • Potential visual impacts on existing and planned uses in the area.
<p><u>Land Use and Agricultural Resources</u> (c.f. Chapter 4.2)</p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • 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.
<p><u>Transportation and Circulation</u> (c.f. Chapter 4.3)</p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • 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,

	<p>and Sullivan Way.</p> <ul style="list-style-type: none"> • 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)	<p>Concerns related to:</p> <ul style="list-style-type: none"> • 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)	<p>Concerns related to:</p> <ul style="list-style-type: none"> • Odor impacts on existing and planned uses in the area.
Biological Resources (c.f. Chapter 4.6)	<p>Concerns related to:</p> <ul style="list-style-type: none"> • 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)	<p>Concerns related to:</p> <ul style="list-style-type: none"> • The project site being within the Beale AFB Area of Influence.
Hydrology and Water Quality (c.f. Chapter 4.10)	<p>Concerns related to:</p> <ul style="list-style-type: none"> • 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.

	<ul style="list-style-type: none"> • 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.
<p><u>Public Services & Utilities</u> (c.f. Chapter 4.11)</p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • 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.
<p><u>Alternatives</u></p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • 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 rezoning 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 rezoning 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, PM₁₀, 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 PM₁₀, 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 (CNDDDB), 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 degradation of water quality.

The Draft EIR finds that the proposed project would result in potentially significant impacts related to stormwater runoff, basin maintenance, and degradation 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	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> 4.1-1 <i>None Feasible.</i>	SU
4.1-2 Impacts related to light and glare.	PS	<i>Nichols Grove Tentative Map</i> 4.1-2(a) <i>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.</i>	LS
	PS	<i>Non-Participating Properties</i> 4.1-2(b) <i>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.</i>	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
4.1-3 Impacts related to scenic vistas and visual resources.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.1-3 None Required.</i>	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	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.1-3 None Feasible.</i>	SU
4.2 Land Use and Agricultural Resources			
4.2-1 Compatibility with surrounding land uses.	S	<i>Nichols Grove Tentative Map and Non-Participating Property (APN 015-140-056)</i> <i>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.</i>	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	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> 4.2-2 <i>None Required.</i>	N/A
4.2-3 Consistency with existing zoning.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> 4.2-3 <i>None Required.</i>	N/A
4.2-4 Consistency with Yuba County LAFCO Standards.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> 4.2-4 <i>None Required.</i>	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	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> 4.2-5 <i>None Required.</i>	N/A
4.2-6 Conversion of Prime Farmland to urban uses.	S	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> 4.2-6 <i>None Feasible.</i>	SU
4.2-7 Cumulative loss of agricultural land.	S	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> 4.2-7 <i>None Feasible.</i>	SU
4.3 Transportation and Circulation			
4.3-1 Impacts to study intersections.	S	<i>Nichols Grove Tentative Map</i> 4.3-1 <i>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.</i>	SU

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.3-2 Impacts to roadway segments.	S	<i>Nichols Grove Tentative Map</i> <i>4.3-2 Implement Mitigation Measure 4.3-1.</i>	SU
4.3-3 Impacts related to transit.	PS	<i>Nichols Grove Tentative Map</i> <i>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.</i>	LS
4.3-4 Impacts related to existing and proposed railroad crossings.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.3-4 None Required.</i>	N/A
4.3-5 Impacts related to pedestrian/bicycle activity.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.3-5 None Required.</i>	N/A
4.3-6 Impacts from construction traffic.	PS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>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.</i>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p>4.3-7 Impacts to intersections under the Five Year Plus Project scenario.</p>	<p>S</p>	<p><i>Nichols Grove Tentative Map</i></p> <p>4.3-7(a) <i>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:</i></p> <ol style="list-style-type: none"> 1. <i>State Street improvements between Main Street and SR 65.</i> 2. <i>McDevitt extension and completion of project streets to downtown Wheatland.</i> 3. <i>Oakley Lane extension to SR 65.</i> 4. <i>South Ring Road and connection to SR 65 via grade-separation.</i> <p><i>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</i></p>	<p>SU</p>

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>be eligible for reimbursement from future fair-share payments.</i></p> <p>4.3-7(b) <i>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.</i></p>	
<p>4.3-8 Impacts to roadways under the Five Year Plus Project scenario.</p>	<p>S</p>	<p><i>Nichols Grove Tentative Map</i></p> <p>4.3-8 <i>Implement Mitigation Measure 4.3-7(a) and 4.3-7(b).</i></p>	<p>SU</p>
<p>4.3-9 Impacts to intersections in long-term (2025) cumulative conditions.</p>	<p>PS</p>	<p><i>Nichols Grove Tentative Map</i></p> <p>4.3-9(a) <i>Implement Mitigation Measure(s) 4.3-1, 4.3-7(a), and 4.3-7(b).</i></p>	<p>LS</p>

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	LS	<p>4.3-9(b) <i>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.</i></p> <ul style="list-style-type: none"> • <i>McDevitt Drive/Nichols Grove Drive</i> • <i>McDevitt Drive / Ring Road</i> • <i>Nichols Grove Drive / Ring Road</i> <p><i>The final improvement selected shall be determined by the City Engineer.</i></p> <p>4.3-9(c) <i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p>4.3-9(d) <i>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</i></p>	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
		<p><i>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.</i></p> <p>4.3-9(e) <i>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.</i></p>	
4.3-10 Impacts to roadway segments in long-term (2025) cumulative conditions.	LS	<p><i>Nichols Grove Tentative Map, Non-Participating Properties</i></p> <p>4.3-10 <i>None Required.</i></p>	N/A
4.3-11 Cumulative conditions (General Plan buildout) plus additional anticipated growth within Wheatland Sphere of Influence.	LS	<p><i>Nichols Grove Tentative Map, Non-Participating Properties</i></p> <p>4.3-11 <i>None Required.</i></p>	N/A
4.4 Noise			
4.4-1 Increase in Traffic Noise Levels.	LS	<i>Nichols Grove Tentative Map – None Required.</i>	N/A
	PS	<p><i>Non-Participating Properties</i></p> <p>4.4-1 <i>In conjunction with submittal of a development application and at the discretion of the City Engineer, the applicant shall submit a noise</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p>	
<p>4.4-2 Traffic Noise Impacts on Project Site.</p>	<p>PS</p>	<p><i>Nichols Grove Tentative Map</i></p> <p>4.4-2(a) <i>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</i></p>	<p>LS</p>

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p>4.4-2(b) <i>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.</i></p> <p><i>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</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p><i>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</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>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).</i>	
4.4-3 Aircraft Noise Impacts on Project Site.	PS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.4-3 Implement Mitigation Measure 4.4-2(b).</i>	LS
4.4-4 Interior Noise Levels Within the Project Site.	PS	<i>Nichols Grove Tentative Map</i> <i>4.4-4(a) Implement Mitigation Measure(s) 4.4-2(a) and 4.4-2(b).</i>	LS
	PS	<i>Non-Participating Properties</i> <i>4.4-4(b) Implement Mitigation Measure 4.4-2(c).</i>	LS
4.4-5 Construction Noise.	PS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.4-5 The project applicant shall place a note on the improvement plans and within construction contracts that requires:</i> <ul style="list-style-type: none"> • <i>Construction activities shall occur between the hours of 7 a.m. to 6 p.m. weekdays and 8 a.m. to 5 p.m. on the weekends;</i> • <i>All heavy construction equipment and all stationary noise sources (such as diesel</i> 	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>generators) shall have manufacturers installed mufflers; and</i></p> <ul style="list-style-type: none"> <i>Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences as is feasible.</i> <p><i>The note and improvement plans shall be reviewed and approved by the City Engineer prior to initiation of ground disturbance activities.</i></p>	
4.4-6 Cumulative impacts of traffic noise levels on proposed residences.	PS	<i>Nichols Grove Tentative Map</i> 4.4-6(a) <i>Implement Mitigation Measure(s) 4.4-2(a) and 4.4-2(b).</i>	LS
	PS	<i>Non-Participating Properties</i> 4.4-6(b) <i>Implement Mitigation Measure 4.4-2(c).</i>	LS
4.5 Air Quality			
4.5-1 Short-term construction-related air quality impacts.	S	<i>Nichols Grove Tentative Map</i> 4.5-1(a) <i>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</i>	SU

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p>4.5-1(b) <i>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.</i></p> <p>4.5-1(c) <i>At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide FRAQMD with the anticipated</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>construction timeline, including start date, name, and phone number of the project manager and on-site foreman.</i></p> <p>4.5-1(d) <i>Prior to initiation of ground disturbance activities, all construction contracts shall stipulate the following:</i></p> <ul style="list-style-type: none"> • <i>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;</i> • <i>The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained;</i> • <i>Equipment operators shall be instructed to minimize equipment idling time to five minutes;</i> • <i>Utilize existing power sources (e.g. power poles) or clean fuel generator rather than temporary power generators;</i> • <i>Portable engines and portable engine-drive</i> 	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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</i></p> <ul style="list-style-type: none"> • <i>Open burning of removed vegetation during infrastructure improvements shall not be permitted. Vegetative material shall be chipped or delivered to waste energy facilities.</i> <p>4.5-1(e) <i>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:</i></p> <ul style="list-style-type: none"> • <i>All active water construction areas shall be watered at least twice a day, or as need to</i> 	

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>prevent visible dust plumes from blowing off-site;</i></p> <ul style="list-style-type: none"> • <i>On-site storage piles shall be covered with tarpaulins or other effective covers;</i> • <i>All trucks hauling dirt, sand, soil, or other loose 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;</i> • <i>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;</i> • <i>All paved access routes, parking areas, and staging areas shall be swept daily (preferably with water sweepers);</i> • <i>Trucks and other equipment leaving the construction site shall be washed to remove particulate matter;</i> • <i>Incorporation of the use of non-toxic stabilizers according to manufacturer's specifications to all inactive construction areas;</i> 	

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • <i>Exposed stockpiles shall be enclosed, covered, watered twice daily, or applied with (non-toxic) soil binders;</i> • <i>Construction site vehicles shall be limited to 15 miles per hour (mph) on unpaved areas;</i> • <i>Disturbed areas shall be replanted with vegetation as quickly as possible;</i> • <i>All grading operations shall be suspended by the developer or contractor or as directed by the FRAQMD when winds exceed 20 mph; and</i> • <i>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.</i> <p>4.5-1(f) <i>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.</i></p> <p>4.5-1(g) <i>During construction, all architectural coatings used at the project site shall be compliant with the most</i></p>	

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	S	<p><i>current FRAQMD Rule 3.15, Architectural Coatings, for review and approval of the City Engineer and FRAQMD.</i></p> <p>4.5-1(h) <i>Implement the following feasible construction phase emissions measures for Traffic Control as reviewed and approved by the City Engineer:</i></p> <ul style="list-style-type: none"> • <i>Construction activities shall minimize disruptions to traffic flow;</i> • <i>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</i> • <i>Schedule operations affecting traffic for off-peak hours to the greatest extent possible.</i> <p>Non-Participating Properties</p> <p>4.5-1(i) <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</i></p>	SU

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>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.</i>	
4.5-2 Impacts of carbon monoxide to local air quality due to project trip generation.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.5-2 None Required.</i>	N/A
4.5-3 Impacts to residences located next to Union Pacific Railroad.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.5-3 None Required.</i>	N/A
4.5-4 Impacts of PM ₁₀ , ozone precursors, and ROG on local air quality.	S	<i>Nichols Grove Tentative Map</i> <i>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 BMM list, recommended measures from air district staff, or voluntary off-site mitigation projects sufficient to provide a minimum</i>	SU

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	S	<p><i>35 percent reduction in emissions.</i></p> <p><i>Non-Participating Properties</i></p> <p><i>4.5-4(b) Implement Mitigation Measure 4.5-1(i). If PM₁₀, 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).</i></p>	SU
4.5-5 Cumulative impacts to regional air quality.	S	<p><i>Nichols Grove Tentative Map</i></p> <p><i>4.5-5(a) Implement Mitigation Measures 4.5-4(a).</i></p>	SU
	S	<p><i>Non-Participating Properties</i></p> <p><i>4.5-5(b) Implement Mitigation Measure 4.5-4(b).</i></p>	SU
4.5-6 Project impacts concerning the production of greenhouse gases.	S	<p><i>Nichols Grove Tentative Map</i></p> <p><i>4.5-6(a) Implement Mitigation Measures 4.5-1(a-d and f-h) and 4.5-4(a).</i></p>	SU
	S	<p><i>Non-Participating Properties</i></p> <p><i>4.5-6(b) Implement Mitigation Measures 4.5-1(i) and 4.5-4(b).</i></p>	SU

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.6 Biological Resources			
4.6-1 Impacts to Valley Elderberry Longhorn Beetles.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p>4.6-1(a) <i>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:</i></p> <ul style="list-style-type: none"> • <i>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;</i> • <i>Project proponent shall employ dust control measures during all construction activities; and</i> • <i>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</i> 	LS

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>construction activities. All drainage water during and following construction shall be diverted away from the bushes.</i></p> <p>4.6-1(b) <i>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.</i></p> <p><i>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, whichever is tallest. All stems measuring greater than 1-inch shall be</i></p>	

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p><i>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.</i></p> <p><i>Associate native plant seedlings will consist of willows, sycamores (<i>Platanus racemosa</i>), Oregon ash, button willow (<i>Cephalanthus occidentalis</i>), and wild grape (<i>Vitus californicus</i>). Each seedling and associate plant shall be provided with a water basin</i></p>	

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p>4.6-1(c) <i>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:</i></p> <ul style="list-style-type: none"> • <i>Population census of adult beetles;</i> • <i>Census of beetle exit holes;</i> • <i>Evaluation of the transplanted bush, seedlings, and associated plants;</i> • <i>Evaluation of protective measures (i.e., fencing, signs, and weed control); and</i> • <i>General habitat assessment.</i> <p><i>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</i></p>	

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p><i>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.</i></p> <p><i>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).</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.6-2 Impacts to Swainson's hawk.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p>4.6-2(a) <i>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:</i></p> <ul style="list-style-type: none"> <i>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</i> 	LS

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p><i>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.</i></p> <p><i>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.</i></p>	

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p>4.6-2(b) <i>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.</i></p> <p style="text-align: center;"><i>Or;</i></p> <p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p>4.6-2(c) <i>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 properties) is determined to be Swainson’s hawk foraging habitat, the</i></p>	LS

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>applicant shall be required to implement Mitigation Measure 4.6-2(b).</i>	
4.6-3 Impacts to Western burrowing owls.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p><i>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</i></p>	LS

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>approved by the City.</i></p> <p>4.6-3(b) <i>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.</i></p> <p>4.6-3(c) <i>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</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>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.</i></p> <p>4.6-3(d) <i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p>4.6-3(e) <i>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).</i></p>	LS
4.6-4 Impacts to raptors.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p>4.6-4(a) <i>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</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p><i>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).</i></p>	LS
4.6-5 Impacts to Migratory Songbirds/Passerines.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p><i>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.</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p>4.6-5(b) <i>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.</i></p> <p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p>4.6-5(c) <i>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)</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.6-6 Impacts to Yuma Myotis Bat.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p>4.6-6(a) <i>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.</i></p> <p>4.6-6(b) <i>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).</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>4.6-6(c) <i>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.</i></p> <p>4.6-6(d) <i>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.</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>Non-Participating Properties</i></p> <p>4.6-6(e) <i>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).</i></p>	LS
4.6-7 Impacts to western pond turtle.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p>4.6-7(a) <i>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.</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>4.6-7(b) <i>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.</i></p> <p>4.6-7(c) <i>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).</i></p> <p>4.6-7(d) <i>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.</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>Non-Participating Properties</i></p> <p>4.6-7(e) <i>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).</i></p>	LS
4.6-8 Impacts to Essential Fish Habitat.	LS	<p><i>Nichols Grove Tentative Map, Non-Participating Properties</i></p> <p>4.6-8 <i>None Required.</i></p>	N/A
4.6-9 Impacts to Natural Woodland Resources.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p>4.6-9(a) <i>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</i></p>	LS

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p>4.6-9(b) <i>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</i></p>	LS

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>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.</i>	
4.6-10 Impacts to wetlands and other Waters of the United States.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p>4.6-10(a) <i>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</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>and 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.</i></p> <p>4.6-10(b) <i>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.</i></p>	

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p>4.6-10(c) <i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p>4.6-10(d) <i>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</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>the delineation by the Army Corps of Engineers, the applicant(s) shall be required to implement Mitigation Measures 4.6-10(a-c).</i>	
4.6-11 Cumulative loss of biological resources in the City of Wheatland and the effects of ongoing urbanization in the region.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.6-11 None required.</i>	N/A
4.7 Cultural Resources			
4.7-1 Disturbance or destruction of previously unknown archaeological resources on the project site.	PS	<i>Nichols Grove Tentative Map</i> <i>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</i>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>significance.</i></p> <p>4.7-1(b) <i>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.</i></p> <p>4.7-1(c) <i>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.</i></p> <p><i>Non-Participating Properties</i></p>	LS

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>4.7-1(d) <i>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.</i></p> <p>4.7-1(e) <i>Implement Mitigation Measures 4.7-1(a-c).</i></p>	
4.7-2 Impacts to existing structures.	LS	<i>Nichols Grove Tentative Map – None Required.</i>	N/A
4.7-3 Disturbance or destruction of previously unknown archaeological resources in combination with other development in the Wheatland area.	PS	<p><i>Non-Participating Properties</i></p> <p>4.7-2 <i>Implement Mitigation Measure 4.7-1(d).</i></p> <p>4.7-3 <i>None Required.</i></p>	LS
	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i>	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	<p><i>Nichols Grove Tentative Map</i></p> <p>4.8-1(a) <i>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.</i></p>	LS
	PS	<p><i>Non-Participating Properties</i></p> <p>4.8-1(b) <i>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,</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>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.</i>	
4.8-2 Loss of structural support due to liquefaction.	PS	<i>Nichols Grove Tentative Map</i> <i>4.8-2(a) Implement Mitigation Measure 4.8-1(a).</i>	LS
	PS	<i>Non-Participating Properties</i> <i>4.8-2(b) Implement Mitigation Measure 4.8-1(b).</i>	LS
4.8-3 Impacts related to seismic activity.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.8-3 None Required.</i>	N/A
4.8-4 Construction-related increases in soil erosion.	PS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>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</i>	LS

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>standard construction practices to limit the erosion effects during construction. Measures could include, but are not limited to the following:</i></p> <ul style="list-style-type: none"> • <i>Hydro-seeding;</i> • <i>Placement of erosion control measures within drainageways and ahead of drop inlets;</i> • <i>The temporary lining (during construction activities) of drop inlets with “filter fabric” (a specific type of geotextile fabric);</i> • <i>The placement of straw wattles along slope contours;</i> • <i>Directing subcontractors to a single designation “wash-out” location (as opposed to allowing them to wash-out in any location they desire);</i> • <i>The use of siltation fences; and</i> • <i>The use of sediment basins and dust palliatives.</i> 	
<p>4.8-5 Long-term geologic and seismic impacts from the proposed project in combination with existing and future developments in the Wheatland area.</p>	<p>LS</p>	<p><i>Nichols Grove Tentative Map, Non-Participating Properties</i></p> <p>4.8-5 <i>None Required.</i></p>	<p>N/A</p>

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.9 Hazards			
4.9-1 Impacts from burn piles and other on-site farm implements.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p>4.9-1(a) <i>If during removal of all on-site debris by the project contractor, visual or olfactory evidence of potential soil contamination is observed, the project applicant shall contact Wallace Kuhl (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.</i></p>	LS
	PS	<p><i>Non-Participating Properties</i></p> <p>4.9-1(b) <i>In conjunction with submittal of a development application, the applicant(s) shall submit a Phase I Environmental Site Assessment for any of the non-participating properties to determine if any on-site structures contain hazards and to identify soil</i></p>	LS

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		4.9-2(b) <i>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).</i>	
4.9-3 Impacts from aboveground storage tanks.	PS	<i>Nichols Grove Tentative Map</i> 4.9-3(a) <i>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.</i>	LS
	PS	<i>Non-Participating Properties</i> 4.9-3(b) <i>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</i>	LS

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>the Yuba County Environmental Health Department, at the expense of the applicant(s).</i>	
4.9-4 Impacts from Polychlorinated Biphenyls (PCBs).	PS	<i>Nichols Grove Tentative Map</i> 4.9-4(a) <i>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.</i>	LS
	PS	<i>Non-Participating Properties</i> 4.9-4(b) <i>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).</i>	LS
4.9-5 Impacts from existing on-site structures and exposure of construction workers to asbestos and lead-based paint.	PS	<i>Nichols Grove Tentative Map</i> 4.9-5(a) <i>Prior to issuance of a demolition permit by the City for any onsite structures, the project proponent shall provide a site assessment that determines</i>	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
	PS	<p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p><i>4.9-5(b) Implement Mitigation Measure 4.9-5(a).</i></p> <p><i>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</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>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.</i>	
4.9-6 Presence of pesticide and/or herbicide residues in project site soils.	LS PS	<i>Nichols Grove Tentative Map – None Required.</i> <i>Non-Participating Properties</i> 4.9-6 <i>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.</i>	N/A LS
4.9-7 Impacts of the McDevitt Drive extension on petroleum and natural gas pipelines.	PS	<i>Nichols Grove Tentative Map</i> 4.9-7(a) <i>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</i>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p>4.9-7(b) <i>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.</i></p> <p>4.9-7(c) <i>Prior to construction in the petroleum or natural gas pipeline's rights-of-way, the project applicant</i></p>	

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
	PS	<p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p><i>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.</i></p>	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	<p><i>Nichols Grove Tentative Map, Non-Participating Properties</i></p> <p><i>4.9-8 None Required.</i></p>	N/A
4.10 Hydrology and Water Quality			
4.10-1 Impact from project stormwater runoff.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p><i>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</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>to the initiation of ground disturbance activities:</i></p> <ul style="list-style-type: none"> • <i>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;</i> • <i>Storm drainlines south of the north Branch of Grasshopper Slough (Tributary 2) shall be designed for the 10-year flow;</i> • <i>Flows exceeding the 100-year flows in the DNR2C detention basin shall be drained to Tributary 2 of Grasshopper Slough;</i> • <i>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</i> • <i>The existing 18-inch culvert that connects Tributary 2 of Grasshopper Slough with the adjacent low-lying field shall be removed.</i> <p><i>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</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>the City Engineer.</i></p> <p><i>Non-Participating Properties</i></p> <p><i>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.</i></p>	LS
4.10-2 Detention basin maintenance.	PS	<p><i>Nichols Grove Tentative Map, Non-Participating Properties</i></p> <p><i>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:</i></p> <ul style="list-style-type: none"> <i>• Dispersion of alluvial sediment deposition at</i> 	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>inlet structures, thus limiting the extended localized ponding of water;</i></p> <ul style="list-style-type: none"> • <i>Periodic sediment removal;</i> • <i>Monitoring of the facility to ensure the site is completely and properly drained;</i> • <i>Outlet riser cleaning;</i> • <i>Vegetation management to prevent marsh vegetation from taking hold, and to limit habitat for disease-carrying fauna;</i> • <i>Removal of graffiti, grass trimmings, weeds, tree pruning, leaves, litter, and debris;</i> • <i>Preventative maintenance on monitoring equipment;</i> • <i>Vegetative stabilization of eroding banks and basal areas;</i> • <i>Animal and vector control;</i> • <i>Structural inspection; and</i> • <i>Funding plan for the above strategies.</i> 	
4.10-3 Degradation of water quality.	PS	<p><i>Nichols Grove Tentative Map</i></p> <p><i>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</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p><i>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</i></p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>include site-specific recommendations for BMPs, as well as mitigate for all other significant impacts to water quality.</i>	
4.10-4 Impacts to groundwater recharge.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.10-4 None required.</i>	N/A
4.10-5 Impacts related to regional flooding.	S	<i>Nichols Grove Tentative Map and Non-Participating Properties</i> <i>4.10-5(a) Flood Related Mitigation.</i> <i>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)).</i> <i>2. Bear River Levee Improvements. The</i>	SU

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>mitigation of flooding from the Bear River shall be implemented as follows:</i></p> <p><i>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</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p><i>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.</i></p> <p><i>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.</i></p> <p><i>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</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p><i>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</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p>4.10-5(c) <i>Development Pending Completion of Flood Control Improvements.</i></p> <p>1. <i>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</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>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.</i></p> <p>2. <i>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.</i></p>	

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.10-6 Cumulative increases in peak stormwater flows into the existing drainage system.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.10-6 None Required.</i>	N/A
4.10-7 Cumulative adverse impacts to water quality.	LS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.10-7 None Required.</i>	N/A
4.11 Public Services and Utilities			
4.11-1 Adequate water supply and delivery for new residents.	PS	<i>Nichols Grove Tentative Map</i> <i>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.</i> <i>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.</i> <i>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</i>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PS	<p><i>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.</i></p> <p><i>Non-Participating Properties</i></p> <p><i>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.</i></p>	LS
4.11-2 Adequate wastewater facilities for new residents.	PS	<p><i>Nichols Grove Tentative Map, Non-Participating Properties</i></p> <p><i>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.</i></p> <p><i>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.</i></p>	SU

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.11-3 Need for additional waste disposal/recycling services.	PS	<p><i>Nichols Grove Tentative Map, Non-Participating Properties</i></p> <p>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.</p>	LS
4.11-4 Project impact on electricity distribution.	PS	<p><i>Nichols Grove Tentative Map, Non-Participating Properties</i></p> <p>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</p>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>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.</i>	
4.11-5 Adequate ratio of law enforcement personnel to residents.	PS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.11-5 Prior to issuance of building permits, the applicant shall be required to pay The City's Police Development Impact Fees.</i>	LS
4.11-6 Adequate fire protection services available to new residents.	PS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.11-6 Prior to issuance of building permits, the applicant shall be required to pay the City's Fire Protection Development Impact Fees.</i>	LS
4.11-7 Number of enrolled students exceeding capacity.	PS	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.11-7 The applicant shall be required to pay all applicable school impact fees in effect at the time of building permit issuance.</i>	LS
4.11-8 Adequate provision of parks and recreation space for new residents.	LS	<i>Nichols Grove Tentative Map – None Required.</i>	N/A
	PS	<i>Non-Participating Properties</i> <i>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</i>	LS

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

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>or pay in lieu fees, for the review and approval of the City Engineer.</i>	
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	<i>Nichols Grove Tentative Map, Non-Participating Properties</i> <i>4.11-9 None required.</i>	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

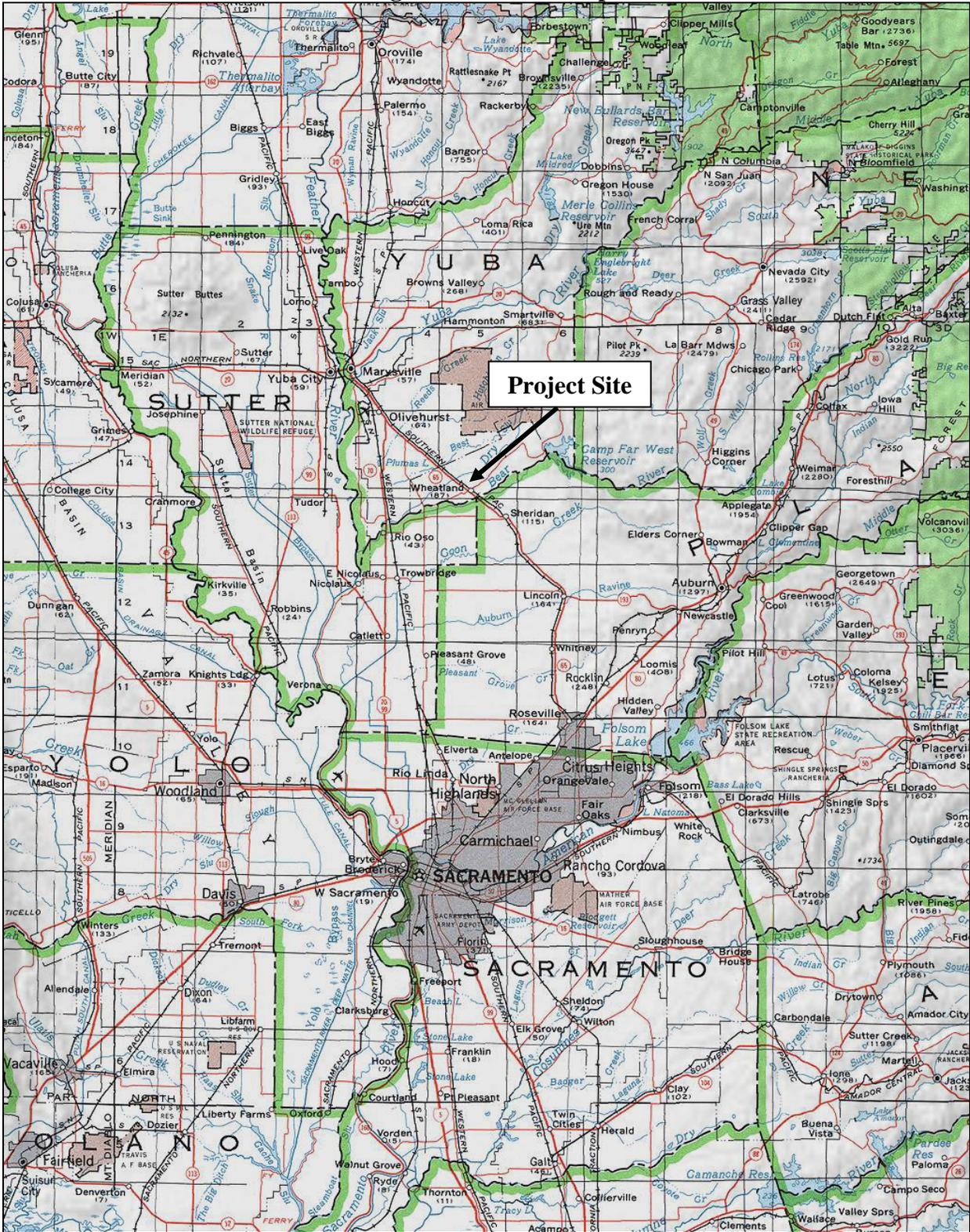
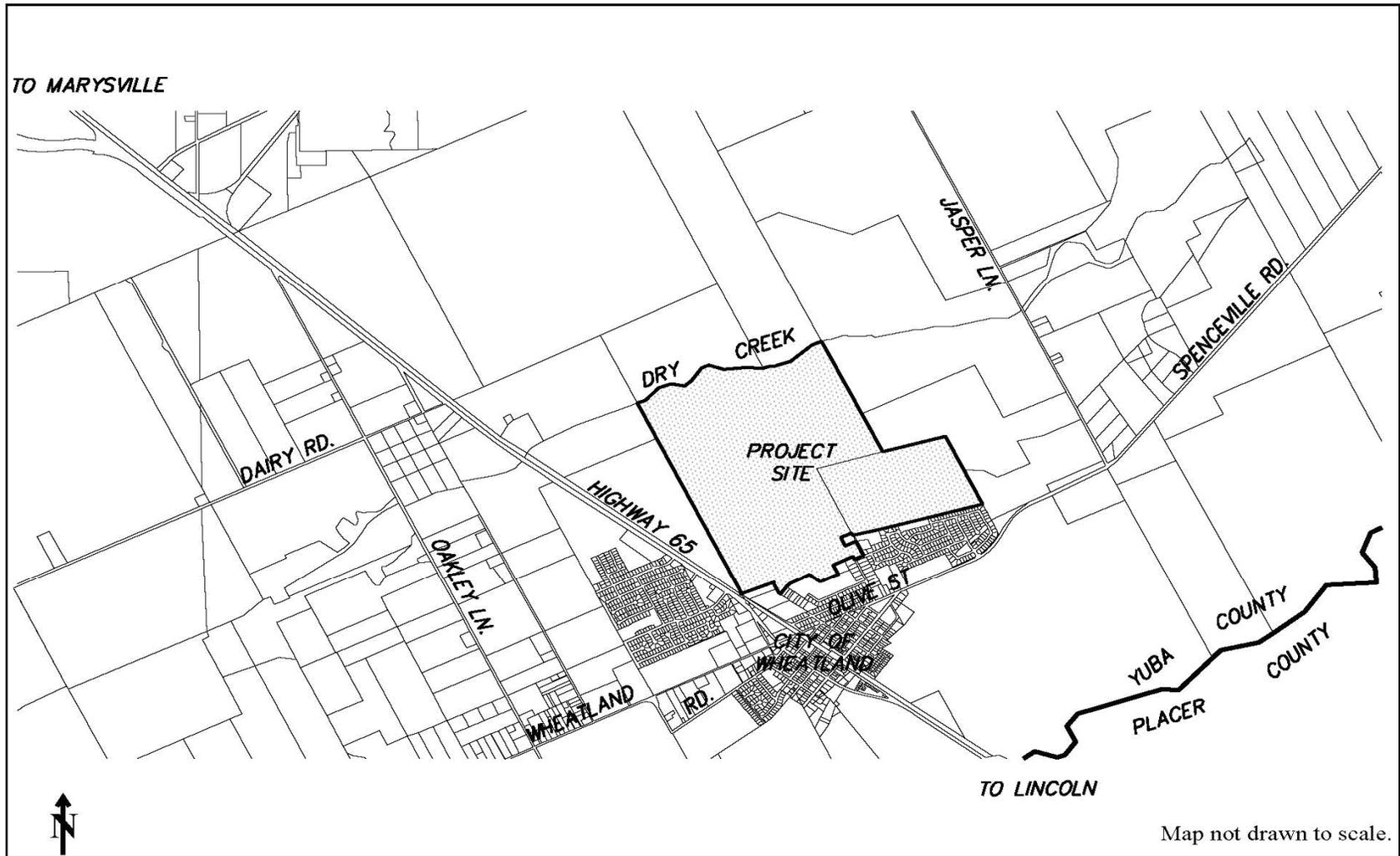
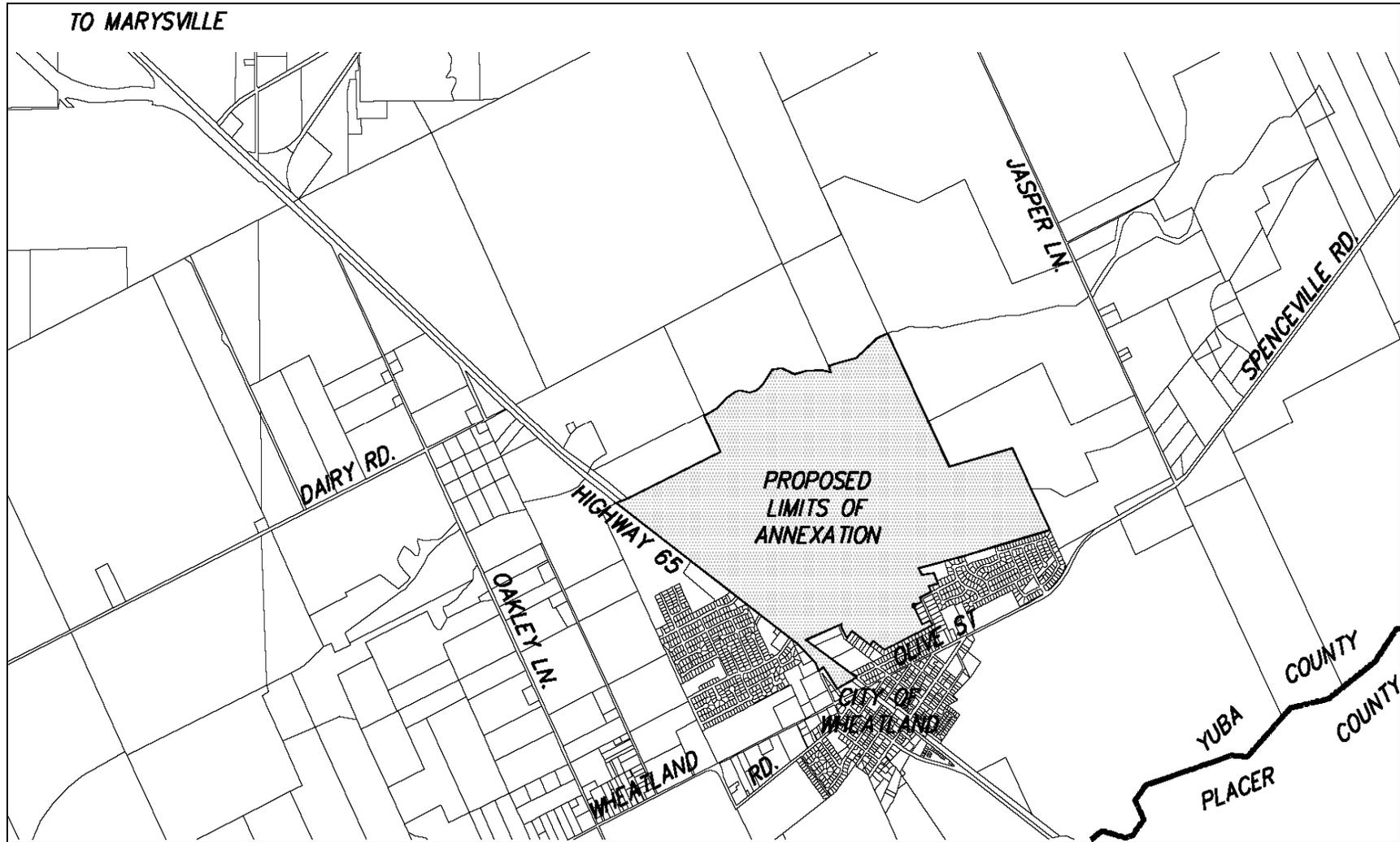


Figure 3-2
Nichols Grove Tentative Map Location



**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 rezoning 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*
<p><i>* 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.</i></p> <p><i>Key to land use designations:</i></p> <ul style="list-style-type: none"> o LDR- Low Density Residential o LMDR- Low-Medium Density Residential o MDR- Medium Density Residential o HDR- High Density Residential o Park Det.- Park/Detention Basin o 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.”

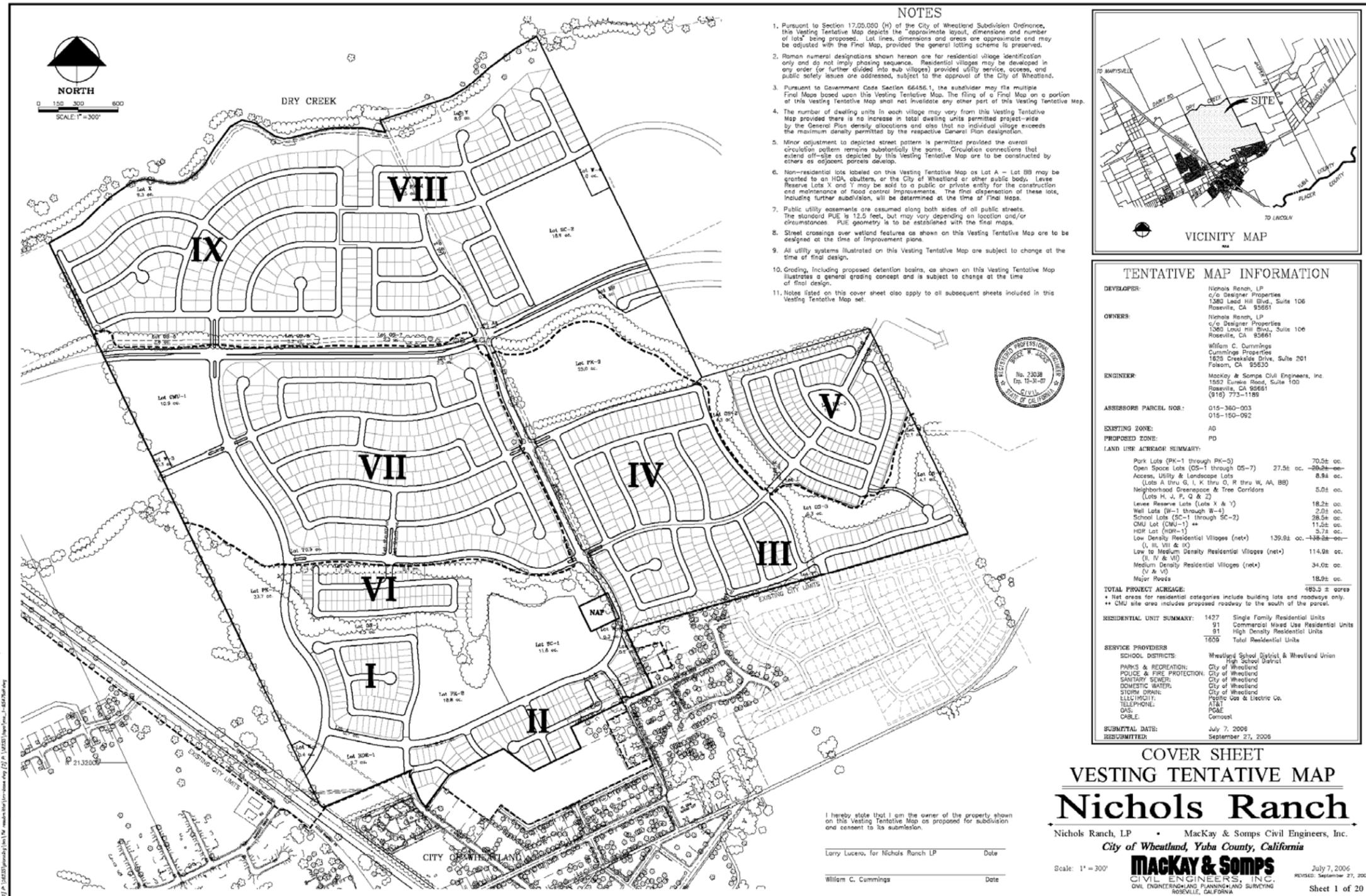
Residential Villages	Land Use Designation	Dwelling Units	Acres	Density (dwelling units/acre)
Village I	LDR	60	16.1	3.7
Village II	LMDR	76	14.7	5.2
Village III	LDR	147	39.0	3.7
Village IV	LMDR	143	34.7	4.1
Village V	MDR	197	27.6	7.1
Village VI	MDR	72	11.0	6.5
Village VII	LMDR	332	76.4	4.3
Village VIII	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

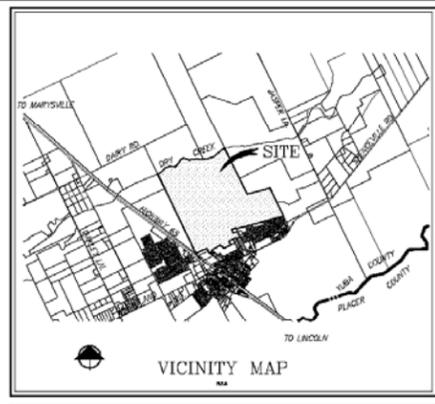
The proposed Nichols Grove Tentative Map site would include 1,427 single-family lots. The proposed project would offer a variety of residential lot sizes, allowing for a blend of housing styles, sizes, and price ranges within a single community. Single family residential is the largest land use component 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



- NOTES**
- Pursuant to Section 17.00.050 (H) of the City of Wheatland Subdivision Ordinance, this Vesting Tentative Map depicts the approximate layout, dimensions and number of lots being proposed. Lot lines, dimensions and areas are approximate and may be adjusted with the Final Map, provided the general lotting scheme is preserved.
 - Roman numeral designations shown hereon are for residential village identification only and do not imply phasing sequence. Residential villages may be developed in any order (or further divided into sub villages) provided utility service, access, and public safety issues are addressed, subject to the approval of the City of Wheatland.
 - Pursuant to Government Code Section 66456.1, the subdivider may file multiple Final Maps based upon this Vesting Tentative Map. The filing of a Final Map on a portion of this Vesting Tentative Map shall not invalidate any other part of this Vesting Tentative Map.
 - The number of dwelling units in each village may vary from this Vesting Tentative Map provided there is no increase in total dwelling units permitted project-wide by the General Plan density allocations and also that no individual village exceeds the maximum density permitted by the respective General Plan designation.
 - Minor adjustment to depicted street pattern is permitted provided the overall circulation pattern remains substantially the same. Circulation connections that extend off-site as depicted by this Vesting Tentative Map are to be constructed by others as adjacent parcels develop.
 - Non-residential lots labeled on this Vesting Tentative Map as Lot A - Lot BB may be granted to an HOA, club, or the City of Wheatland or other public body. Levee Reserve Lots X and Y may be sold to a public or private entity for the construction and maintenance of flood control improvements. The final disposition of these lots, including further subdivision, will be determined at the time of Final Maps.
 - Public utility easements are assumed along both sides of all public streets. The standard PUE is 12.5 feet, but may vary depending on location and/or circumstances. PUE geometry is to be established with the final maps.
 - Street crossings over wetland features as shown on this Vesting Tentative Map are to be designed at the time of Improvement plans.
 - All utility systems illustrated on this Vesting Tentative Map are subject to change at the time of final design.
 - Grading, including proposed detention basins, as shown on this Vesting Tentative Map illustrates a general grading concept and is subject to change at the time of final design.
 - Notes listed on this cover sheet also apply to all subsequent sheets included in this Vesting Tentative Map set.



TENTATIVE MAP INFORMATION

DEVELOPER: Nichols Ranch, LP
c/o Designer Properties
1383 Laid Hill Blvd, Suite 106
Roseville, CA 95661

OWNERS: Nichols Ranch, LP
c/o Designer Properties
1383 Laid Hill Blvd, Suite 106
Roseville, CA 95661

ENGINEER: William C. Cummings
Cummings Properties
1825 Creekside Drive, Suite 201
Folsom, CA 95630

ASSESSORS PARCEL NO.: MacKay & Soms Civil Engineers, Inc.
1552 Eunice Road, Suite 100
Roseville, CA 95661
(916) 773-1188

EXISTING ZONE: AG
PROPOSED ZONE: PD

LAND USE ACREAGE SUMMARY:

Park Lots (PK-1 through PK-5)	70.5± ac.
Open Space Lots (OS-1 through OS-7)	27.5± ac.
Access, Utility & Landscape Lots (Lots A thru G, I, K thru O, R thru W, AA, BB)	8.8± ac.
Neighborhood Greenspace & Tree Corridors (Lots H, J, P, Q & Z)	5.0± ac.
Levee Reserve Lots (Lots X & Y)	18.2± ac.
Well Lots (W-1 through W-4)	2.0± ac.
School Lots (SC-1 through SC-2)	28.5± ac.
CMU Lot (CMU-1)	11.5± ac.
HDR Lot (HDR-1)	3.7± ac.
Low Density Residential Villages (net*) (I, III, VIII & IX)	139.8± ac.
Low to Medium Density Residential Villages (net*) (II, IV & VII)	114.0± ac.
Medium Density Residential Villages (net*) (V & VI)	34.0± ac.
Major Roads	18.9± ac.
TOTAL PROJECT ACREAGE:	493.2 ± acres

* Net areas for residential categories include building lots and roadways only.
** CMU site area includes proposed roadway to the south of the parcel.

RESIDENTIAL UNIT SUMMARY: 1427 Single Family Residential Units
91 Commercial Mixed Use Residential Units
91 High Density Residential Units
1609 Total Residential Units

SERVICE PROVIDERS: Wheatland School District & Wheatland Union High School District
SCHOOL DISTRICTS: City of Wheatland
PARKS & RECREATION: City of Wheatland
POLICE & FIRE PROTECTION: City of Wheatland
SANITARY SEWER: City of Wheatland
DOMESTIC WATER: City of Wheatland
STORM DRAIN: City of Wheatland
UTILITY PROVIDERS: Pacific Gas & Electric Co.
TELEPHONE: AT&T
GAS: PG&E
CABLE: Comcast

SUBMITAL DATE: July 7, 2008
RESUBMITTED: September 27, 2008

COVER SHEET
VESTING TENTATIVE MAP
Nichols Ranch
Nichols Ranch, LP • MacKay & Soms Civil Engineers, Inc.
City of Wheatland, Yuba County, California
Scale: 1" = 300'
MACKAY & SOMPS
CIVIL ENGINEERS, INC.
CIVIL ENGINEERING, PLANNING AND SURVEYING
ROSEVILLE, CALIFORNIA
July 7, 2008
REVISED: September 27, 2008
Sheet 1 of 20

I hereby state that I am the owner of the property shown on this Vesting Tentative Map as proposed for subdivision and consent to its submission.

Larry Lucero, for Nichols Ranch LP _____ Date _____

William C. Cummings _____ Date _____

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 portion 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

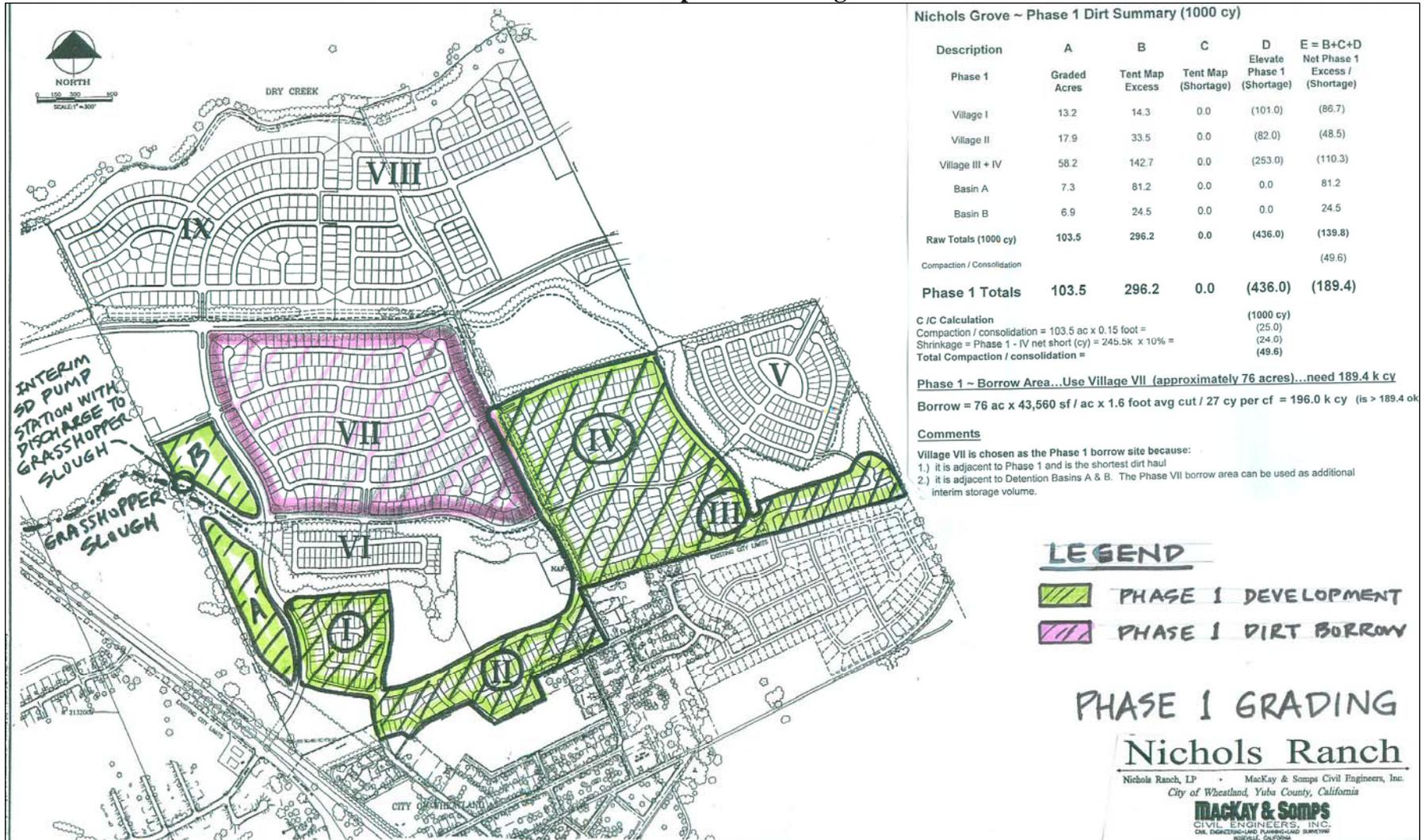
The Nichols Grove Tentative Map project would also require the approval of the *Nichols Grove General Development Plan and Design Guidelines*, which are part of the Tentative Map application and are available for public review at City Hall, 313 Main Street in the City of Wheatland. The *General Development 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 Village 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



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 rezoning 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
- Rezoning 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 rezoned 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 rezoning 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 rezoned 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 rezoning 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 prezone 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.

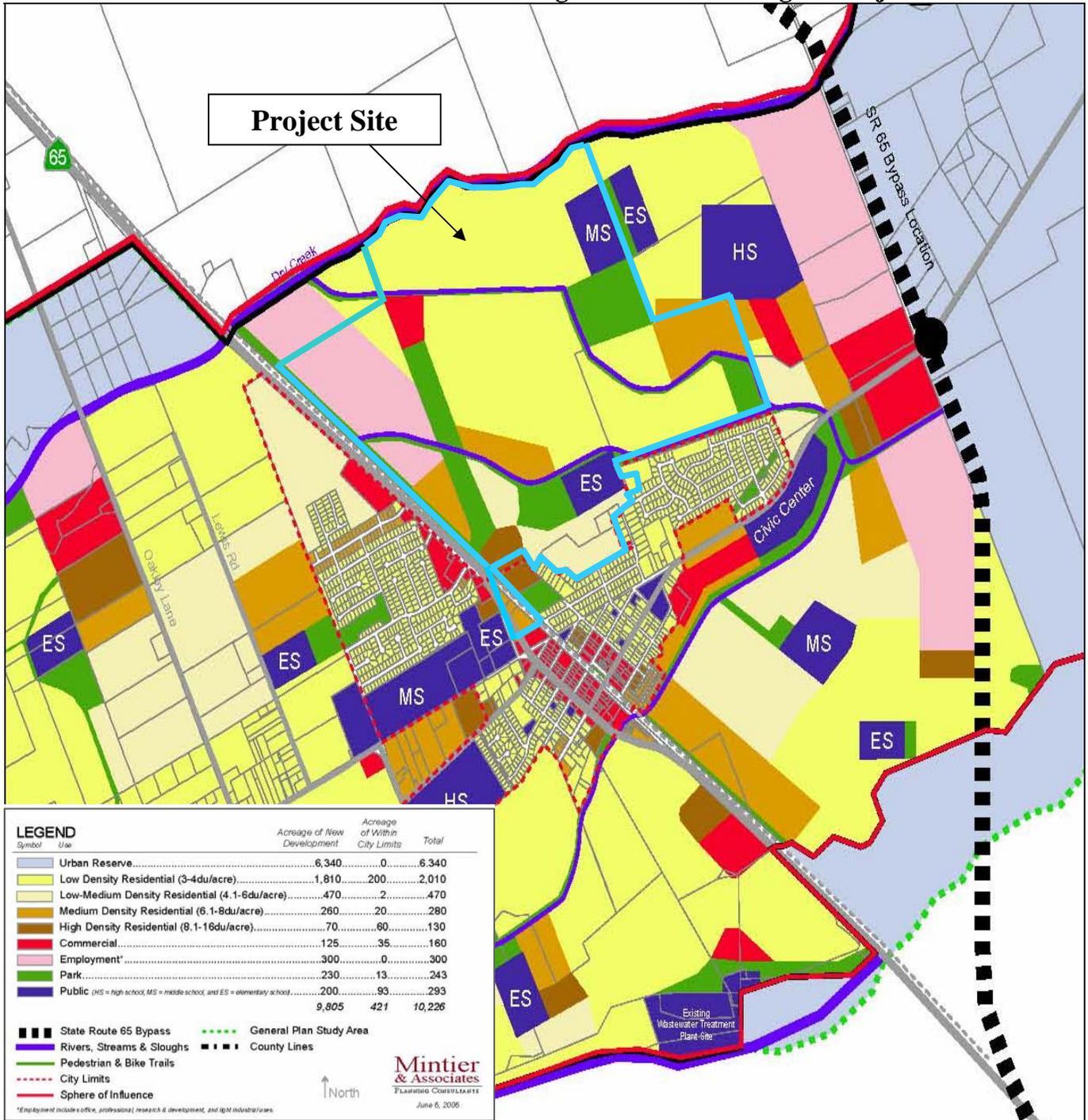
It should be noted that the new PD zone is included as Appendix K to the Draft EIR.

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.

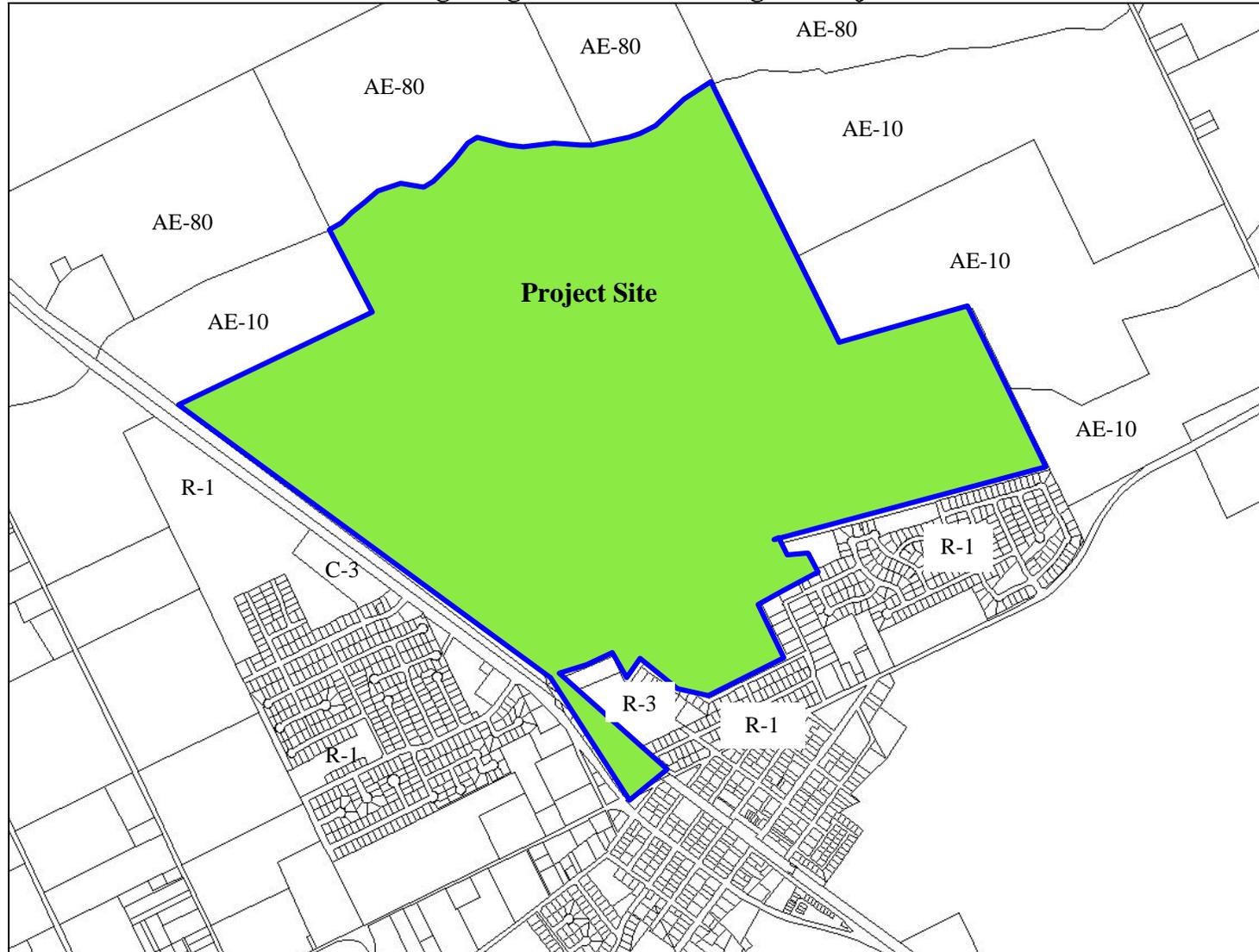
North: The project site is bordered to the north by existing agricultural land and Dry Creek.

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.

Class	Definition
I	Soils have few limitations that restrict their use.
II	Soils have moderate limitations that reduce the choice of plants, or that require special conservation practices.
III	Soils have severe limitations that reduce the choice of plants, require conservation practices, or both.
IV	Soils have very severe limitations that reduce the choice of plants, require very careful management, or both.
V	Soils are not likely to erode but have other limitations; impractical to remove that limit their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
VIII	Soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife habitat, or water supply or to aesthetic purposes.
<i>Source: USDA Soil Conservation Service, 1977.</i>	

Farmland Mapping and Monitoring Program

The 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 Importance⁴ 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 rezoning, general plans, and other land use plans, interests and plans of unincorporated communities, SOIs and master service plans of neighboring governmental entities and recommendations and determinations from related service reviews (§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 of urban areas. Therefore, promotion of planned development is a primary goal of LAFCO.

- a. The fundamental policy of LAFCO in considering the development status of land, located in or adjacent to an established city 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 pre zoning 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 pre zoning and related change of organization. The annexing city shall consult with LAFCO during the CEQA process, provide a written response to LAFCO's input, and submit environmental documentation to LAFCO pursuant to State CEQA Guidelines §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 an 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 near transportation corridors, Downtown, major commercial areas, neighborhood commercial centers, and employment centers.
- Policy 1.B.5. The City shall discourage leapfrog development and development in peninsulas extending into agricultural lands to avoid adverse effects on agricultural operations.

New Residential Neighborhoods

Goal: 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.

Policy 1.E.7. New commercial development adjacent to residential development shall provide buffers from noise, trespassing, lighting, or other annoyances, through methods such as landscaping or fencing.

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 rezoning 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 rezoned 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 rezoning 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 rezoning 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 rezoned 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 rezoning would be approved concurrently and an inconsistency would not occur. Therefore, a *less-than-significant* impact would result.

Mitigation Measure(s)

None required.

4.2-4 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 rezoning 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 rezoned 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 Engineers¹ (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 UPRR).

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

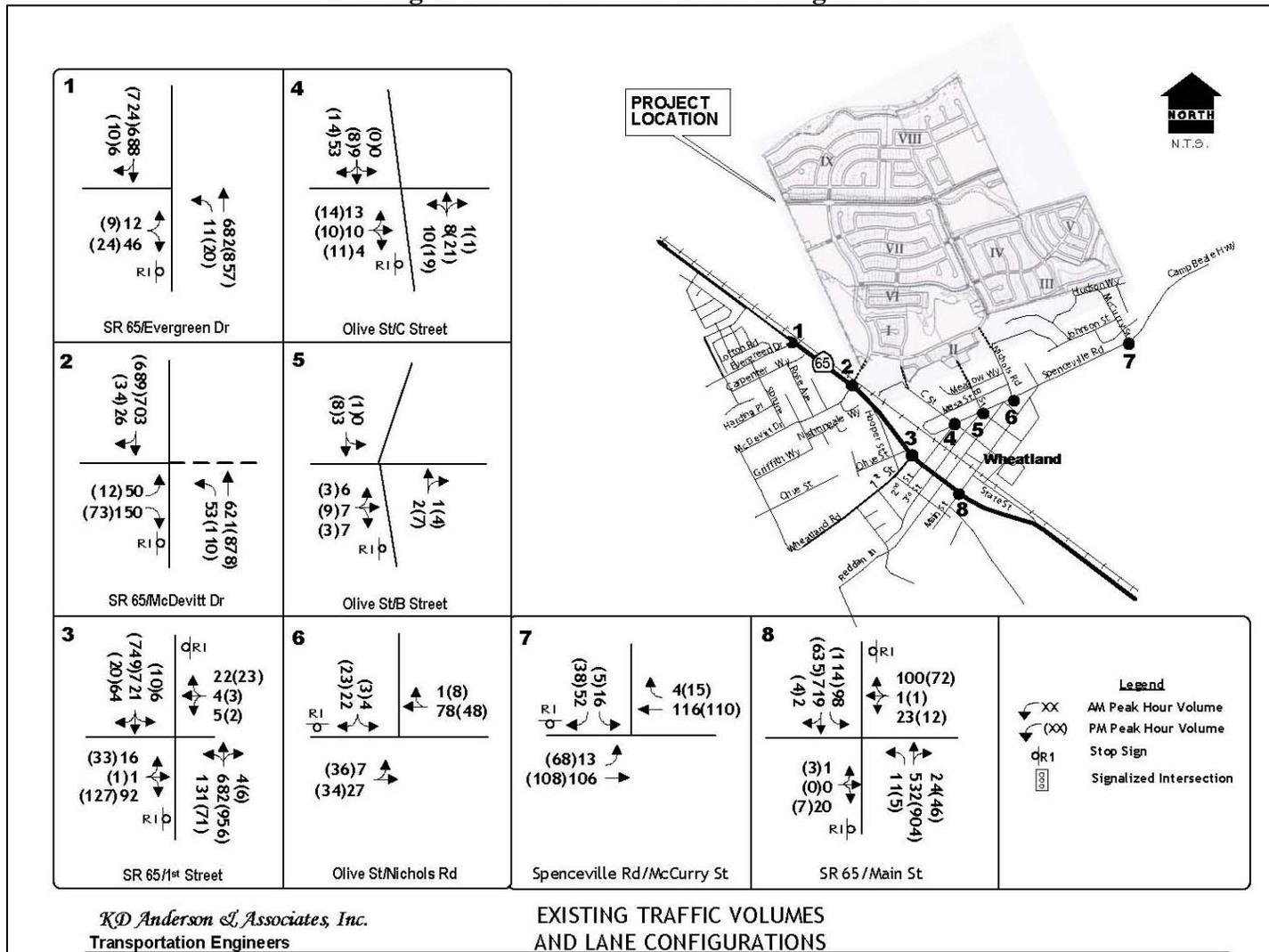
Current A.M. and P.M. peak hour Levels of Service were calculated at the study intersections (Refer to the Technical Appendix of the Traffic Impact Analysis for calculation worksheets) and are summarized in Table 4.3-2. Current Levels of Service were compared to adopted standards to determine whether 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: *KD Anderson & 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 NB left turn EB left+thru+right turn	EB Stop	9.5 sec	A	9.8 sec	A	No
		22.1 sec	C	27.7 sec	D	
SR 65 / McDevitt Drive NB left turn EB left turn EB right turn	SB Stop	10.0 sec	B	10.2 sec	B	No
		67.3 sec	F	82.3 sec	F	
		20.6 sec	C	16.2 sec	C	
SR 65 (D Street) / First Street NB left turn SB left turn	EB / WB					Yes
	Stop	11.3 sec 9.5 sec	B A	10.2 sec 10.8 sec	B B	
EB left+thru+right turn WB left+thru+right turn		136.4 sec	F	407.9 sec	F	
		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 left+thru+right turn	EB Stop	7.4 sec	A	7.3 sec	A	No
		9.2 sec	A	9.1 sec	A	
Olive St / B Street SB left turn EB left+thru+right turn	EB Stop	-	-	7.2 sec	A	No
		8.7 sec	A	8.9 sec	A	
Olive Street / Nichols Drive EB left turn SB left+right turn	SB Stop	7.4 sec	A	7.4 sec	A	No
		8.9 sec	A	8.8 sec	A	
Spenceville Rd / McCurry St EB left turn SB left turn SB right turn	SB Stop	7.5 sec	A	7.6 sec	A	No
		10.2 sec	B	11.2 sec	B	
		9.2 sec	A	9.1 sec	A	
SR 65 / Main Street NB left turn SB left turn EB left+thru+right turn WB left+thru+right turn	EB/WB	9.6 sec	A	9.2 sec	A	Yes
	Stop	9.4 sec	A	12.1 sec	B	
		18.4 sec	C	63.3 sec	F	
		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: <i>KDAnderson & Associates, Inc., 2007</i>					

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 UPPR 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 80² 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 UPPR 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 unsignalized 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
<i>Source: KD Anderson & Associates, Inc., 2007</i>						

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.

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.

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.

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

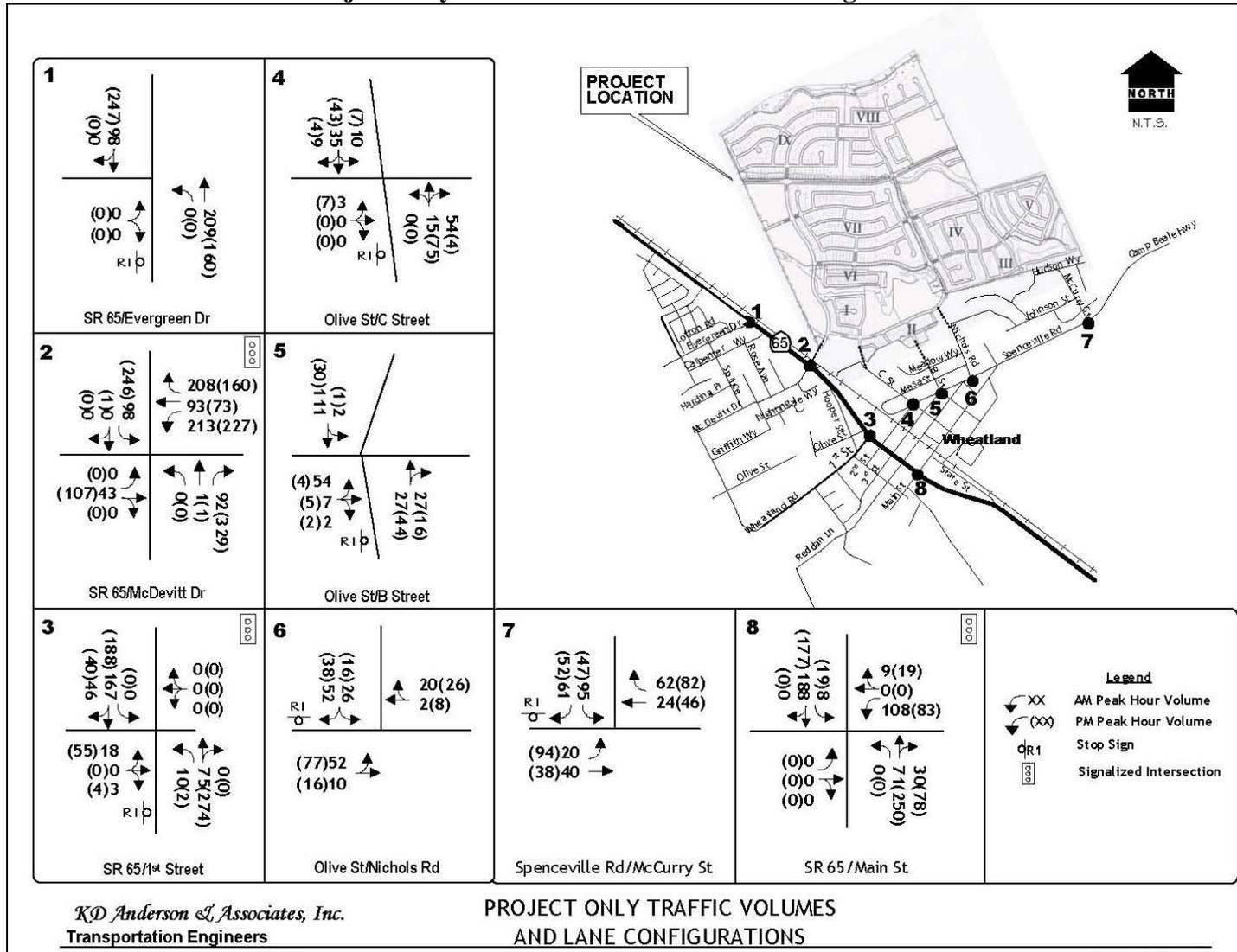
Source: KAnderson & Associates, Inc., 2007

**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: KAnderson & 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:

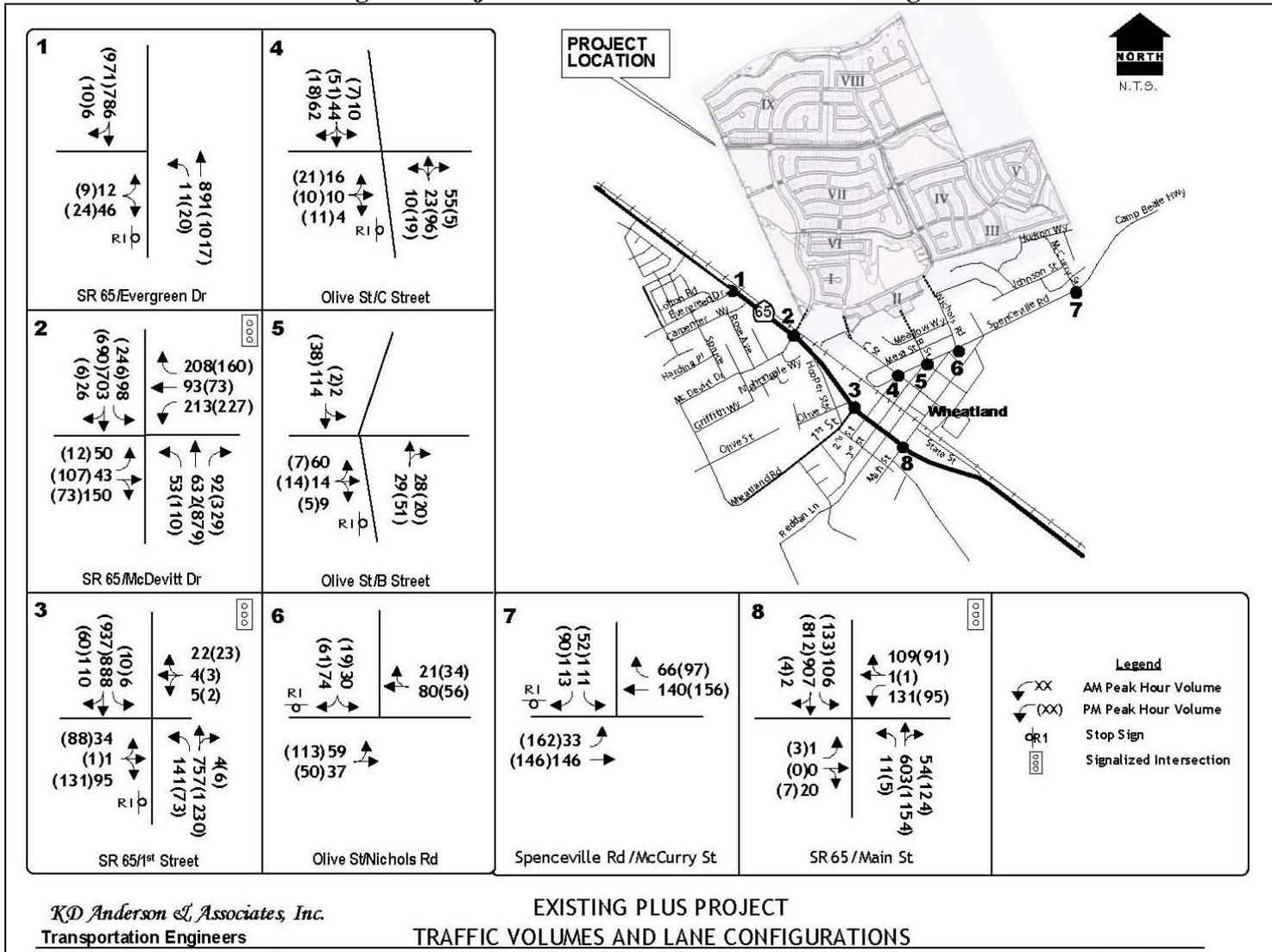
- Jones Ranch: 552 single-family residences, a small commercial center and elementary school on Wheatland Road west of the High School.
- Heritage Oaks: 604 single family residences, plus a shopping center and mini-storage located on the west side of SR 65 south of the developed area of the City and 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**



**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 Stop	10.0 sec	B			10.2 sec	B			N.A
SB left turn		-	-			-	-			
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) / 1 st 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				
Direction	Percentage “Through” Traffic			
	A.M. Peak Hour		P.M. Peak Hour	
	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.

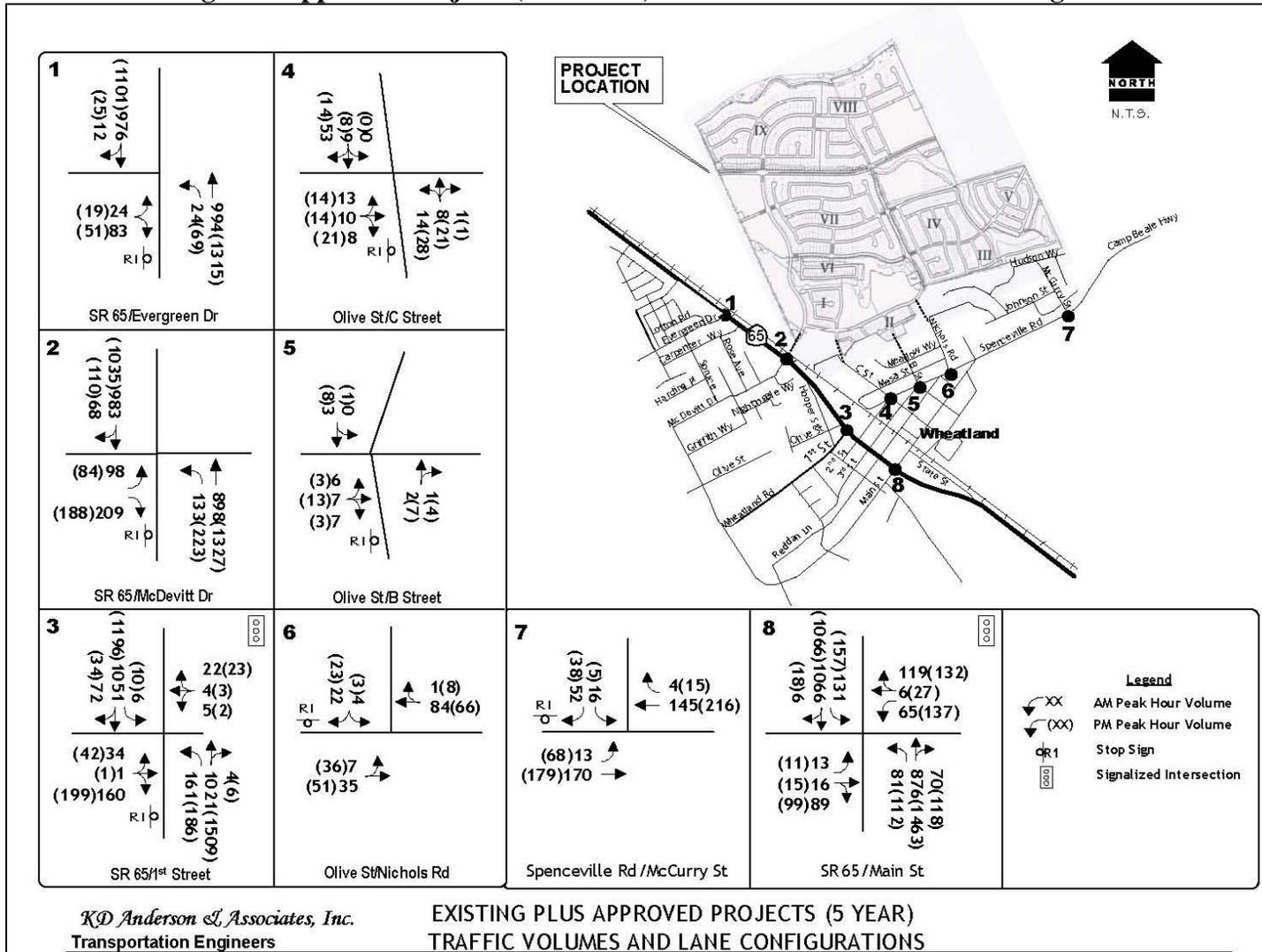
Recent and Planned Improvements

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.

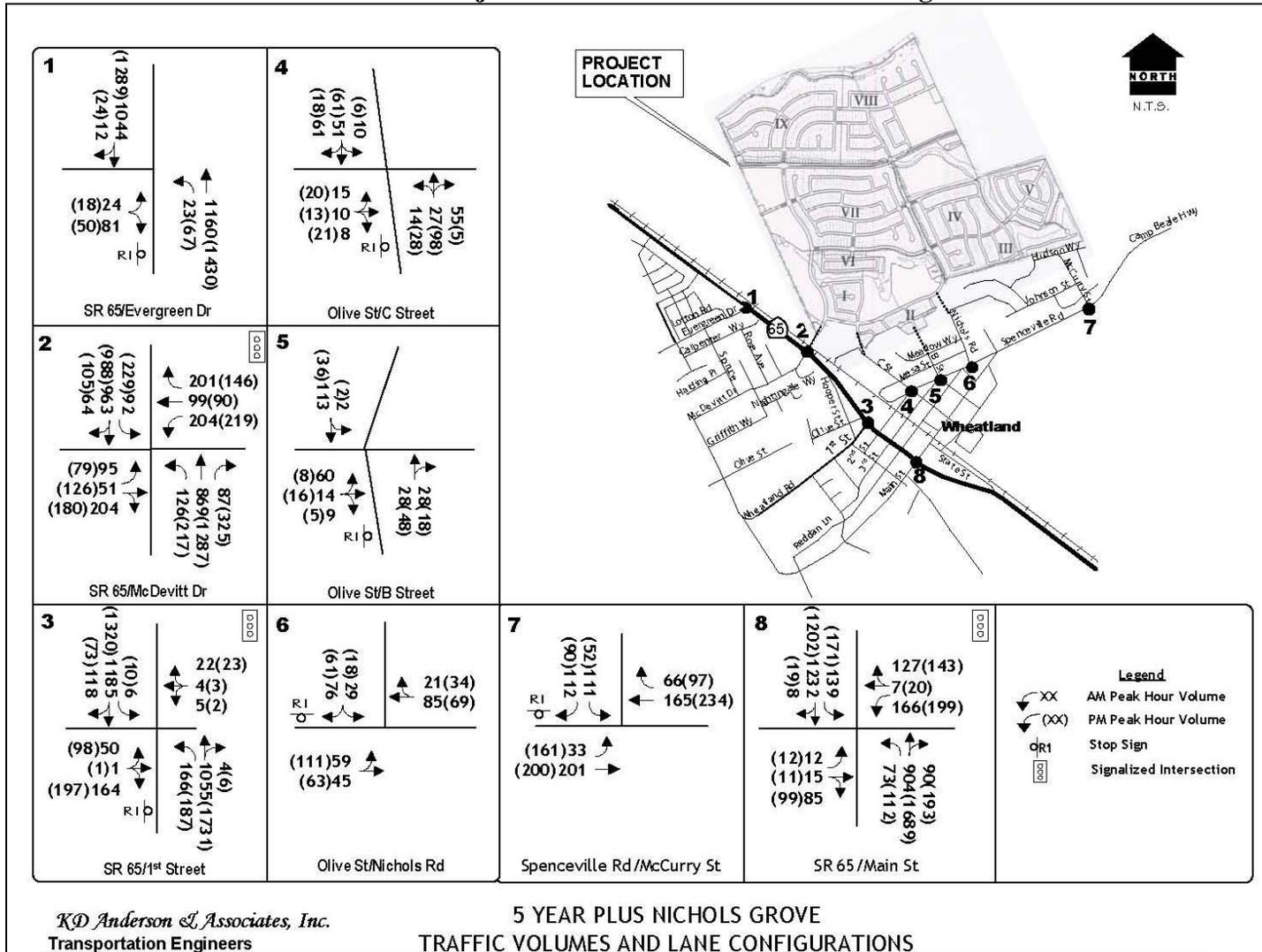
Planned Circulation System Improvements

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**



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.

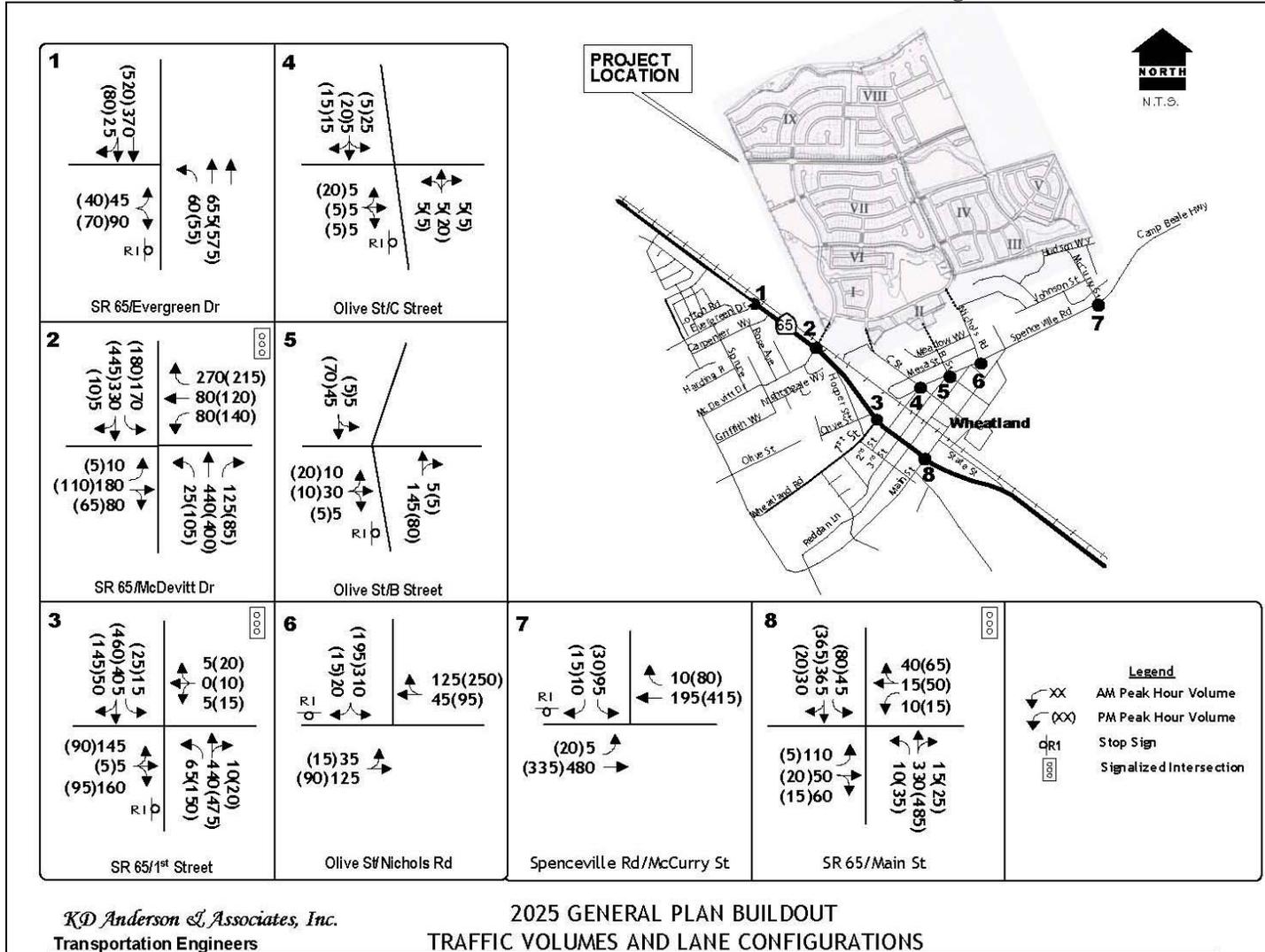
Project-Specific Impacts and Mitigation Measures

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



KD Anderson & Associates, Inc.
 Transportation Engineers

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

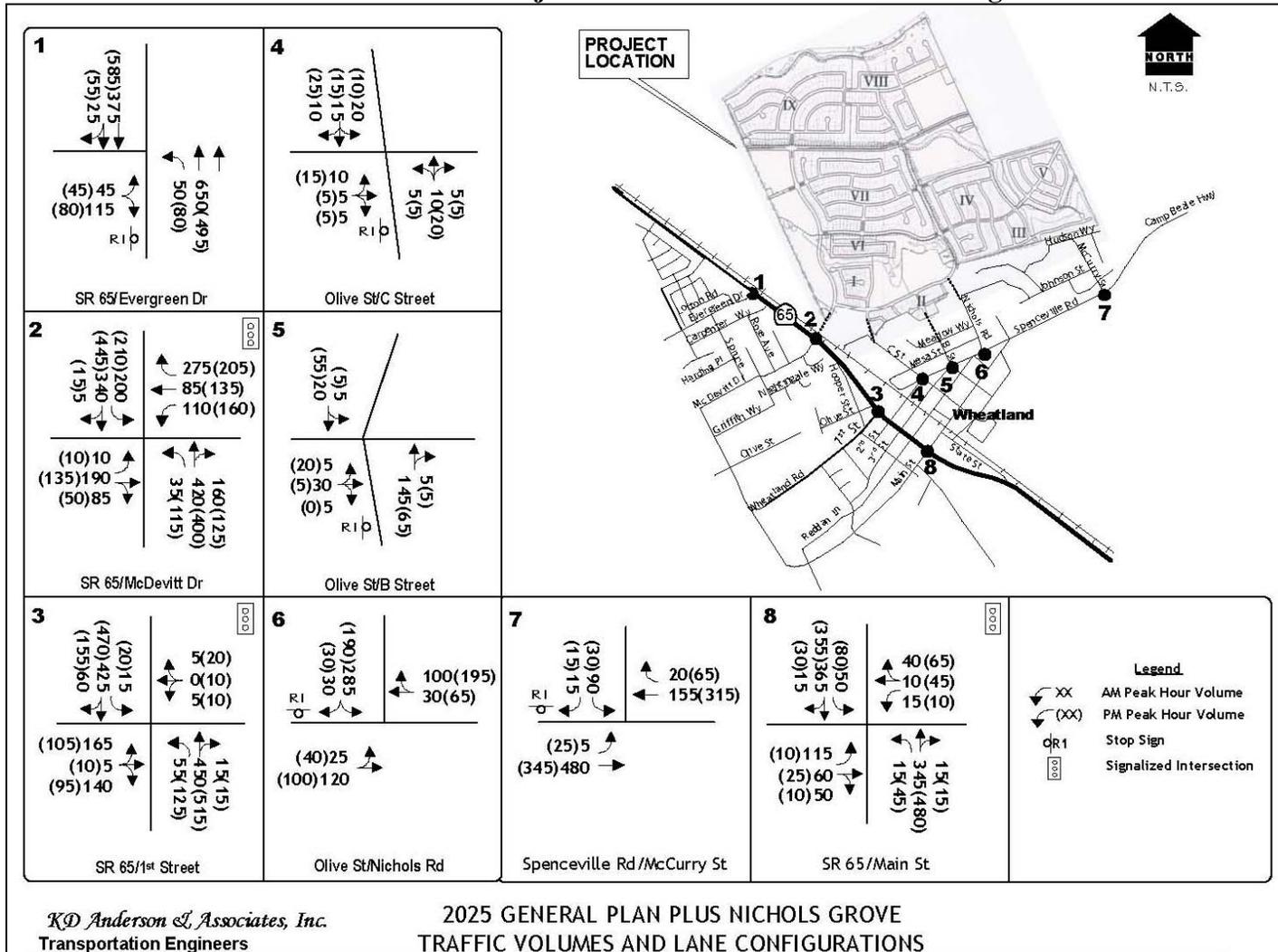
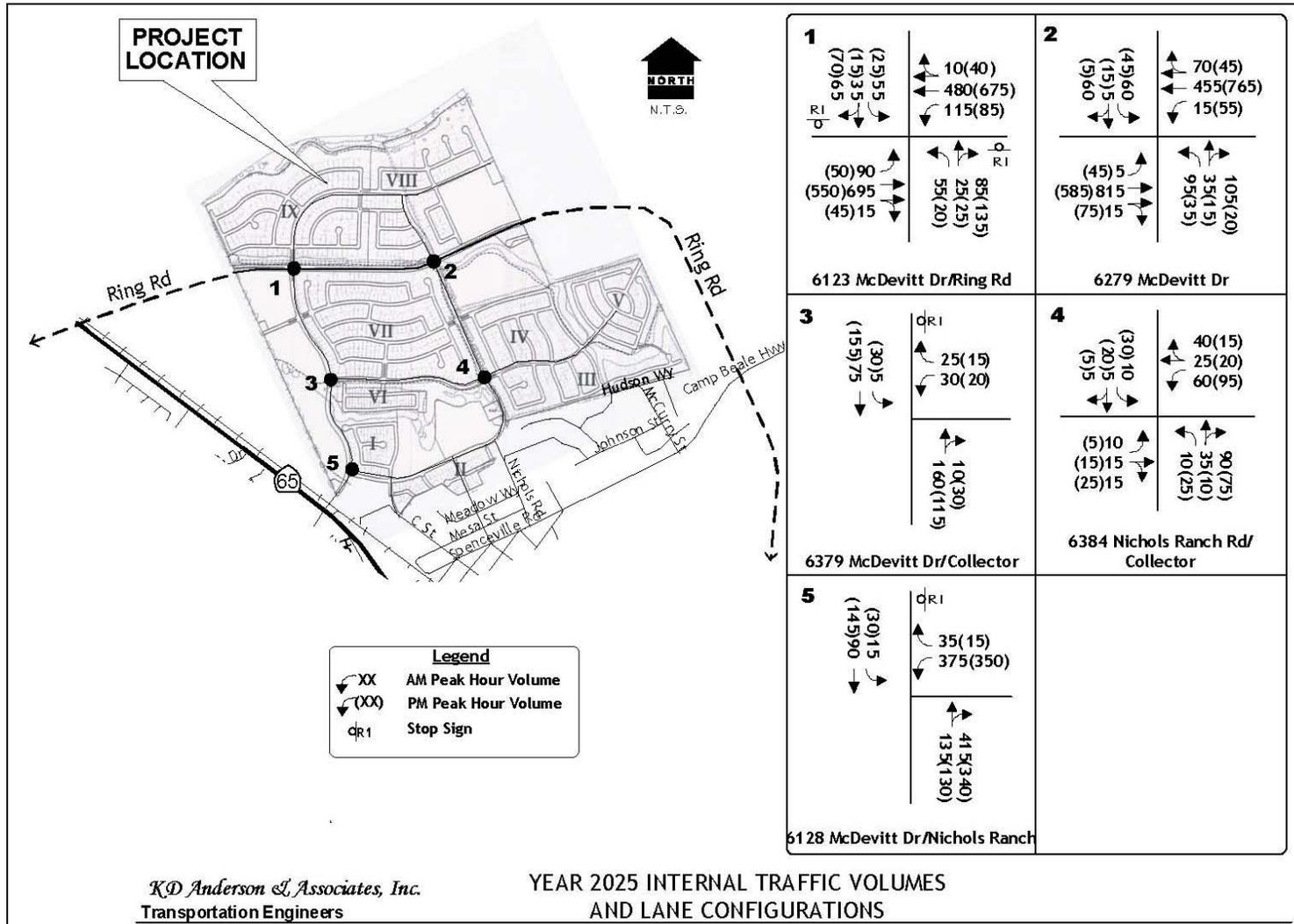


Figure 4.3-8
 Year 2025 Internal Traffic Volumes and Lane Configurations



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 1 st Street		20,100	2	F	5,380	25,480	F
	1 st 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 to 4 th Street		150	2	A	245	395	A
	4 th 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: K D Anderson & 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 UPRR, 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 NB left turn EB left+thru+right turn	EB Stop	11.2 sec 135.7 sec	B F	11.6 sec 262.4 sec	B F	12.9 sec 444.8 sec	B F	14.8 sec 884.5 sec	B F	Yes
SR 65 / McDevitt Drive NB left turn SB left turn EB left turn EB thru+right turn WB left turn WB thru WB right turn	EB / WB Stop	13.5 sec - >999 sec 72.5 sec - - -	B - F F - - -			18.1 sec - >999 sec 71.7 sec - - -	B - F F - - -			N.A.
	Signal			91.4 sec	F			192.3 sec	F	
SR 65 (D Street) / 1 st 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 NB left turn EB left+thru+right turn	EB Stop	- 7.4 sec 9.2 sec	- A A	7.5 sec 7.4 sec 9.9 sec	A A A	- 7.3 sec 9.2 sec	- A A	7.4 sec 7.5 sec 10.1 sec	A A B	No
Olive St / B Street SB left turn EB left+thru+right turn	EB Stop	- 8.7 sec	- A	7.3 sec 10.1 sec	A B	7.2 sec 9.0 sec	A A	7.4 sec 9.5 sec	A A	No
Olive Street / Nichols Drive EB left turn SB left+right turn	SB Stop	7.4 sec 8.9 sec	A A	7.6 sec 9.9 sec	A A	7.4 sec 10.6 sec	A B	7.7 sec 9.9 sec	A A	No
Spenceville Rd/McCurry St EB left turn SB left turn SB right turn	SB Stop	7.6 sec 11.0 sec 9.4 sec	A B A	7.8 sec 13.8 sec 9.9 sec	A B A	7.9 sec 13.1 sec 9.8 sec	A B A	8.6 sec 20.0 sec 10.3 sec	A C B	No
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			Lanes	LOS	ADT		
			Existing	Approved and Growth	Total			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 1 st Street		20,100	11,710	31,810	2	F	4,060	35,870	F
	1 st 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 to 4 th Street		150	40	190	2	A	150	340	A
	4 th 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 left+thru+right turn	EB Stop	8.4 sec	A	8.4 sec	A	9.2 sec	A	9.5 sec	A	No
		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) / 1 st 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 NB left turn EB left+thru+right turn	EB Stop	7.3 sec	A	7.3 sec	A	7.3 sec	A	7.3 sec	A	No
		7.3 sec	A	7.3 sec	A	7.3 sec	A	7.3 sec	A	
		9.1 sec	A	9.1 sec	A	9.1 sec	A	9.1 sec	A	
Olive St / B Street SB left turn EB left+thru+right turn	EB Stop	7.6 sec	A	7.6 sec	A	7.4 sec	A	7.4 sec	A	No
		10.4 sec	B	10.2 sec	B	9.8 sec	A	9.5 sec	A	
Olive Street / Nichols Drive EB left turn SB left+right turn	SB Stop	7.7 sec	A	7.6 sec	A	8.1 sec	A	7.9 sec	A	No
		17.0 sec	C	14.6 sec	A	14.1 sec	B	14.3 sec	B	
Spenceville Rd/McCurry St EB left turn SB left turn SB right turn	SB Stop	7.7 sec	A	7.6 sec	A	8.6 sec	A	8.2 sec	A	No
		18.5 sec	C	17.2 sec	C	17.9 sec	B	16.3 sec	C	
		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 EB left turn WB left turn NB left+thru+right turn SB left+thru+right turn	NB/SB Stop			8.9 sec	A			9.7 sec	A	Yes
				10.1 sec	B			9.3 sec	A	
	Signal			19.9 sec	B			18.1 sec	B	
				281.3 sec	F			39.0 sec	E	
				185.6 sec	F			54.2 sec	F	

**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 WB left turn NB left+thru+right turn SB left+thru+right turn	NB / SB Stop			8.7 sec	A			10.1 sec	B	Yes
				10.0 sec	B			9.5 sec	A	
				285.0 sec	F			113.8 sec	F	
				80.6 sec	F			209.7 sec	F	
	Signal			14.3 sec	B			9.8 sec	A	
McDevitt Dr / Collector SB left turn WB left+right turn	WB Stop			7.6 sec	A			7.6 sec	A	No
				10.1 sec	B			10.4 sec	B	
McDevitt Dr / Nichols Grove SB left turn WB left+right turn	WB Stop			8.8 sec	A			8.6 sec	A	No
				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 SB left turn EB left+thru+right turn WB left+thru+right turn	EB/WB Stop			7.3 sec	A			7.3 sec	A	No
				7.5 sec	A			7.5 sec	A	
				9.6 sec	A			9.6 sec	A	
				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

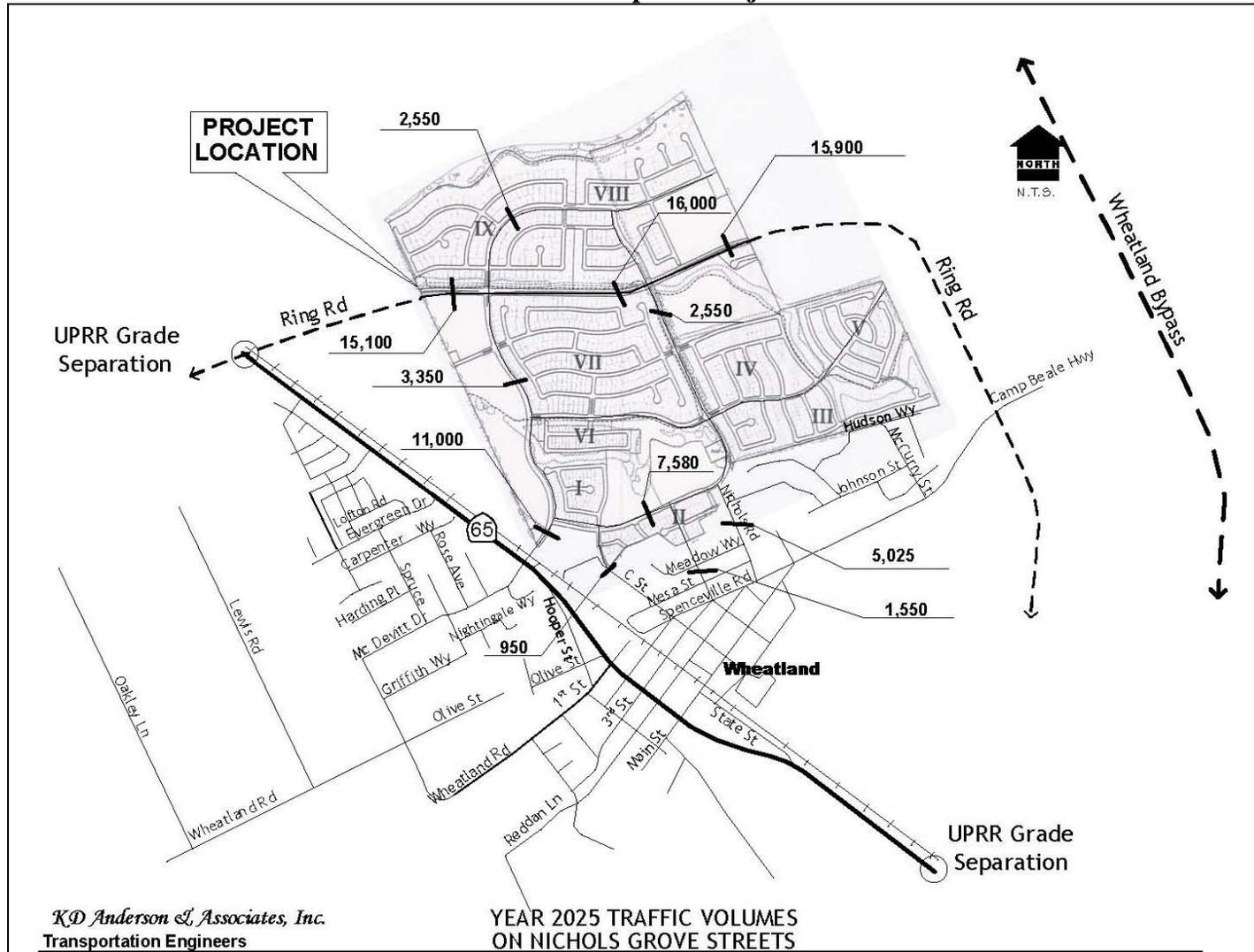
The Cumulative (2025) buildout analysis discussed above assumed buildout of the adopted Wheatland General Plan and background regional development anticipated by the Sacramento Area Council of Governments (SACOG) when the basic Tri-County traffic model was developed. However, the City of Wheatland has 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		
				Daily Volume	Lanes	LOS	ADT		LOS
							Daily Volume	Change	
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 1 st Street		20,100	13,500	4	A	13,900	400	A
	1 st 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 to 4 th Street		150	275	2	A	275	0	A
	4 th 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: KDAAnderson & 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		LOS
							Daily Volume	Change	
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 1 st Street		20,100	13,900	4	A	14,400	540	A
	1 st 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 to 4 th Street		150	275	2	A	370	95	A
	4 th 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		LOS
							Daily Volume	Change	
	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-weighting 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.

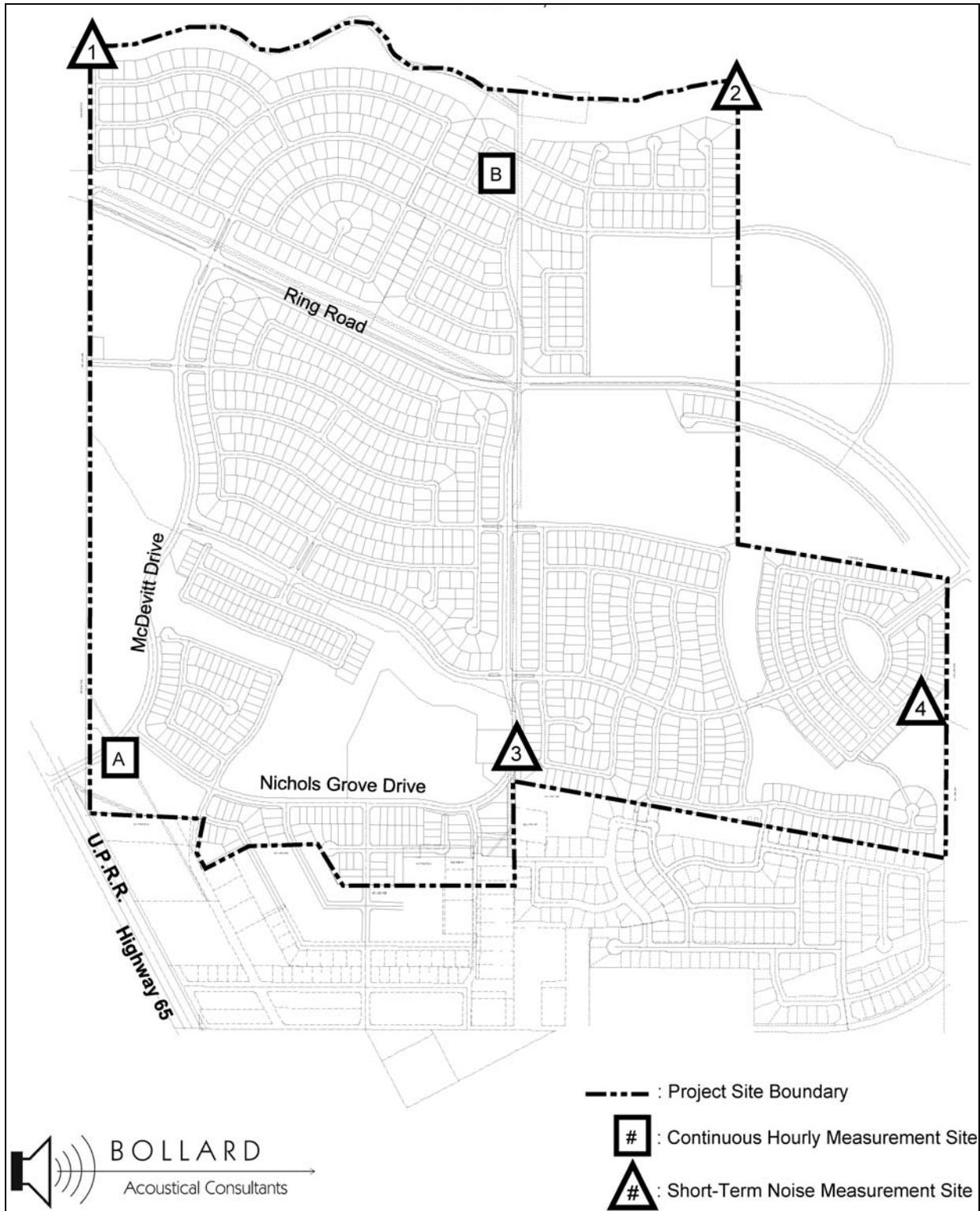
General Ambient Noise Levels

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 L_{max} , represents the highest noise level measured. The average value, denoted L_{eq} , represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. 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 to 4th 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)		L_{dn} at 240 feet from Railroad Centerline
60 dB L_{dn}	65 dB L_{dn}	
955 feet	440 feet	69 dB
* Predicted distances to noise level contours are from the railroad track centerline.		
<i>Source: Bollard Acoustical Consultants, Inc., 2007.</i>		

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.

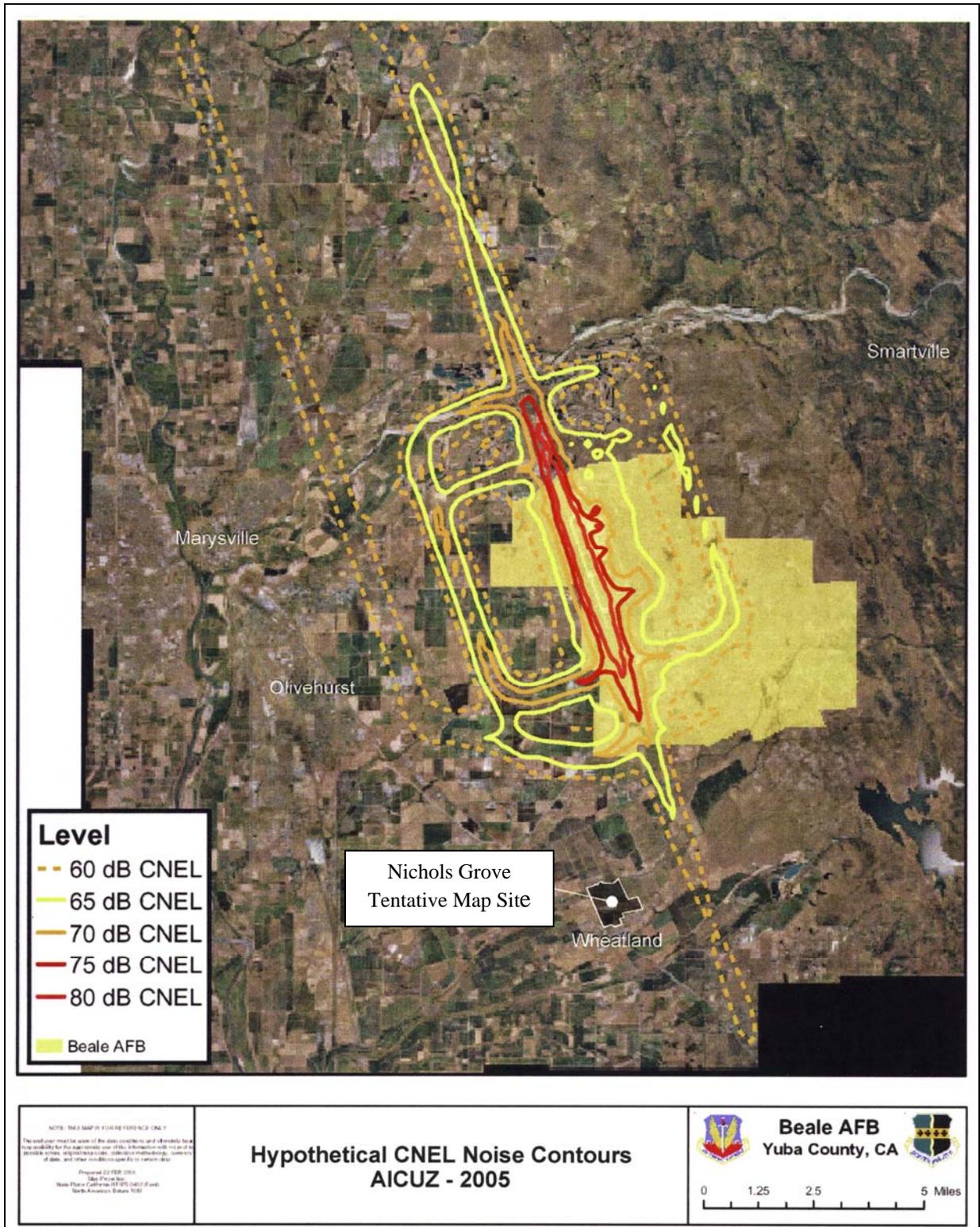
REGULATORY CONTEXT

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
<i>Source: Wheatland General Plan EIR, 2006.</i>		

Policy 9.G.2. The City shall require that noise created by new non-transportation sources might be mitigated so as not to exceed the noise level standards of Wheatland, as measured immediately within the property line of lands designated for sensitive uses.

Policy 9.G.4. The City shall prohibit new development of noise-sensitive land uses in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the noise level standards of Wheatland, unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to levels of Wheatland standards.

Policy 9.G.5. The noise created by new transportation noise sources shall be mitigated so as not to exceed the levels specified in Table 4.4-5 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	Interior Spaces	
	L _{eq} /CNEL dB	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 L_{dn} shall be applied at the building façade, in addition to a 60 dB L_{dn} 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 L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/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 and meeting halls;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, where the project would expose people residing or working in the area to excessive noise levels; or
- A single-event noise resulting in interior SEL in excess of 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 to 4th 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.			
<i>Source: Bollard Acoustical Consultants, Inc.</i>			

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.

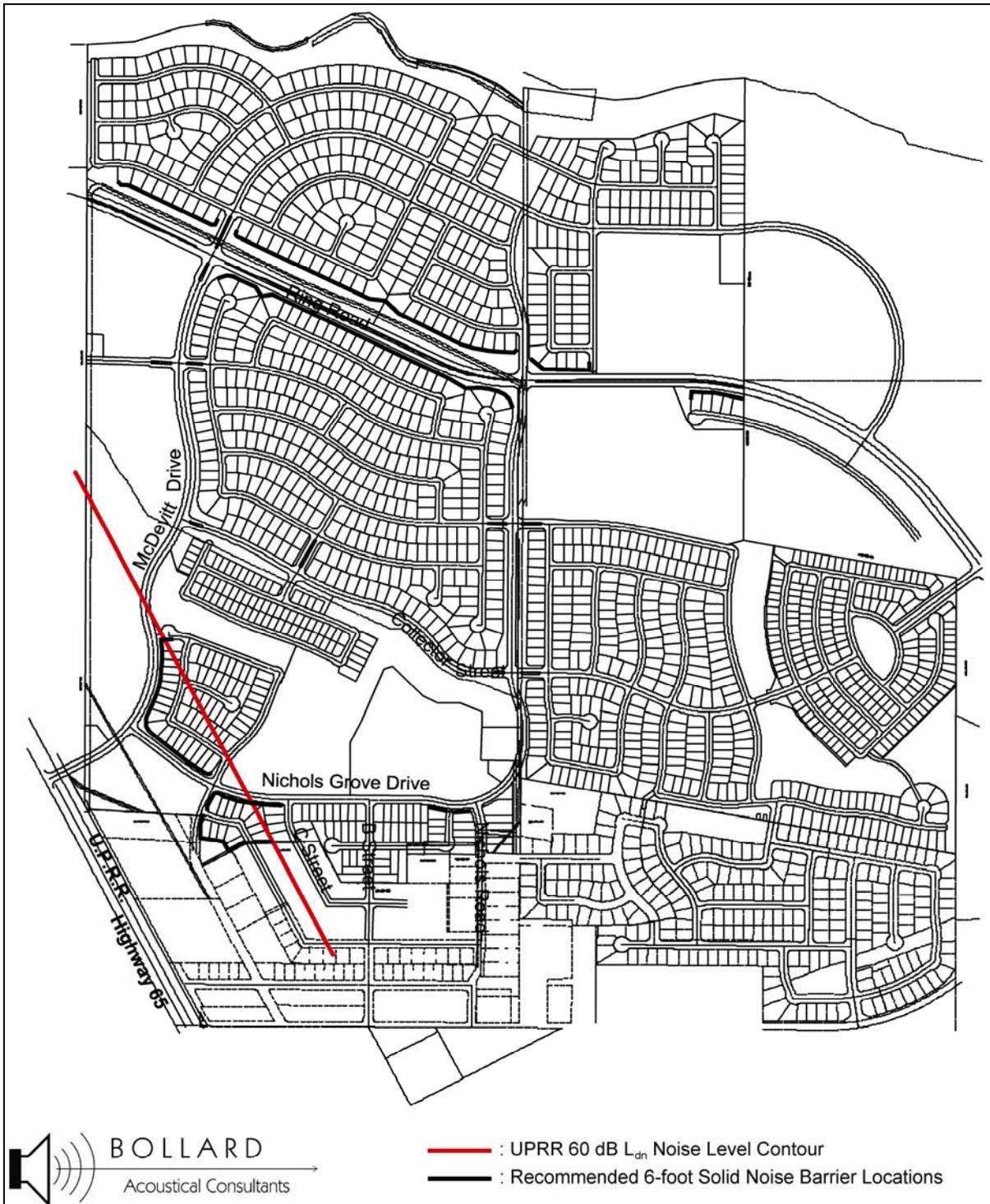
Nichols Grove Tentative Map

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 UPRR 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
<i>Source: Environmental Noise Pollution, Patrick R. Cunniff, 1977.</i>	

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*.

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, PM₁₀, 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 PM₁₀, 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 PM₁₀ (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, PM₁₀, 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.

Ozone

Ozone is produced by chemical reactions, involving nitrogen oxides (NO_x) and reactive organic gases (ROG) that are triggered by sunlight. Nitrogen oxides are created during combustion of fuels, while reactive organic gases are emitted during combustion and evaporation of organic

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

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 PM₁₀. Particles between 2.5 and 10 microns in diameter arise primarily from natural processes, such as wind-blown dust or soil.

Fine particles are less than 2.5 microns in diameter (PM_{2.5}). PM_{2.5}, by definition, is included in PM₁₀. Fine particles are produced mostly from combustion or burning activities. Fuel burned in cars and trucks, power plants, factories, fireplaces and wood stoves 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 (SO₂) is a colorless gas and constitutes a major element of pollution in the atmosphere. SO₂ is commonly produced by fossil fuel combustion. In the atmosphere, SO₂ is usually oxidized by ozone and hydrogen peroxide to form sulfur trioxide (a secondary pollutant). If SO₂ 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 (CO₂), 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 CO₂ equivalent is a good way to assess emissions because the use of an equivalent gives weight to the global warming potential of the gas. Methane gas, for example, is estimated by the Association of Environmental Professionals and the USEPA to have a comparative global warming potential 21 times greater than that of CO₂. 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 CO₂ equivalent (Tg CO₂ 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 CO₂ 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

CO₂ 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 Report⁶ the following climate change effects are predicted in California over the course of the next century:

- A diminishing Sierra snowpack declining by 70 percent to 90 percent, threatening the State's water supply;
- Increasing temperatures 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 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
PM _{2.5}	Annual Average	15 µg/m ³	12 µg/m ³
	24-Hour	35 µg/m ³	—
Lead	Calendar Quarter	1.5 µg/m ³	—
	30 Day Average	—	1.5 µg/m ³
Sulfates	24 Hour	25 µg/m ³	—
Hydrogen Sulfide	1-Hour	0.03 PPM	—
Vinyl Chloride	24-Hour	0.01 PPM	—
PPM = Parts-per-Million µg/m ³ = Micrograms-per-Cubic Meter <i>Source: California Air Resources Board, February 22, 2007. (http://www.arb.ca.gov)</i>			

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 SO₂. 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 PM₁₀ 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 PM₁₀ 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	PM₁₀
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			
<i>Source: Don Ballanti, Nichols Grove Air Quality Impact Analysis, June 2007.</i>			

The majority of PM₁₀ 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 PM₁₀. 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 PM₁₀ 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 PM₁₀; 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 loose 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 al, 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 PM₁₀, 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 PM₁₀.

Table 4.5-4 Project Regional Emissions (Pounds per Day)			
	ROG	NO_x	PM₁₀
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 PM₁₀ are greatest in winter due to wood burning in fireplaces and woodstoves. Winter emissions for PM₁₀ are shown in Table 4.5-4. Emissions of PM₁₀ would exceed the FRAQMD threshold of significance of 80 pounds per day. In addition, project emissions of ROG and NO_x would also exceed the FRAQMD thresholds of

significance. Therefore, buildout of the 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 PM₁₀, ROG, and NO_x. As a result, development of the non-participating properties would increase PM₁₀, 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 PM₁₀ 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 PM₁₀, 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 PM₁₀; therefore, because the proposed project would have a cumulatively considerable contribution to degradation of regional air quality, the project would have a *significant* cumulative impact on regional air quality.

Mitigation Measure(s)

The following mitigation measures would reduce project impacts by a minimum of 35 percent; however, the ROG, NO_x, and PM₁₀ 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 CO₂ 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 CO₂ 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 CO₂ 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 CO₂ 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 CO₂ emissions from vehicles of approximately 366 grams CO₂/mile,⁸ approximately 24,604 tons (US) of CO₂ per year would be generated by the vehicle trips associated with the proposed project. It should be noted that while the CO₂ emissions factor does assume certain reductions in vehicle emissions due to future vehicle models operating more efficiently, the factor does not take into account additional reductions in vehicle emissions that might take place in response to AB 1493, if mobile source emission reductions are ultimately implemented through legislation. 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 CO₂ 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	Compliant. The vehicles that access the project will be in compliance with any vehicle standards that are established by CARB.
	Heavy-Duty Vehicle Emissions Reduction Measures	
	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	Compliant. California law requires compliance with Title 24 efficiency standards.
	Appliance Energy 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 CO₂ emissions attributable to the project and cumulative CO₂ emissions from other sources in the State cannot be quantified. Furthermore, the way in which CO₂ emissions associated with the project might or might not influence actual physical effects of global climate change cannot be determined. For these reasons, whether the project would generate a substantial increase in GHG emissions relative to existing conditions, and whether emissions from the project would make a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change is uncertain.

For this analysis, a conservative approach is taken and the project is considered to have a *significant* incremental contribution to the cumulatively considerable production of greenhouse gases resulting in the cumulative impact of global climate change.

Mitigation Measure(s)

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 ROG_s, 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.*

⁷Meehl, 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

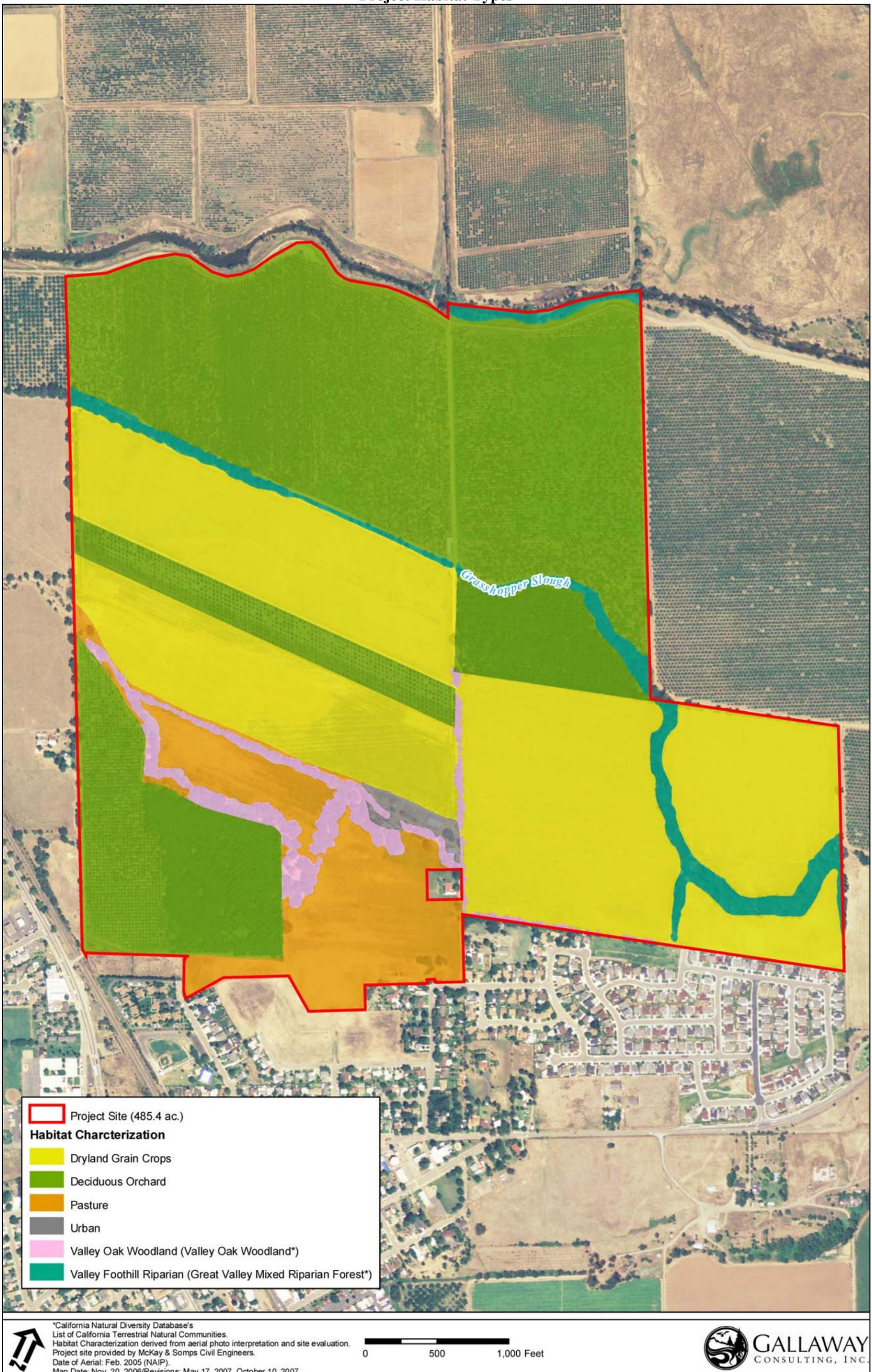
Dryland grain and seed crops occur in association with orchards, vineyards, pasture, urban, and other wildlife habitats such as riparian, chaparral, wetlands, desert, and herbaceous types. Dryland grain and seed crops are usually established on fertile soils, which historically supported an abundance 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 (CNDDDB). 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 CNDDDB'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 CNDDDB 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 woodpeewee (*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 melanoleucus*). 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 (<i>Prunus sp.</i>)	4	56
California Black Walnut (<i>Juglans hindsii</i>)	25	464
California Buckeye (<i>Aesculus californica</i>)	4	52
Edible Fig (<i>Ficus carica</i>)	1	30
Elderberry (<i>Sambucus caerulea</i>)	1	8
English Walnut (<i>Juglans regia</i>)	3	40
Fruitless Mulberry (<i>Morus alba</i>)	2	39
Oregon Ash (<i>Fraxinus latifolia</i>)	1	22
Pecan (<i>Carya illinoensis</i>)	5	57
Valley Oak (<i>Quercus lobata</i>)	255	4,309
Total	301	5,077
<i>Source: Sierra Nevada Arborists, 2007.</i>		

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 (CNDDDB) 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 CNDDDB 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

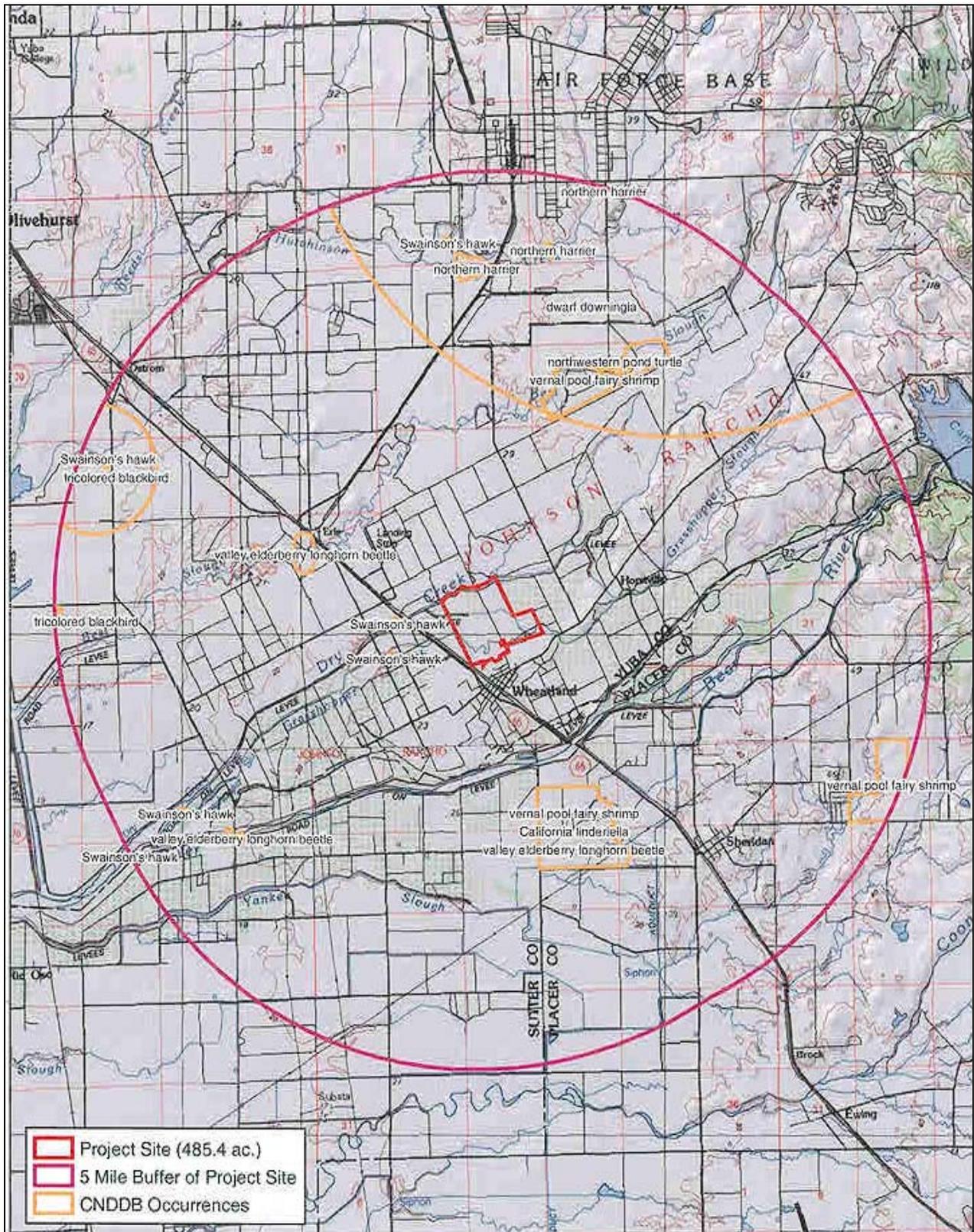


Table 4.6-2 Special-Status Species and Sensitive Natural Communities that Potentially Occur or Were Observed within the Project Site			
Common Name (Scientific Name)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence*
SENSITIVE NATURAL COMMUNITIES AND HABITATS			
Great Valley Mixed Riparian 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 <i>Acer negundo</i> , <i>Juglans hindsii</i> , <i>Platanus racemosa</i> , <i>Populus fremontii</i> , and <i>Salix</i> spp.	<u>Known</u> . 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.	<u>Known</u> . 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.	<u>Known</u> . Occurs north of the northern border of the site. Dry Creek constitutes EFH.
PLANTS			
Ahart's Dwarf Rush (<i>Juncus leiospermus</i> var. <i>ahartii</i>)	__/_/1B	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools / vernal mesic areas. (Mar-May)	<u>None</u> . No suitable habitat.
Big-scale Balsam Root (<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>)	__/_/1B	Cismontane woodlands and chaparral. Valley and Foothill grasslands. Sometimes serpentinite. (Mar-June)	<u>None</u> . No suitable habitat.
Bogg's Lake Hedge-Hyssop (<i>Gratiola heterosepala</i>)	__/_/SE/1B	Marshes and swamps. Vernal pools. (Apr-Aug)	<u>None</u> . 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 (<i>Clarkia biloba</i> ssp. <i>brandegeae</i>)	__/__/1B	Chaparral. Cismontane woodlands/often along roadcuts. (May-July)	<u>None</u> . No suitable habitat.
Dwarf Downingia (<i>Downingia pusilla</i>)	__/__/2	Valley and foothill grasslands. Vernal pools. (Mar- May)	<u>None</u> . No suitable habitat.
Hartweg's Golden Sunburst (<i>Pseudobahia bahiifolia</i>)	FE/SE/1B	Cismontane woodlands. Valley and foothill grasslands in heavy clay soils. (Mar-Apr)	<u>None</u> . No suitable habitat.
Legenere (<i>Legenere limosa</i>)	__/__/1B	Vernal pools. (Apr-June)	<u>None</u> . No suitable habitat.
Pincusion Navarretia (<i>Navarretia myersii</i> ssp. <i>myersii</i>)	__/__/1B	Vernal pools. (May)	<u>None</u> . No suitable habitat.
Veiny Monardella (<i>Monardella douglasii</i> ssp. <i>venosa</i>)	__/__/1B	Cismontane woodlands. Valley and foothill grasslands in heavy clay soils. (May-July)	<u>None</u> . No suitable habitat.
INVERTEBRATES			
Vernal Pool Tadpole Shrimp (<i>Lepidurus packardi</i>)	FE/__/__	Pools found in grass-bottomed swales of unplowed grasslands. Some pools are mud bottomed and highly turbid.	<u>None</u> . No suitable habitat.
Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	FT/__/__	Moderately turbid, deep, cool-water vernal pool.	<u>None</u> . No suitable habitat.
Conservancy Fairy Shrimp (<i>B. conservatio</i>)	FE/__/__	Large, long standing vernal pools.	<u>None</u> . 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 (<i>Desmocerus californicus dimorphus</i>)	FT/___/___	Within stems of blue elderberry bushes (<i>Sambucus mexicana</i>).	<u>High</u> . Suitable habitat detected within the BSA. <u>No presence detected.</u>
REPTILES AND AMPHIBIANS			
Western Pond Turtle (<i>Clemmys marmorata</i>)	_/CSC/_	Permanent or nearly aquatic habitats by slow moving waters with abundant aquatic vegetation.	<u>Moderate</u> . Suitable habitat is associated with Dry Creek.
Giant Garter Snake (<i>Thamnophis gigas</i>)	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.	<u>None</u> . Sub-marginal habitat within BSA. No known occurrence within 5 miles.
California Red-legged Frog (<i>Rana aurora draytonii</i>)	FT/CSC/_	Requires permanent water source, typically occurs along slow moving streams, ponds, or marshes with emergent vegetation.	<u>None</u> . Not known to occur in Central Valley.
FISH			
Central Valley Spring-run Chinook Salmon (<i>Oncorhynchus tshawytscha</i>)	FT/ ST/___	Occurs in drainages within the Sacramento River watershed. Dry Creek → Bear River → Feather River → Sacramento River.	<u>None</u> . 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 (<i>Oncorhynchus mykiss</i>)	FT/___/___	Occurs in drainages within the Sacramento River watershed. Dry Creek → Bear River → Feather River → Sacramento River.	<u>High</u> . This species is a year round resident in the watershed and will occur seasonally in Dry Creek

(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*
			adjacent to the site.
Central Valley Fall/Late Fall-Run Chinook Salmon (<i>Oncorhynchus tshawytscha</i>)	_/CSC/_	Occurs in drainages within the Sacramento River watershed. Dry Creek → Bear River → Feather River → Sacramento River.	<u>High</u> . This species will occur in Dry Creek during high flow periods adjacent to the site.
Delta Smelt (<i>Hypomesus transpacificus</i>)	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.	<u>None</u> . Species does not occur in Yuba County. No suitable habitat present.
Sacramento Splittail (<i>Pogonichthys macrolepidotus</i>)	___/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.	<u>Low</u> . Not likely to occur, but seasonal presence is possible in Dry Creek adjacent to the site.
MAMMALS			
Yuma Myotis Bat (<i>Myotis yumanensis</i>)	_/CSC/_	Woodland and forested areas, large buildings and abandoned mine tunnels within one-half mile of a surface water source.	<u>Moderate</u> . 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 (<i>Haliaeetus leucocephalus</i>)	FT/SE/___	Lakes, rivers, estuaries, reservoirs and some coastal habitats.	<u>None</u> . No suitable breeding or foraging habitat present.
Bank Swallow (<i>Riparia riparia</i>)	___/ST/___	Nests in steep riverbank cliffs, gravel pits, and highway cuts.	<u>None</u> . 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 (<i>Laterallus jamaicensis coturniculus</i>)	___/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.	<u>None</u> . No suitable habitat.
Cooper's Hawk (<i>Accipiter cooperii</i>)	_/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	<u>Known</u> . Observed during survey. Suitable nesting and foraging areas within BSA.
Long-Eared Owl (<i>Asio otus</i>)	_/CSC/_	Riparian habitat required; also uses live oak thickets and other dense stands of trees.	<u>Moderate</u> . Suitable habitat within the project area.
Northern Harrier (<i>Circus cyaneus</i>)	_/CSC/_	Meadows, grasslands, open rangelands, desert sinks, and emergent wetlands.	<u>Moderate</u> . Suitable foraging areas within project area.
Swainson's Hawk (<i>Buteo swainsoni</i>)	___/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.	<u>High</u> . Active nest site documented within 1-mile of the survey area.
Tricolored Blackbird (<i>Agelaius tricolor</i>)	_/CSC/_	Emergent wetlands with tall, dense cattails or tules, but also thickets of willow, blackberry, and wild rose habitats.	<u>Low</u> . Marginal habitat within site.
Western Burrowing Owl (<i>Athene cunicularia hypugea</i>)	_/CSC/_	Open grasslands and chaparral at lower elevations.	<u>Moderate</u> . Suitable habitat within the BSA.
Western Yellow-Billed Cuckoo (<i>Coccyzus americanus occidentalis</i>)	FC/SE/___	Densely foliated, deciduous trees and shrubs, especially willows.	<u>None</u> . 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 (<i>Scientific Name</i>)	Status Fed/State/ CNPS	Associated Habitats	Potential for Occurrence*
White-tailed Kite (<i>Elanus leucurus</i>)	___/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.	<u>Moderate</u> . Suitable foraging areas within project area.
Yellow Warbler (<i>Dendroica petechia</i>)	___/CSC/___	Very partial to riparian woodlands of the lowlands and foothill canyons.	<u>Moderate</u> . 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 from historical spawning and rearing habitat, water-flow fluctuations, unsuitable water temperatures, and reduction of habitat quality. The fish currently inhabit river reaches downstream of major dams on Central Valley rivers, including the Sacramento, Feather, Yuba, American, Mokelumne, Stanislaus, Tuolumne, and Merced, as well as smaller tributaries of the Sacramento River and the Delta.

After two to four years of maturation in the ocean, adult Chinook salmon return to their natal freshwater streams to spawn. Adult Fall-run Chinook salmon migrate upstream into the Sacramento River between mid-September and December, with peak migrations occurring between October and November. Newly emerged fry remain in shallow, lower velocity edge waters, particularly where debris congregates and makes the fish less visible to predators (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 CNDDDB 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.

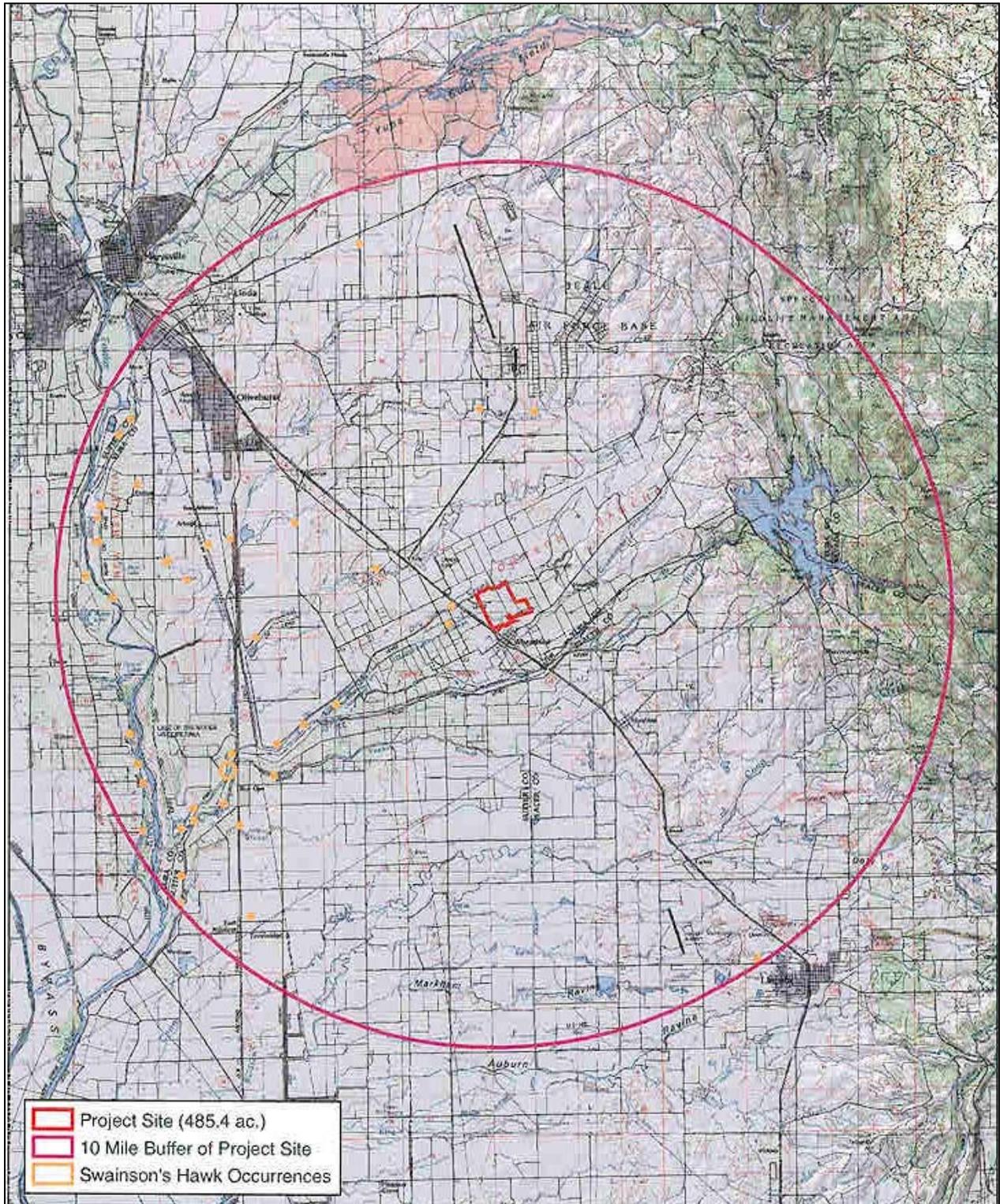
Table 4.6-3 Number of Nests in Proximity of Project Site	
Distance of Nest to Site (miles)	Number of SWHA Nests
<1	2
>1-5	6
>5-10	31
<i>Source: Gallaway Consulting, Inc., 2007.</i>	

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.

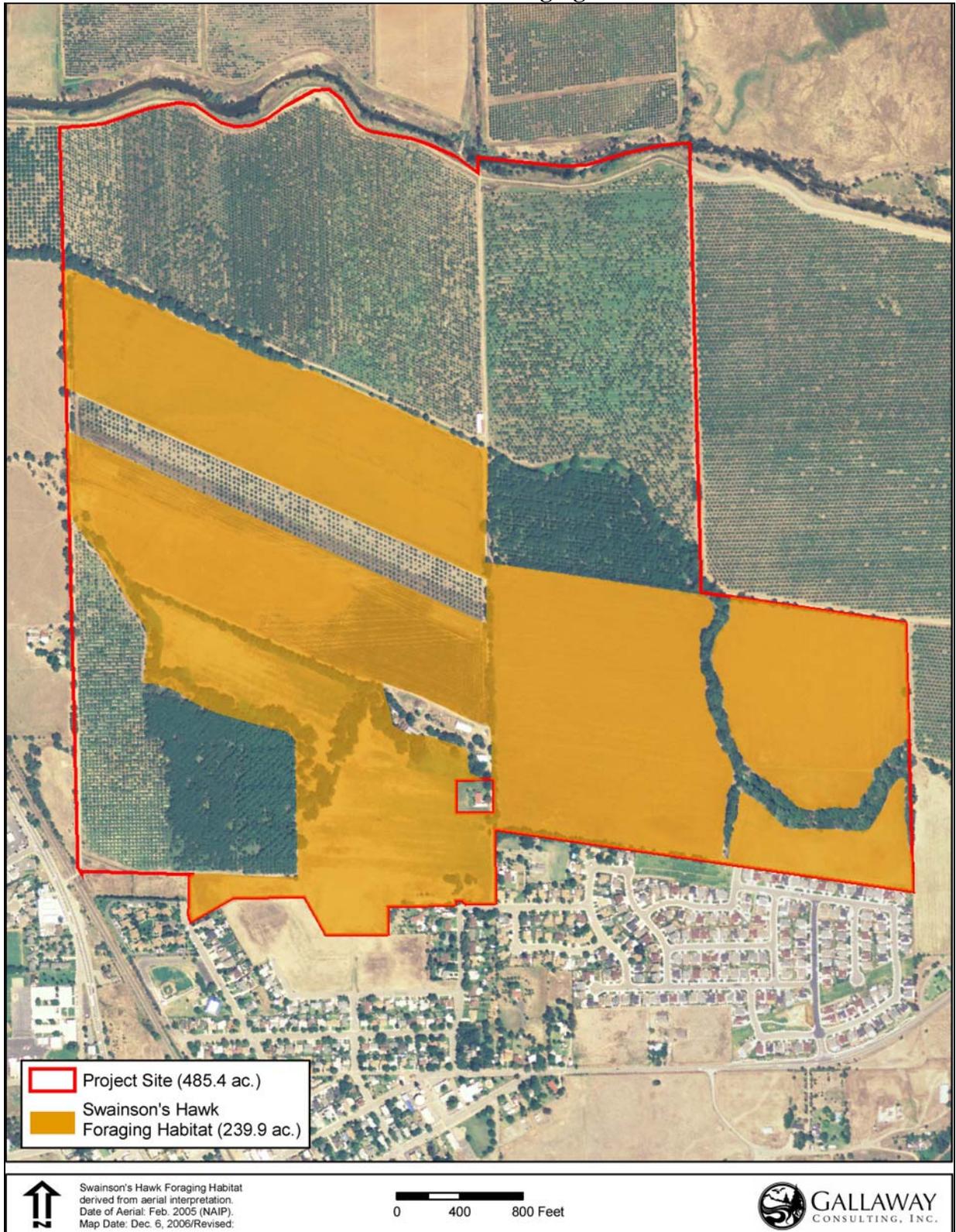
Cooper's Hawk

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 gliding flight. The species nests in abandoned crow, magpie, hawk, heron, or squirrel nest in dense canopied trees. Breeding occurs from early March to Late July. 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 CNDDDB to identify sensitive natural communities occurring within the City of Wheatland and eight surrounding USGS quadrangles. The CNDDDB 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, whichever 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 (*Vitis 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 properties) 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

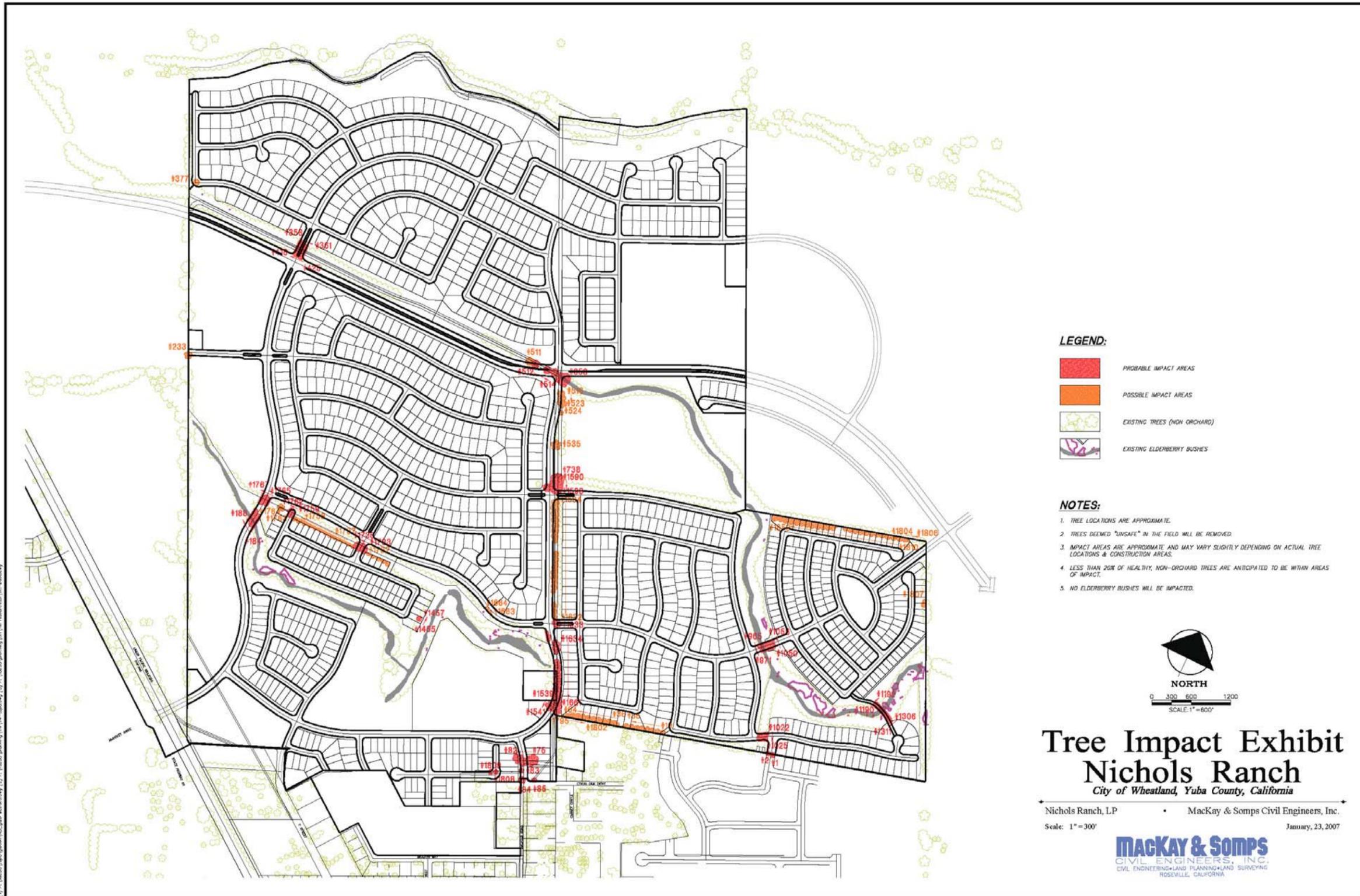
Native trees within the project site have been identified as a sensitive natural resource by the City of Wheatland. Policy 8.C.2 of the Wheatland General Plan states that the “City shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands 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	<i>Quercus lobata</i>		19	25	Poor	Fair
75	Valley Oak	<i>Quercus lobata</i>		58	50	Poor	Fair
80	Fruitless Mulberry	<i>Morus alba</i>		12	18	Poor	Fair
81	Fruitless Mulberry	<i>Morus alba</i>	13, 14	27	25	Poor	Fair
358	Valley Oak	<i>Quercus lobata</i>		10	15	Poor	Fair
360	Valley Oak	<i>Quercus lobata</i>		8	13	Poor	Fair
361	Valley Oak	<i>Quercus lobata</i>		9	24	Poor	Fair
1050	Valley Oak	<i>Quercus lobata</i>		10	15	Poor	Fair
1306	California Black Walnut	<i>Juglans hindsii</i>		20	24	Poor	Fair
1310	Oregon Ash	<i>Fraxinums latifolia</i>		22	23	Poor	Fair
1456	California Buckeye	<i>Juglans hindsii</i>		20	25	Poor	Fair
1590	Valley Oak	<i>Quercus lobata</i>		9	6	Poor	Fair
1619	California Black Walnut	<i>Juglans hindsii</i>	4, 13	17	12	Poor	Fair
1641	Almond	<i>Prunus sp.</i>	5, 7, 7, 8	27	21	Poor	Fair
1644	Valley Oak	<i>Quercus lobata</i>		11	13	Poor	Fair
1645	California Black Walnut	<i>Juglans hindsii</i>		11	19	Poor	Fair
1646	Valley Oak	<i>Quercus lobata</i>		27	34	Poor	Fair
1647	Valley Oak	<i>Quercus lobata</i>		18	25	Poor	Fair
1648	Valley Oak	<i>Quercus lobata</i>		24	30	Poor	Fair
1650	Valley Oak	<i>Quercus lobata</i>		12	8	Poor	Fair
1653	Valley Oak	<i>Quercus lobata</i>		17	16	Poor	Fair
1654	Valley Oak	<i>Quercus lobata</i>		15	6	Poor	Fair
1655	Valley Oak	<i>Quercus lobata</i>		13	17	Poor	Fair
1656	Valley Oak	<i>Quercus lobata</i>		11	15	Poor	Fair
1657	Valley Oak	<i>Quercus lobata</i>		23	32	Poor	Fair
1659	Edible Fig	<i>Ficus carica</i>	4, 4, 5, 5, 6, 6	30	23	Poor	Fair
1795	English Walnut	<i>Juglans regia</i>		7	29	Poor to fair	Fair
1799	California Black Walnut	<i>Juglans hindsii</i>		18	28	Poor	Poor
1801	California Black Walnut	<i>Juglans hindsii</i>		11	4	Poor	Poor
1859	California Black Walnut	<i>Juglans hindsii</i>		14	16	Poor	Fair

Source: Sierra Nevada Arborists, 2007.

Figure 4.6-6
 Tree Impact Exhibit



2-19-2007 10:26:43 Intervenor #1 118233 (vshaki) The CHERRY (vshaki) tree-removal.dwg
 [?] in 118233 (vshaki) MacKay & Soms Civil Engineers, Inc. [?] in 118233 (vshaki) MacKay & Soms Civil Engineers, Inc. [?] in 118233 (vshaki) MacKay & Soms Civil Engineers, Inc.

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 Maidu 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 Gutierrez, 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 Gutierrez, the grantee. Wheatland falls within the center of this land grant. During 1844, Gutierrez built an adobe house at the place afterwards called Johnson's Crossing, located about three miles east of Wheatland. Gutierrez 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 (Lindstrom 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.

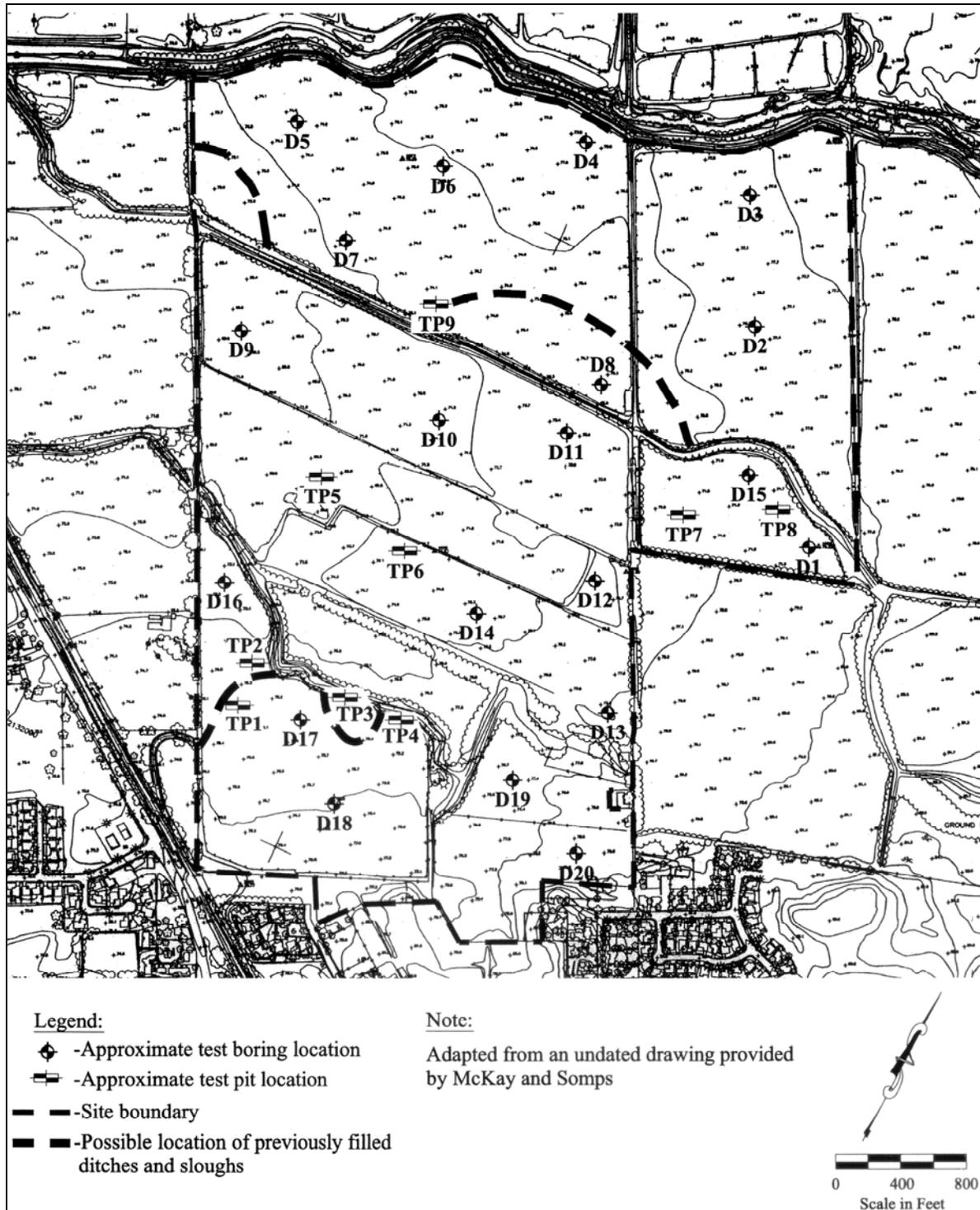
4.8-1 Damage to foundations, pavement, and other structures from expansive soils.

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).

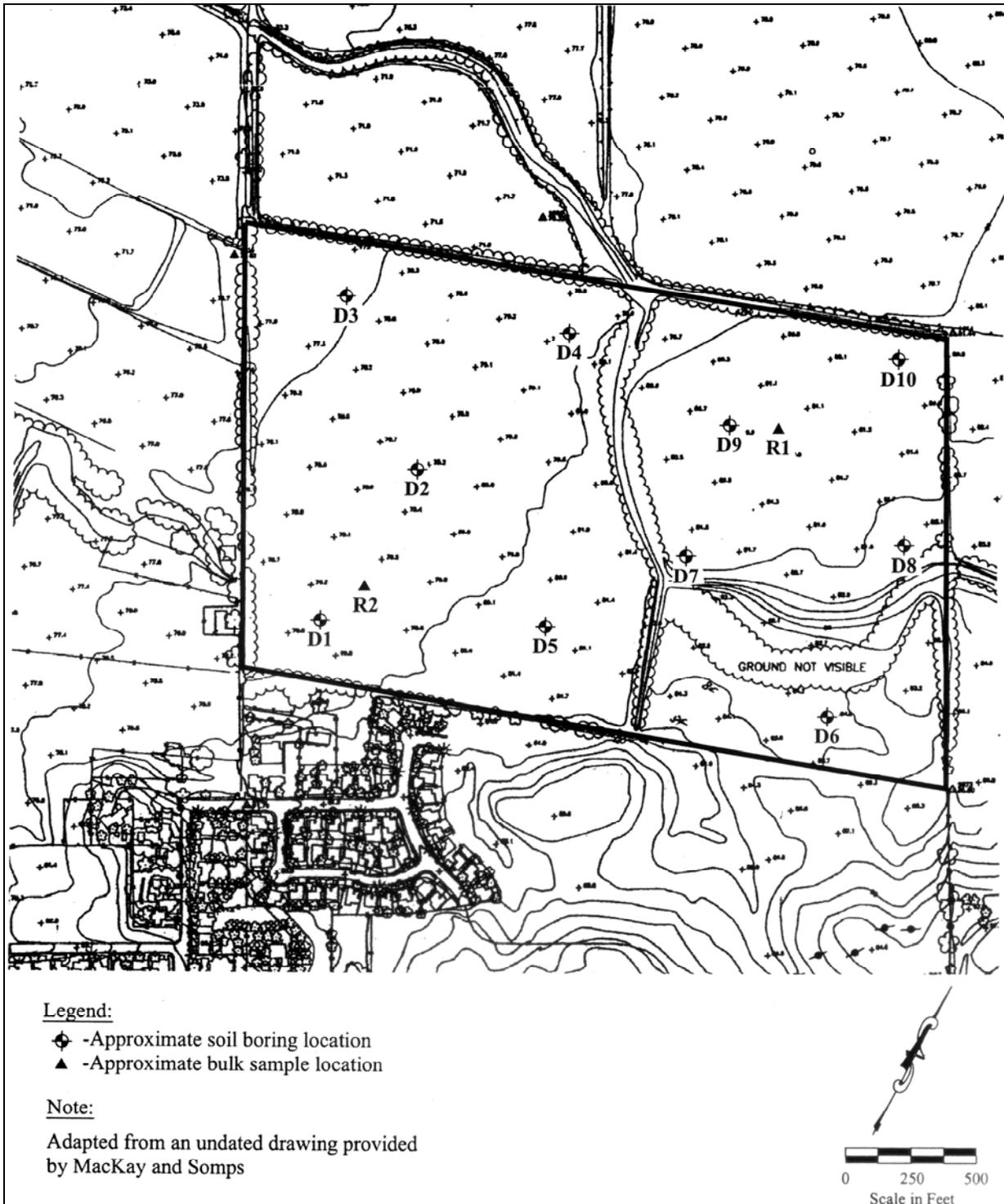
Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. These soils are typically characterized by large amounts of finer grained materials such as silts and clays within the soil matrix. Expansion is measured by shrink-swell potential, which is 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 rezoned and developed with Employment, Low Density Residential, and Commercial uses. In addition, the nine other non-participating properties would eventually be rezoned 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

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- 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.