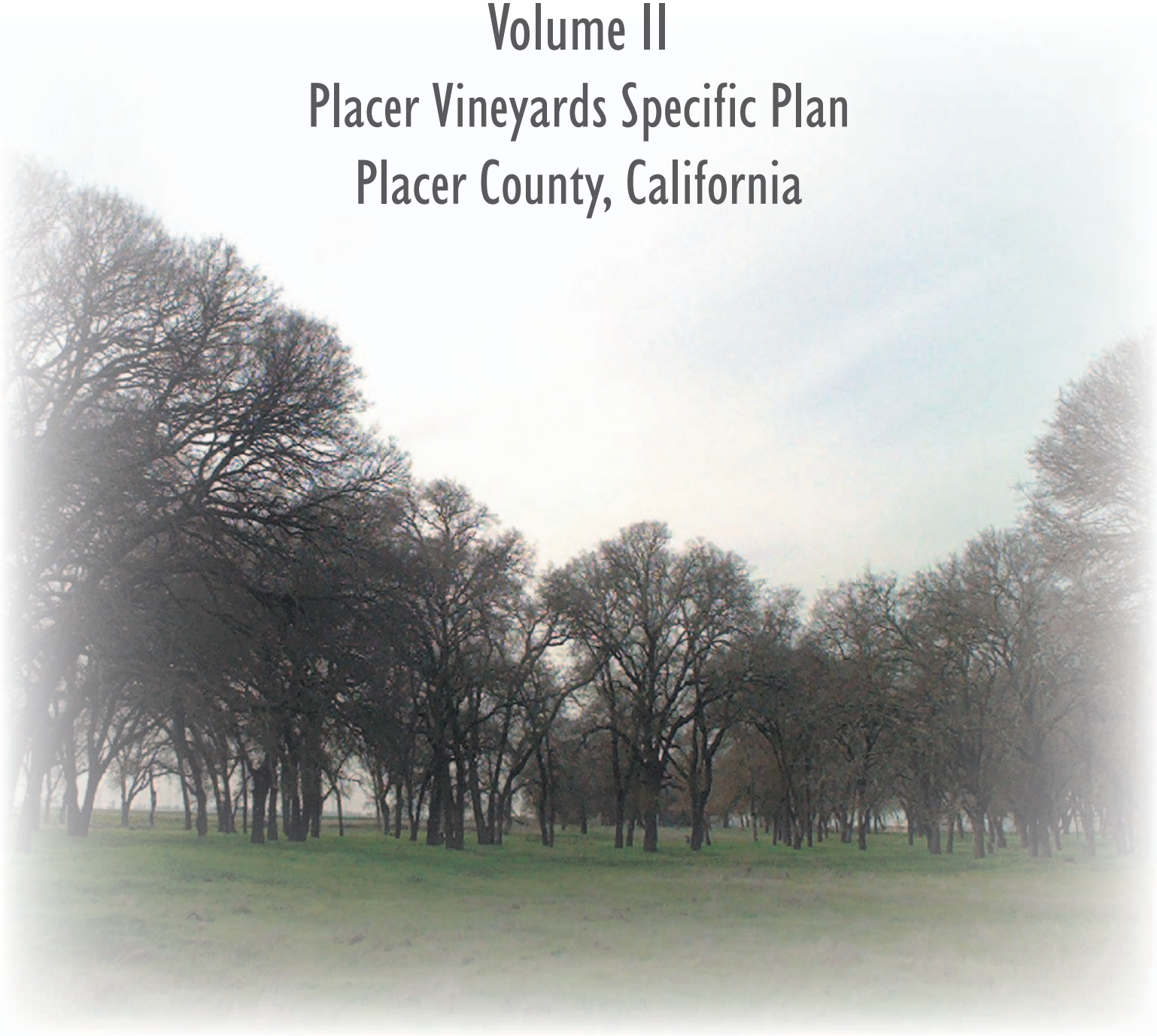
Revised Draft Environmental Impact Report
Volume II
Placer Vineyards Specific Plan
Placer County, California



March, 2006

Quad Knopf

REVISED DRAFT ENVIRONMENTAL IMPACT REPORT
VOLUME II

for

Placer Vineyards Specific Plan
Placer County, California

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4.6

Archaeological/Paleontological Resources

4.6 ARCHAEOLOGICAL/PALEONTOLOGICAL RESOURCES

4.6.1 INTRODUCTION

An initial cultural resources study was completed for the Specific Plan area in the year 2000 and provided an overview of cultural resources within the approximately 5,230-acre Placer Vineyards Specific Plan area (Windmiller *et al.* 2000). The complete text of the inventory (minus confidential appendices) is included as Appendix G of this Revised Draft EIR. At that time, proposed development was conceived in three phases. The first phase of development would be confined to parcels located within "Area I." The second phase would be confined to "Area II" and the third and final phase would be confined to "Area III." The updated Specific Plan proposal is no longer broken down into these "Areas."

For purposes of the initial cultural resources study, all three areas and the off-site infrastructure areas proposed at the time were the subjects of records searches by the North Central Information Center and the Northeast Information Center, California Historical Resources Information System. In addition, the consultant obtained a sacred lands file search from the Native American Heritage Commission, contacted Native Americans listed by the commission to solicit information on religious or sacred sites that could be located within the Specific Plan area and requested comments from local and regional historical societies regarding any significant historic sites, buildings or structures.

The area of the Specific Plan originally designated for initial development, a 2,254-acre portion, was subjected to field inspection by professional archaeologists and an architectural historian. Later, in 2001, a property of 290 acres was added to the initial phase, and was subjected to a field inspection by archaeologists (Windmiller 2001). As a result of these field inspections, which encompassed a total of 2,544 acres, the archaeologists and architectural historian identified three locations of buildings and six archaeological resources. Of these nine cultural resources, only one, a Native American archaeological site designated "PV-2" (CA-PLA-948), was deemed potentially significant under CEQA statutes, guidelines and advisories.

The overview study concluded that the Specific Plan area was marginal to the major developments in regional prehistoric cultures and marginal with respect to historic development of western Placer County. However, the Specific Plan area as a whole did potentially include some cultural resources that could be eligible for the California Register of Historical Resources or qualified as "unique archaeological resources" under CEQA.

Since the initial cultural resources study for the Specific Plan was completed, some aspects of the Specific Plan project have changed (see Figures 3-5 through 3-8F for the Specific Plan area and updated off-site infrastructure areas). Most of the land and buildings in the community of Riego remain omitted from intensive archaeological inspection and detailed description and evaluation of buildings and structures. However, the remainder of the Specific Plan area is the subject of field inspection for archaeological sites and historic buildings and structures on those properties for which permission was secured from landowners. This additional field inspection was guided by an updated records search of the Specific Plan area.

New off-site infrastructure areas, many of which are located along existing roads, proposed intersection improvements and road widenings were also subjected to records searches and field inspections. However, the field inspections were limited to those areas of public access, such as road rights-of-way, as permission to trespass had not been secured for the proposed off-site projects.

As before, any archaeological resources and buildings 45 years old or older were documented on DPR 523 forms distributed by the California Office of Historic Preservation. This documentation is required as part of the process of identifying cultural resources. In addition, each identified resource was evaluated for its potential significance under CEQA.

A preliminary paleontological reconnaissance survey was conducted on July 12, 2001, within the Specific Plan area and expanded upon in a report dated September 19, 2005, by Davis[2] Consulting Earth Scientists. The additional work was conducted at a reconnaissance level to include off-site infrastructure areas. This report is included as Appendix H of this Revised Draft EIR. Geologic units reflect those found within existing reports; however, the area was traversed in the field to confirm the general characterization of units contained in the literature.

Cultural resources information for the project's surface water supply have been excerpted from descriptions contained in the Placer County Water Agency (PCWA) *American River Pump Station Project EIS/EIR* (PCWA and U.S. Bureau of Reclamation, 2001) and the *American River Basin Cumulative Report* prepared by the U.S. Bureau of Reclamation (Reclamation) as part of the referenced EIS/EIR (August 2001).

4.6.2 ENVIRONMENTAL SETTING

The Specific Plan area lies within the edge area of undulating prairie between the foothills of the Sierra Nevada and the Great Valley (Central Valley) of California. The valley is an elongated northwest-trending structural trough which was formed by the westward tilting of the Sierra Nevada block against the east side of the Coast Ranges. In the center of the valley, sediments extend to a depth of six to ten miles (Repenning *et al.* 1966:48).

Surface geology of the east one-quarter of the Specific Plan area is sand, silt and gravels of the Turlock Lake Formation. The west portion of the Specific Plan area is alluvium of the Riverbank Formation. The Turlock Lake and Riverbank formations are both Quaternary depositions. The Turlock Lake Formation is partially consolidated sand, silt and gravel derived mostly from Sierra granitic and metamorphic rocks. The Riverbank Formation is undifferentiated alluvial deposits (Wagner *et al.* 1981).

Climate of the locality is Mediterranean. Summers are hot and rainless; winters are moderate with 15 to 40 inches of rainfall and fog (Storer and Usinger 1963:27).

PREHISTORY/ARCHAEOLOGY

While scholars have conducted a number of excavations in the deep village mounds along the Sacramento and Feather rivers, relatively little scientific work, other than surface surveys and

limited test excavations, has been accomplished on the east side of the Central Valley where the topography is hilly or gently rolling.

Since the early 1950's, stone tools of the so-called "Farmington Complex" have been unearthed periodically in the region where the Sacramento Valley meets the Sierra foothills (Moratto 1984:62). Archeologist Eric Ritter has shown that the artifacts are either contemporaneous with, or older than the Modesto-Riverbank formations, which would date the tools between 10,000 and 5,000 B.C. (Ritter *et al.* 1976).

Commenting on the 1979 excavations by Peak & Associates of a stone tool quarry and campsites near Rancho Murieta, Sacramento County, Southwestern archeologist Julian Hayden remarked about the similarity of the Farmington artifact types with those of San Dieguito II from southern California and the Lower Colorado River area (Peak 1981; Julian Hayden, personal communication 1994).

San Dieguito II is coeval with the Western Pluvial Lakes Tradition, an adaptation of hunter-gatherers to lake, marsh and grassland habitats along the eastern side of the Sierra Nevada as early as 9000 B.C. (Moratto 1984:90-91). The development of the Western Pluvial Lakes Tradition and its regional variants such as the Farmington complex could, as Moratto suggested, correspond to the emergence and initial differentiation of Hokan languages 984:544).

The Archaic Period, which in California lasted from about 6000 B.C. to A.D. 1000, is divided by archaeologists into three subperiods: lower, middle and upper (Fredrickson 1994:100, Figure 9.1). During the Lower Archaic, between 6000 B.C. and 3000 B.C., many of the pluvial lakes in California became dry playas as a result of climatic changes. Early milling stone complexes of this subperiod have been identified by scholars at a number of sites in southern and northern California. Seed gathering, inferred from the use of milling stones, was an arid land adaptation. Speakers of Hokan languages probably brought the concept of milling stones to California, since scholars recognize that Hokan peoples were in the regions of the western United States where deserts first appeared after the end of the last Ice Age (Moratto 1984:546-547).

The Middle Archaic, dating between 3000 B.C. and 500 B.C., marked the beginning of the florescence of aboriginal cultures in California's Great Central Valley. Though concerted exploration of the Sacramento Delta's ancient village mounds was well underway by the 1930's, it was not until 1962 when two prehistoric village sites in the Dry Creek drainage were excavated by salvage archaeologists that scientists began taking a systematic look at foothills archaeology in the greater Roseville area.

In 1966, archaeologist Patti Palumbo (Johnson) completed a Master's thesis that focused on archaeology of the Dry Creek drainage. In her thesis, Palumbo analyzed artifacts from 32 Native American sites along Dry Creek between Roseville on the east and the American Basin on the west, which brought together virtually all Native American materials known from the area. Six of the archaeological sites were excavated; the remaining sites were visited by the graduate student who collected artifacts from the ground surface. Palumbo also studied artifact collections originating from the area, but lacking specific provenience (Palumbo 1966:1).

Four of Palumbo's Dry Creek archaeological sites are located within the Specific Plan area. From downstream to upstream locations along Dry Creek, the sites are the Spinelli Site (field number 31-68; trinomial CA-PLA-47), the Mourier Site 1(field number 31-82; trinomial CA-PLA-82), Mourier Site 2 (field number 31-80; trinomial CA-PLA-80), and the Doyle Site (field number 31-65; trinomial CA-PLA-46). Palumbo concluded that these sites, along with 24 others, appear to have been temporary camps. Palumbo identified only four permanent village sites along Dry Creek, none of which were located within the Specific Plan area.

Between 4000 B.C. and 2000 B.C., it is probable that Hokan languages were spoken in much of California. However, with increased aridity east of the Sierra, speakers of Penutian languages apparently began moving from the deserts of the northwestern Great Basin and southern Columbia Plateau into northern California.

During his mid-1960's survey of Auburn Ravine, Robinson noted the discovery of large, Martis-like projectile points at the Lincoln Mound (CA-PLA-14). A village site to which native people returned over a period of thousands of years, the Lincoln Mound was used up to and including the historic period. The site is located about 15 miles northeast of the Specific Plan area (Robinson 1967:119ff).

In the northern Sierra, the Martis Complex dates from 2000 B.C. to A.D. 500 (Moratto 1884:299). The hallmarks of Martis are large, roughly shaped projectile points made of basalt, "boatstones," which are weights used on throwing sticks to propel heavy darts, manos and millingstones used to grind seeds, bowl mortars and cylindrical pestles. On the west slope of the Sierra and Sierra foothills, Martis is identified by archaeologists as the Mesilla Complex (Ritter 1970a).

Since Robinson's work, scientists have suggested beginning and ending dates for Mesilla as 1000 B.C. and A.D. 1 (Moratto 1984:299). While radiocarbon dates indicate a westward movement of people into this part of California early in prehistory, the precise nature of such immigration is still unknown. There are some who believe that the bearers of Martis moved from California eastward and not vice versa (Peak & Associates 1995a:2-20).

Sedentary villages were established in the western Sierra by the time of Christ, possibly earlier (Moratto 1984:303). In the mid-Sacramento Valley, these developments followed the formation of the Sacramento Delta and marsh lands, which was completed by 2000 B.C. The birth of the delta was a consequence of the rising sea level caused by global warming and melting of glaciers at the end of the Pleistocene.

Between 2000 B.C. and 500 B.C., Utian populations appear to have occupied the Sacramento Delta, the areas along rivers and streams, marsh land, and the hills on both the east and west sides of the Sacramento Valley (Moratto 1984:553). Expansion westward into the San Francisco Bay area seems to have brought about some type of fusion between the bearers of Utian languages and the resident speakers of Hokan and Yukian languages. This apparent fusion of cultures, whatever its precise nature, resulted in what archaeologists now recognize as the Berkeley Pattern, sometimes still referred to as the "Middle Horizon." Some Middle Horizon

artifacts were also identified at the Lincoln Mound during Robinson's excavations there (Robinson 1967:122).

Among Palumbo's Dry Creek archaeological sites, time-sensitive artifact styles reflected the Central California Late Horizon prior to European contact ("Upper Archaic/Emergent periods" in the current taxonomy). While Palumbo cautiously asserted that there was an Indian occupation of the Dry Creek drainage towards the end of the Middle Horizon (Upper Archaic), she suggested that the large stemmed points found at Dry Creek sites could have been a late period carry-over from the Middle Horizon (Palumbo 1966:186-187).

Ancestors of the Nisenan, a Maiduan people who historically inhabited the American and Yuba river drainages encompassing the Specific Plan area, probably immigrated to the region rather late in time. Increasing aridity in the Great Basin seems to have been a factor that initially prompted entry of ancestral Maiduans into the northern Sierra Nevada. During the first two hundred years of the Christian era, Maiduan groups penetrated farther to the Yana territory of northeastern California (Moratto 1984:562). Ritter's Bidwell Complex could represent the radiation of Maiduan speakers into the Oroville locality around A.D. 600 to A.D. 700 (Ritter 1970a, b and Moratto 1984:562). After comparing various linguistic models of Maiduan radiation, archaeologist Makoto Kowta suggested that Maiduan-speakers entered California from the north around A.D. 500 and settled first in the foothills or valley edge in what historically was Nisenan territory (1988:190).

During the Bidwell phase, population growth in the foothills is evident from the archaeological discoveries. In the Sacramento Valley, such growth is reflected by the occurrence of large village mounds dating to the period. In foothill localities such as Auburn Ravine, however, the evidence for population growth is different. Robinson observed a settlement pattern of "workshop" middens (and bedrock mortars) along with "habitation" middens, which he identified as a "site complex" or clusters of sites (Robinson 1967:170). Peak & Associates noted a wide variety of Native American sites along Orchard Creek, a tributary to Auburn Ravine: large and small "occupation" sites, large and small camp sites, isolated bedrock mortar/milling stations, a chert quarry site and cupule or rock art sites (Peak & Associates 1995a:2-1). Along Dry Creek, Palumbo observed only four permanent village sites, while small camp sites numbered 28. The village sites were located in the upper (eastern) portion of the Dry Creek drainage; the frequency of campsites was greater in the upper (eastern) portion of Dry Creek and less in the lower (western) part of the drainage system (Palumbo 1966:187-188).

The Emergent Period, A.D. 1000 to A.D. 1800, was characterized by the consolidation of territories formed as a result of the immigration of native groups, including the Nisenan. Robinson indicated that the foothills region around Auburn Ravine saw increased intensity of use by Native Americans after circa A.D. 1200 and into the historic period (Robinson 1967:121; Moratto 1984:184, Figure 5.7). The tribal territories formed during the Emergent Period probably remained in much the same locations as noted by early Spanish observers (cf. Fredrickson 1994:100, Figure 9.1). Interregional trade seems to have expanded greatly during the Emergent Period, up to the succeeding Mission Period when Spanish intrusions began tearing the fabric of native life in California.

ETHNOGRAPHY

The Dry Creek drainage lies in the ecotone or "edge area" between the Valley and Foothill Nisenan, both of whom were Maiduan-speaking peoples (Palumbo 1966:8). Anthropologist A.L. Kroeber reported a historic Nisenan village (*Pitsokut*) in the Roseville area approximately halfway between Auburn and Sacramento (Kroeber 1925:394; Plate 37). Archaeologist-ethnographer Francis A. Riddell learned of a village site in Roseville called *Pich-u-gut* from one of his Nisenan consultants, Mrs. Lizzie Enos. Mrs. Enos related a story about *Pichugut* villagers who invited the foothill people to visit and trade. After arriving, the villagers killed their guests. This act infuriated the foothill people, whose shaman sent bad air into the valley to kill all the valley people. While Mrs. Enos did not specify a date for this event, it could relate to the effects of the 1833 malaria epidemic (Riddell, Francis A., personal communication, 2000). Malaria was prevalent at one time along the foothills edge between Lincoln and Roseville, and could have been disastrous to local Indian populations (Wilson 1995:2.44).

Palumbo debated whether or not *Pichugut* was the Evelyn site (field number 31-86) located well upstream (east) from the Specific Plan area (Palumbo 1966:9). Unfortunately, the Evelyn site was destroyed by looters in 1962, leaving little for archaeologists to salvage. Palumbo did affirm that the site was one of the best along Dry Creek in terms of information potential. The site was apparently four to five feet deep and stratified, and represented occupation during both Middle and Late horizons (Upper Archaic/Emergent periods) (Palumbo 1966:151-152).

While the beginning of the historic era can be placed at 1769 when Europeans first made permanent settlement in California, little is known of the Roseville area Nisenan. Archaeologist-ethnohistorian Norman L. Wilson has shown that the relationship between Roseville and Lincoln districts is not well understood. Large village sites are recorded in the Lincoln area along Auburn Ravine, and in the Roseville vicinity along Secret Ravine and Dry Creek. From these settlement patterns, it is possible to conclude that there was an intensive occupation of the foothill-valley ecotone at some time prior to the 1833 epidemic. The adaptation of these "edge area" people could have been more valley than foothill-oriented (Wilson 1995:2.44).

The foothill and valley Nisenan had two different settlement patterns. The foothill Nisenan constructed their villages near water sources. The tribelet, a loose political organization, controlled specific districts usually bounded by major stream or river drainages. The foothill people were mobile hunter-gatherers. Generally, foothill Nisenan did not have large year-round villages. Instead, there were hundreds of small campsites and villages. A few of the villages, larger than most, functioned as tribelet centers (Wilson 1995:2.37).

This pattern of socio-political organization was different from the Valley Nisenan whose large, sedentary villages were located along water courses bounded by the land between drainages (Wilson 1995:2-36). Territories of the Valley, Foothill and Hill Nisenan together encompassed the American, Feather, Bear and Yuba river drainages from the west bank of the Sacramento River to the Sierra crest (Wilson and Towne 1978:387).

A major foothills tribelet center was located at Auburn. Its sphere of influence during the early years of European-American contact included Forest Hill Ridge to the east, Bear River to the

north, south to the Middle Fork of the American River and down Auburn Ravine to the Lincoln vicinity (Wilson 1995:2.40).

Winter villages were located by permanent water sources and included a large, semi-subterranean assembly house and substantial residences which were partly excavated into the ground. Groups at both Auburn and Newcastle had assembly houses (Wilson 1995:2.41).

Residences were supported by strong wood frames covered with brush, mud, cedar or pine bark. These houses had an indoor hearth and sometimes a portable mortar set into the dirt floor. The people slept near the walls on mats and skins; benches or shelves held food and equipment. An 1850 account described the residences of a foothills edge rancheria:

> (They were) built of brush, plastered with mud, and capable of containing three or four persons. (The interiors were) nicely thatched with sprigs of pine and cypress, while a matting of the same material covered the bottom (Buffum 1850:33,34).

A sweat lodge and acorn granaries were also found at permanent villages. Cemeteries were often located nearby.

A second type of residence was constructed at camps away from the winter villages. This type of house was constructed of a frame covered with brush or tules. Though excavated slightly into the ground with the earth piled around the exterior base to keep out drafts, often it did not have a hearth. This type of house was used for sleeping and storage only.

Other structures included frames for drying meat and plants, and sun shades constructed over bedrock mortar stations. Acorns were gathered in the fall, and their meats pulverized in mortars, after which the bitterness was removed by leaching in water. The Nisenan sometimes picked up and used manos or hand stones as acorn anvils or for other types of food processing; generally, though, manos and metates or the grinding slicks found on granite outcrops belonged to more ancient cultures.

Acorns were the staple among many California native groups. From acorns, unleavened bread was made. Acorn gruel, heated in baskets with hot stones, was also made and consumed.

The many small camp and village sites scattered across the foothills around Auburn were each no more than two days' travel by foot. In his recent summary of Nisenan ethnohistory, Wilson suggested that the area's winter village was located at Auburn because the people enjoyed living above the fog and in the sunlight during the wet season (Wilson 1995:2.39). By late winter/early spring, however, the people would trek down to the valley's edge to fish, engage in waterfowling and communal rabbit drives, harvest the first green plant growth and visit the salt springs, which are located about 10 miles northeast of the Specific Plan area on the southeast side of Lincoln.

In the fall, foothill people moved to the middle elevations between 1,000 feet and 3,000 feet to gather acorns of the black oak and trade with Hill Nisenan, Washo and Paiute (Wilson 1995:2.45). Historic records indicate that the rivers and streams supported dense gallery forests to the valley’s edge (Wilson, Norman L., pers. comm., 2000). It seems likely that the gallery

forests were exploited for acorns and buckeyes, while the surrounding grasslands were harvested for hard seeds.

At the time of initial European-American contact, the large group that came during late winter/early spring to the Lincoln area from Auburn's winter village probably came in large numbers for both the seasonally-available resources and mutual protection. It is likely that the Lincoln area was also used by these people intermittently during the remainder of the year. Valley people probably also used the area for acorn gathering, obtaining salt and trade.

HISTORY

Recorded history of the region began with accounts of Spanish expeditions into the interior of the Great Central Valley (Wilson and Towne 1978:396). By 1776, Jose Canizares had explored Miwok territory south of the Nisenan. In 1808, Gabriel Moraga led an expedition up the Sacramento River to the lower reaches of the Feather River, thus crossing Nisenan territory. Despite these early incursions by the Spanish, however, there is no record of Nisenan having been removed to the missions, according to Wilson and Towne (1978:396).

In 1820, Capitan Luis Arguello continued exploration of the Feather River under the Mexican flag. By the late 1820's, American and Hudson's Bay Company trappers began exploiting the region for beaver and establishing camps in Nisenan country.

The great epidemic of 1833, probably malaria brought south by a group of trappers from Oregon, decimated an estimated 75% of California's aboriginal population.

In 1839, when John Sutter arrived to realize his dreams of building a feudal colony, "there was a loose consortium of extended families and small villages that looked to the Auburn area village and its chiefs as the center of their social political life" (Wilson 1995:2.43). The Auburn center's large sphere of influence during the early years of recorded history could have been the result of the 1833 epidemic as well as a significant shift in the Indian populations during the gold rush; it could have had something to do with a consolidation of Native American strength and available places where Indians could live without persecution.

While the native population was already decimated by the time Sutter arrived in the Sacramento Valley, his arrival would eventually lead to the gold rush, an event that changed the valley forever. In the first two years of the gold rush, over 100,000 immigrants poured into California from all over the world. In this initial rush for gold, the area of western Placer County remained sparsely populated due to its relative lack of gold bearing soils or streams.

AGRICULTURE

In the early 1850's, those who settled and took up agriculture concentrated on the rich soils close to permanent water sources. When the choice land was taken up, new arrivals were forced to look in other areas such as the prairie between the rivers and streams. The plains of western Placer County were one such area of open land. Situated at the eastern edge of the Sacramento Valley, the prairie of western Placer County has a thin soil mantle and few permanent water

sources. These conditions made it difficult for small farmers, while large ranches prospered. After 1867, the area north of Sacramento was dominated by the wheat industry and large ranches.

The large ranches included Rancho Del Paso, located 1.5 half miles south of the Specific Plan area. Initially, John Sutter claimed what was later to become Del Paso Rancho. In 1843, Sutter deeded a large tract of land to the partners Eliab Grimes and John Sinclair (Oliver 1983:2), 10). In 1844, Manuel Micheltorena, then governor of California, granted Del Paso Rancho, which included 44,374.42 acres, to Eliab Grimes (Thompson and West 1880:184). The grant extended eight miles along the American River, included the Nisenan village of Kadema, and covered the Sacramento plains 8.5 miles to the north.

Eliab Grimes died in 1848 and lawsuits arising from Grimes' will prompted Sinclair to sell his interest in the rancho to Grimes' son, Hiram. In August, 1849, Hiram Grimes sold the rancho to Samuel Norris. Norris raised cattle and wheat, with the north portion of the rancho dedicated to grazing land (Oliver 1983:12-16).

Prior to 1870, 82 people owned over one million acres of the best land in the entire Sacramento Valley. Public concern arose after 1870 when settlers found it difficult to acquire land (McGowan 1961a:256). Land ownership in California had become a problem when Mexico ceded California to the United States. With the exception of Mexican land grants, such the Del Paso Rancho, the United States government possessed the remainder.

Problems with the distribution of the newly acquired land in the public domain were exacerbated by the government's own methods of distribution. In addition to the Homestead Act that allowed an individual to claim up to 160 acres of land for agricultural use, the government gave over 11 million acres of land in California to the railroads and another 8.5 million acres of swamp, overflow or "school" lands to the State of California. The state sold the land for less than $1.00 an acre.

Another problem facing settlers was the issue of bounty scrip. The United States government had issued veterans of the War of 1812 and the Mexican War land scrip that entitled them to 160 acres of public land anywhere in the United States. California land speculators bought the scrip for a fraction of their worth and used them to build large ranches (McGowan 1961a:256).

Of the 5,230 acres encompassed by the Specific Plan area, 1,920 acres were given by the United States to the State of California as swamp and overflow land. The U.S. government gave 1,440 acres to the state in exchange for other "school" lands, 640 acres were acquired (and immediately resold) through military scrip, and 480 acres were given to the railroad. This mass distribution of land hindered the individual homesteader unless he had political connections and money to purchase land from the state, a speculator or the railroad (Bureau of Land Management 1983a and 1983b).

Because of the government's method of allocating land, the early population of the region was sparse. Immigrants who did settle soon discovered that the land was suited for few uses such as dry farming and grazing. The soil was relatively poor and there was no reliable permanent water

source. An individual who tried to earn a living from the 160 acres allocated under the Homestead Act soon discovered the marginal nature of the land, tried other occupations, or relocated to a better-watered place.

Henry Dunn, a 37 year-old teamster from Ireland, purchased the northeast quarter of Section 12 along Dry Creek in 1861 (Bureau of Land Management 1861). In the 1860 census, Dunn listed his occupation as a "teamster." However, according to the agricultural census of the same year, Dunn was listed as owning 345 acres of improved land on which he grew 10 tons of hay and raised swine (United States Bureau of Census 1860a:87 and 1860b:7). Despite his multiple occupations, Dunn sold out in 1865.

Chester Hooker is another example of a small farmer/rancher who owned land within the Specific Plan area. In 1861, Hooker purchased a military scrip patent for a 160-acre parcel located in the southwest corner of Section 12 (Bureau of Land Management 1861). He operated a dairy and tried his hand at dry farming. In 1860, Hooker owned 12 dairy cattle and 18 beef cattle. He produced six hundred pounds of cheese and grew two hundred bushels of barley, two hundred pounds of sweet potatoes and one hundred bushels of wheat. Like Dunn, Hooker's operation was short-lived, as he had moved on by 1870 (United States Bureau of Census 1860a:87 and 1860b:7).

While the small farmers and ranchers sold out and moved on, the ranchers who owned or acquired more than 160 acres remained in the area. The Dyer and Gould families both developed successful agricultural operations within the Specific Plan area where they remained for at least 30 years.

In 1857, 27 year-old John Dyer and his 25 year-old brother, James, arrived in the area (Davis 1964:4). In 1861 they purchased the northwest quarter of Section 10 (160 acres) from Thomas Meyer. By 1860, the brothers owned three hundred acres in Sections 10 and 11 on which they raised hay, barley and sweet potatoes (United States Bureau of Census 1860a:87 and 1860b:7).

By 1870, the brothers had acquired 480 acres total and had split their operations into two equal 240-acre parcels. While the brothers had separate ranches, they both grew wheat, oats, barley and hay. In addition to these dry-farmed crops, the Dyers logged oaks and raised dairy cattle, selling butter and steers (United States Bureau of Census 1870a:355 and 1870b).

Like the Dyers, the Goulds were also successful. Forty year-old Josiah Gould, his 30 year-old wife Catherine and three children arrived in California in the late 1850's. By 1860, Gould owned 320 acres and in 1865, he purchased 160 acres from Henry Dunn (Placer County 1865:133). Gould grew wheat, sweet potatoes, barley and hay and raised dairy cattle and swine.

By 1870, Gould had purchased an additional 160 acres and converted some of his fields to orchards and vineyards. While still growing some wheat, barley and hay, it appears that Gould now relied more on irrigated crops in his orchards. He also sold vegetables, wine, honey and wood. While he still raised swine, he also raised cattle for beef.

In 1877, Josiah deeded 160 acres to his son, John Gould (Placer County 1877:659). By 1880, Josiah Gould still owned 180 acres on which he grew hay, wheat, barley, grapes, peaches and apples. He also raised sheep, swine and chickens. His son, John, raised the same type of crops on his own 160 acres. Other Gould family members who owned land in the Specific Plan area included James Gould, John's older brother, who owned 125 acres. He relied mainly on dry farming and wood cutting. Joseph Gould, possibly Josiah's brother, owned 130 acres on which he raised chickens and grew hay, barley, wheat, potatoes, peaches, apples and grapes (United States Bureau of Census 1880:8).

The landowners and the crops they grew within the Specific Plan area reflected the general historical trends in the Sacramento Valley. The pattern of the small land owner selling out to the larger land owners in the area was historically valley-wide. Crop diversification was another historical trend. Between 1867 and 1885, wheat was the most popular crop in the Sacramento Valley, but most of the area's farmers diversified. The farms in the Specific Plan area were close enough to Sacramento to supply the city with fresh fruit, vegetables and dairy products. All the farmers in the area sold butter. The Goulds sold fruit and vegetables in addition to other products.

The Goulds had also raised sheep. Wool was the second most important agricultural export from the Sacramento Valley after 1860. Sheep could thrive on less water than cattle and the Civil War and the Franco-Prussian War in Europe had driven up the price of wool. The number of sheep in the valley increased from 180,000 in 1859 to 1,250,000 in 1876 (McGowan 1961a:270).

RECLAMATION DISTRICT 1000

Beyond the west edge of the Specific Plan area, though within the area of proposed road intersection improvements and an off-site water line option, lies the American Basin. Historically, the American Basin was an area of annual flooding, which prevented substantial development until after 1910.

It was in 1910 that the then current owners of Rancho Del Paso sold their land to the Sacramento Valley Colonization Company, a subsidiary of the United States Farm Company of St. Paul, Minnesota. Del Paso Rancho was the last of the large land holdings in Sacramento County to be subdivided. (Reed 1923:38). Land development and concomitant reclamation of the swamp and river overflow lands was clearly an important historical trend.

A report by the Army Corps of Engineers for the California Debris Commission called for a multi-million dollar plan to control flooding: weirs, bypasses, raised levees and a widened mouth of the Sacramento River. This 1910 report was the basis for the Sacramento Flood Control Project for which federal funds were approved in 1917, though substantial federal support did not come until the 1930's (Dames and Moore 1996:9).

During the same period, the State of California was developing a workable plan for flood control. In 1911, the State Reclamation Board was established. The new board had jurisdiction over individual reclamation districts and levee plans and created many new districts. Reclamation District 1000 was created at this time. By 1913, the State Reclamation Board was

given authority to raise taxes to finance construction. These events coincided with the emergence of modern large corporations and the development of machinery such as suction and clamshell dredges capable of handling large-scale earth-moving projects.

Reclamation District 1000 was originally envisioned as levees, drainage canals, pumps, irrigation systems and roads, all of which would be paid by the sale of land as family farms. An early idea was to include a suburban residential development at the southern end of Reclamation District 1000 (Dames and Moore 1994:105). The Natomas Company, with a history of large scale water projects dating back to 1851, as well as involvement in mining and agriculture, tackled the development of Reclamation District 1000 and Reclamation District 1001 (Dames and Moore 1996:12-14). The resulting landscape conformed to the twentieth century vision of productive land: Reclamation District 1000 was transformed from seasonally inundated, partly swampy land, to a vast open landscape with a large pattern of fields formed by a grid of canals and roads.

This distinctive pattern of land use remained the hallmark of Reclamation District 1000 since the early 1920's when the infrastructure of the project was completed (Dames and Moore 1996:15). In recent decades, urban development has replaced many of the farms and the rural landscape is rapidly disappearing.

THE RAILROADS

The Southern Pacific-owned Sacramento and Oregon Railroad served the Sacramento Valley, although the line was primarily concerned with the more profitable long-distance freight and passenger travel. Local traffic required many stops over a short distance. With the advent of electric powered trains in the early twentieth century, the idea of an electric railroad to serve local traffic was conceived. An electric railroad, with its fast starts and stops and cheap power, could make the local runs profitable. A local railroad would provide a valuable service for interurban travel and to ship farm produce to city markets and canneries (McGowan 1961b:47).

Henry A. Butters was the first person to build an electric railroad from Chico to Sacramento when he used his profits from foreign railroad ventures to construct a railroad in the Sacramento Valley. "The Northern Electric Company," as the railroad was initially named, was incorporated on June 24, 1905, to build an electric railroad between Oroville and Chico (McGowan 1961b:47).

Soon after the completion of the section between Oroville and Chico, officials of the Northern Electric Company turned their attention southward. By 1906, the company built a railroad between Oroville and Marysville, passing three miles east of Biggs and Gridley and through the town of Live Oak. In December, 1906, service began between Chico, Oroville, Biggs, Gridley, Live Oak, Yuba City and Marysville (McGowan 1961b:49).

With completion of the Chico to Marysville line, Northern Electric officials planned extensions to Red Bluff, Colusa and Sacramento. The extension between Marysville and Sacramento was completed within ten months after the electric cars first entered Marysville. By July 1907, steam powered locomotives traveled between Marysville and Sacramento until the electric third rail was completed in September (Swett et al 1981:15). Soon after reaching Sacramento, the

company reincorporated under the name, "Northern Electric Railway Company." Its stations between Sacramento and Marysville included Rio Linda, Elverta and Pleasant Grove, all of which are located near the Specific Plan area (Swett et al 1981:188).

The company reached its peak in 1913 when it formed a partnership with the line connecting Sacramento to Oakland. With expansion to San Francisco and the eventual merger of the two companies, the Northern Electric became "...the longest electrified interurban railroad in the United States." In 1915, the Northern Electric offered a direct link from Oakland to Chico without the need to transfer. The service allowed farmers to ship produce and dairy products on the nightly pick-up train and have it delivered to the Bay Area market by 4:00 a.m. (McGowan 1961b:47).

Despite the expanded service, or more accurately because of the cost, the railroad faced financial difficulties. With high construction expenses and less than expected revenues, the Northern Electric fell into receivership in 1914. In 1918 the Sacramento Northern Railroad bought the Northern Electric for $1.75 million. The Sacramento Northern had been incorporated for the sole purpose of bringing all the electric lines in the Sacramento Valley under the auspices of one company. The new company changed the emphasis from passenger to freight. Success of this strategy was short-lived, however. The Sacramento Northern sold out to the Western Pacific Railroad in 1921 (McGowan 1961b:53).

As the automobile gained in popularity, use of the electric railroads declined. The Great Depression of the 1930's and floods and windstorms that damaged the tracks led to the demise of the entire interurban system. The last through passenger trains east of the Suisun ferry reached Sacramento in August 1940. The final blow to the railroad came in 1945 when the State Railroad Commission declared the open running- type electric third rail illegal (McGowan 1961b:54).

MILITARY AVIATION

The creation of McClellan Air Force Base can be attributed to the efforts of one man, Arthur S. Dudley, Secretary-Manager of the Sacramento Chamber of Commerce. In 1920, the Sacramento Chamber of Commerce hired Dudley to persuade the United States Government to keep Mather Field open. Despite his efforts, the army closed the base in 1932 (Miller 1982:8).

During his campaign to reopen Mather Field, Dudley learned from the nation's top military leaders that the country's air defenses were weak. If a war broke out in the Pacific, as some military leaders suspected, the west coast was vulnerable to air attacks. Using this information, Dudley sought a way to help strengthen the nation's air defenses and reopen Mather Field at the same time (Miller 1982:9).

While lobbying in Washington D.C., Dudley met Reginald Waters of the Miami, Florida Chamber of Commerce and Florida Congressman J. Mark Wilcox who had the same agenda. Dudley and Waters were instrumental in forming the National Air Frontier Defense Association, a group of chambers of commerce who conducted a nationwide publicity campaign to promote the need for a strong air defense (Miller 1982:11).

Their efforts paid off in 1935 when the House of Representatives passed a bill authorizing construction of six new air bases. While Dudley's main goal had been the reopening of Mather Field, a new opportunity presented itself. General Paul Westover, one of Dudley's supporters, asked him whether he wanted Mather reactivated or if he wanted Sacramento to receive a new aircraft repair facility instead. Recognizing that if a war started, Mather would be reactivated anyway, Dudley chose the new facility (Miller 1982:15).

The military high command decided that Sacramento was far enough inland to be safe from air raids. The city was located next to the main Southern Pacific railroad line and had river access for shipping planes. In October, 1935, General Westover, Chief of the Air Corps, asked Dudley to obtain options to purchase of 1,200 acres of farm land in the northern section of Rancho Del Paso. He asked Alden Anderson, president of the Capital National Bank of Sacramento for help. Keeping the project quiet, Anderson asked real estate agent Carroll A. Cook to obtain purchase options from farmers in the area. Thinking that a speculator was buying the land for an industrial park, the farmers were happy to sell it at a small profit since it only good for raising turkeys (Miller 1982:15).

On May 7, 1936, Congressman Frank Buck announced that the House Appropriations Committee had accepted a seven million dollar appropriation for the new air depot in Sacramento. After some political maneuvering, the government bought one thousand acres for $87,249. On September 8, 1936 construction on the Sacramento Air Depot began (Miller 1982:18-19).

On November 15, 1938, the Sacramento Air Depot began to repair aircraft, engines and flight instruments. On November 29, 1939, the air base held an open house with an air show signaling the official opening of the base. On December 1, it was renamed "McClellan Field" in honor of Major Hezekiah McClellan, a pioneer in army aviation who died in a plane crash in 1936 (Miller 1982:37-38).

From the time of its official opening until the beginning of World War II, McClellan Field figured prominently in air logistics support on the West Coast. McClellan personnel devoted an increasing amount of time and effort to training replacement workers. In 1940, the base commander instituted the first quality control unit on the base. In July, 1941, Major Charles Williamson established a civilian instrument repair training program. This training program set the example for other training programs (Miller 1982: 41-43).

With the bombing of Pearl Harbor and America's entrance into World War II, McClellan Field continued to expand as other bases in the west opened. By June 30, 1943, the depot employed 17,652 civilians and 4,250 military personnel. As the tide of the war turned in favor of the Allies, however, the military began cutting back its workforce at McClellan. By March 1944, only 12,775 civilian employees remained at the base (Miller 1982: 56-67).

On V-J Day, August 14, 1945, all of the depot's production lines stopped and by January 1946 the base returned to its pre-war function providing air logistics support to units in the field. Despite the return to its regular functions, the base was subject to more changes including a

name change to McClellan Air Force Base when the United States Air Force was established in 1947 (Miller 1982: 61).

As the military modernized, so did McClellan Air Force Base. The base provided logistical support throughout the Pacific. With the outbreak of the Korean War, civilian and military employees faced new challenges while working in a place that was quickly falling behind in maintenance standards. It remained clear that the increased sophistication of equipment, increased competition with private industry and limited opportunity for plant expansion or modernization required immediate attention if McClellan was to remain effective (Miller 1982: 70).

Reforms by the Air Force came quickly because McClellan's support of the air war in Korea was vital. In 1951, McClellan became the first base to perform depot-level maintenance on jet interceptors. As the Korean War hit a stalemate, the military started to downsize. Despite the demobilization effort, McClellan continued to grow. The growth was attributed in part to the very decentralization that was causing reductions elsewhere as the Air Force transferred 104 employees from Dayton to McClellan (Miller 1982: 71).

The new employees would help as the Sacramento Air Materiel Area at McClellan had assumed responsibility for all Air Force aircraft built by the Lockheed Corporation and the North American Aviation Corporation. The two companies produced six different jets for the air force. In addition to the new jets, McClellan also assumed responsibility for aircraft auxiliary fuel tanks, electrical generator sets and printing and reproduction equipment. Despite several alterations in responsibilities, McClellan remained a vital part of the United States Air Force Aircraft Maintenance Group (Miller 1982: 73).

Because of the high level of flight activity surrounding McClellan AFB, the air traffic taxed the civilian instrument landing system (ILS) at Sacramento Municipal Airport. Civilian officials had accepted Air Force demands on the system, because the federal government had funded it. However, as air traffic increased, so did tensions between military and civilian officials. On June 4, 1951, in an effort to alleviate the problem, the officials at McClellan authorized the construction of a military ILS. Part of this system included an outer runway beacon that would be located four to seven miles north of the base (Irwin, Sgt., pers. comm., April 27, 2000).

In 1952, the Air Force purchased land in Section 2, approximately 4.5 miles north of the base for the ILS outer beacon, a low-power, low-frequency radio signal used to guide aircraft as they approached the base. In 1955, Lawrence Construction Company completed construction on the beacon tower and an associated shed located within the Specific Plan area. The outer beacon was in operation for over 20 years before it became obsolete. The Air Force dismantled the radio equipment and sold the property in 1988 (Thompson, John, pers. comm., December 30, 1999). McClellan AFB officially closed in 2001 and has been converted to civilian uses.

RECORDS SEARCH RESULTS

Records searches were conducted by two information centers in 1999. The North Central Information Center, California State University, Sacramento conducted the search for existing

records on archaeological and historic sites for the Specific Plan area and off-site infrastructure areas in Placer County. The Northeast Information Center, California State University, Chico provided a search for existing records of sites in off-site infrastructure areas projected for Sutter County (Windmiller *et al.* 2000:18-19).

To accommodate changes in the plans for Placer Vineyards, updated records searches were conducted by the North Central Information Center for the Specific Plan area itself and for new planned off-site infrastructure areas in Placer and Sacramento counties. In addition, the Northeast Information Center conducted records searches for off-site intersection improvements.

THE SPECIFIC PLAN AREA

The North Central Information Center California Historical Resources Information System completed a records search for the Specific Plan area on December 3, 1999.

The Information Center's letter report indicated that nine previously recorded archaeological sites and six isolates were located "within, adjacent to, very close to this project." However, the map on which the Information Center plotted the location of sites shows that only four previously recorded prehistoric archaeological sites and one isolate are located within the Specific Plan area.

The records search also indicated that the old Sacramento Northern Railroad grade crosses the Specific Plan area. The Watt Avenue at Dry Creek Bridge (Bridge no. 19C0084 in the Caltrans inventory of historic bridges) is also located within the Specific Plan area. Also situated within the Specific Plan area, according to early historic maps consulted by Information Center personnel, are the routes of the old Sacramento and Nevada Road, the Upper Nevada Road, segments of local roads, two homesteads on the General Land Office plat and three buildings on the 1910 USGS topographic map.

Prehistoric resources noted by the information center included four campsites (CA-PLA-46, CA-PLA-47, CA-PLA-80 and CA-PLA-82) and one isolated find of two artifacts, a stone pestle and mano or handstone (DR-5).

The updated records search of August 23, 2005 (NCIC File No: PLA-05-124), indicated new studies (since the consultant's 1999-2000 and 2001 studies for the Specific Plan) located adjacent to the Specific Plan area. However, the information center did not report any more recent studies for the Specific Plan proper, or any recently documented cultural resources for the Specific Plan area.

OFF-SITE INFRASTRUCTURE

Certain off-site infrastructure related to the project has been assessed at a programmatic level. Infrastructure assessed in this fashion may be constructed by others, such as PCWA and the City of Roseville. These projects will be analyzed in more detail, in accordance with the California Environmental Quality Act, once they are better defined and prior to their implementation. Projects analyzed in this fashion include a long-term surface water supply line, the recycled

water line from the PGWWTP, agricultural water supply improvements at the Lincoln Wastewater Treatment and Reclamation Facility, and potential improvements at the DCWWTP site or the SRWTP site.

Dry Creek Wastewater Treatment Plant (DCWWTP)

The DCWWTP, located on 104 acres on Booth Road in Roseville, provides service to the Cities of Roseville, Rocklin and Loomis, the community of Granite Bay, and other unincorporated portions of Placer County. The wastewater collection system is both a gravity and force main system, discharging treated effluent into Dry Creek. The DCWWTP provides tertiary-level wastewater treatment through the processes of screening, grit removal, primary clarification, aeration, secondary clarification, filtration, chlorination and dechlorination. According to the *Roseville Regional Wastewater Treatment Service Area Master Plan Draft Environmental Impact Report*, virtually the entire site has been disturbed by activity related to wastewater treatment.

Sacramento Regional Wastewater Treatment Plant (SRWTP)

The SRWTP 2020 Master Plan provides the planning capacity for future needs of the Sacramento Regional Wastewater Treatment Plant. The future capacity needs of SRWTP are based on population-based wastewater flow projections of the current service area, annexation of West Sacramento in the year 2007, and water conservation rates. Other possible future annexations, such as Placer Vineyards, were not included in the projections.

SRWTP is operated by Sacramento Regional County Sanitation District (SRCSD) and is located ten miles south of downtown Sacramento on a 3,500 acre site. SRWTP occupies 900 acres and the remaining 2,600 acres consists of open space land and provides a buffer zone be the facilities and surrounding land uses. Nearby land uses include residential development to the north, east, and south. Industrial development is located to the south, Interstate 5 and the Sacramento River are located west of the property, and a 1,000-foot-wide restricted development area is located to the south.

Riego/Baseline Road Intersection Improvements

The Riego/Baseline Road intersection enhancements would include the following intersections: Brewer and Baseline roads; Baseline and Locust roads; Baseline and Pleasant Grove roads; Riego and Pleasant Grove roads and; Riego and East Natomas roads (see Figures 3-8C, 3-8D, 3-8E, and 3-8F).

On August 31, 2005, the Northeast Information Center completed a records search of that portion of the proposed intersection enhancements along Riego and Baseline roads located in Sutter County (I.C. File No. D05-65). The information center reported that previous archaeological inspections had been conducted along Baseline and Riego roads, along East Natomas Road south of Riego Road and in the general vicinity. As a result of these efforts, two historic sites were previously recorded: a portion of the Natomas East Main Drainage Canal Levee (CA-SUT-85-H) and a segment of the Sacramento Northern Railroad grade (CA-SUT-87-H).

Portions of the Baseline and Pleasant Grove roads intersection, the Baseline and Locust roads intersection, and all of the Baseline and Brewer roads intersection are located in Placer County and are encompassed by the updated records search undertaken by the North Central Information Center for the Specific Plan (see NCIC File No: PLA-05-124, above). The updated records search did not locate any cultural resources within the above intersection improvement areas.

Baseline Road Widening

On August 22, 2005, the North Central Information Center completed a records search for the proposed widening of Baseline Road from its intersection with Walerga Road on the east to the Sutter County line on the west (see Figures 3-8B, 3-8C and 3-13). As a result of that search, the information center identified two previously recorded cultural resources along side the existing road right-of-way: the old Sacramento Northern Railroad grade, recorded in Sutter County as CA-SUT-87-H and in Sacramento County as CA-SAC-946, the McClellan Air Force Base Instrument Landing System Maintenance Shed (P-31-1137-H), and a historic trash scatter (CA-SAC-945). The California Office of Historic Preservation's Historic Property Directory lists the Alpha/Riego School at an unidentified location on Baseline Road. However, the information center's letter report refers to the 1910 Pleasant Grove Quadrangle, which illustrates the school approximately 0.75 mile north of Baseline Road.

The "Eagle Hotel" is illustrated on the 1855 General Land Office plat for Township 11 North, Range 5 East of the Mt. Diablo Meridian. The same feature is illustrated as "Eagle House" on the 1866 General Land Office Plat for Township 10 North, Range 5 East. Though the illustrated location of the historic inn varies between the two maps, both maps indicate its position as the north side of the baseline in the southeast one-quarter of the northeast one-quarter of Section 4, which translates as the north side of Baseline Road approximately 0.4 mile east of the intersection of Baseline and Palladay roads.

The information center also reported that several historic roads crossed Baseline Road. The historic maps included with the records search show four such roads.

Watt Avenue Road Widening

On August 19, 2005, the North Central Information Center completed a records search for the proposed Watt Avenue Road Widening, which includes the intersection of Watt Avenue and PFE Road (NCIC File No. PLA-05-123), and the Watt Avenue bridge widening (see Figures 3-8 and 3-8A). The information center's staff found no listings within the proposed road widening corridor. However, archaeological site records provided by the information center indicate the location of a prehistoric habitation or camp site on the south side of Dry Creek immediately east of Watt Avenue (CA-PLA-69). The archaeological site has been described as a washed out area on the south side of Dry Creek where artifacts were exposed during the flood of February, 1962. The artifact assemblage included about 25 projectile points, mostly of slate or shale and some of obsidian. The assemblage also included mortars, pestles, cooking stones, grinding implements and a paint mortar. The artifacts were found in a stratum approximately three feet below the original ground surface. Also noted at the site were buried pockets of rock measuring 1.5 feet in

diameter and 1.5 feet in depth. Archaeologist Patti Palumbo (now Johnson) indicated that similar "rock pockets" have been found at several sites along Dry Creek (Palumbo, 1966). Both Palumbo and J. B. Mott who originally recorded CA-PLA-69 agreed that the site was probably very old.

Mott also reported evidence of an archaeological site on the north side of Dry Creek immediately west of Watt Avenue. The site, Field Number "Spinelli 1," was later recorded as CA-PLA-47. However, the information center listed at least two possible locations for CA-PLA-47, all but one of which is located outside of the proposed Watt Avenue Widening corridor. Though the information center did not report the on-going research by Peak & Associates, that firm has recently completed an archaeological inspection of the property surrounding CA-PLA-47 (Property #8 [see Figure 3-11]) and conducted archaeological excavations at the site.

The General Land Office plat of 1865 shows two roads crossing the road widening corridor: one northeast to southwest and one northwest to southeast. In addition, the plat illustrates a field encompassing what is now Watt Avenue in the Dry Creek flood plain on the south side of Dry Creek. Also illustrated are three houses east of what is now Watt Avenue along Dry Creek. Current maps of the area illustrate a cemetery, the Union Cemetery, located on the first ridge above the flood plain of Dry Creek on the east side of Watt Avenue. The cemetery is over one hundred years old.

SURFACE WATER SUPPLY CONNECTIONS

San Juan-Sacramento Suburban Secondary Initial Surface Water Supply

This utility line would be confined to the streets: Watt Avenue from PFE Road to U Street (Antelope Road) to Walerga Road vicinity (see Figure 3-5). The records search of August 23, 2005 (NCIC File No: PLA-05-166), indicated no previous cultural resource studies and no cultural resources reported along this proposed water line corridor. Several studies have been conducted on properties adjacent to Watt Avenue and near Antelope Road along the proposed water line route. That portion of the proposed route along Antelope Road borders the historic northern boundary of *Rancho Del Paso*.

Long-Term Surface Water Connection

This utility line follows Elverta Road west to the Sacramento River (see Figure 3-5). The records search of August 23, 2005 (NCIC File No. PLA-05-122) indicates that the proposed water line route crosses at least five cultural resources: Sorrento Road (CA-SAC-567-H); Western Pacific Railroad (CA-SAC-464-H); East Main Drainage Canal (now Steelhead Creek) and Levee (CA-SAC-463-H); the Elverta Road at East Main Drainage Canal Bridge (Caltrans Bridge #24C0218); and Reclamation District 1000 Rural Historic Landscape. At least two-thirds of the proposed alternative has been the subject of previous cultural resource studies.

The proposed utility line crosses the American Basin, site of the rural historic landscape. Reclamation District 1000 was determined eligible for the National Register of Historic Places in

1994, according to the records search. However, the East Main Drainage Canal, which was constructed in 1974, was determined not eligible for the National Register.

The California Department of Transportation's bridge inventory indicated that bridge #24C0218 also constructed in 1974, was not eligible for the National Register. The General Land Office plats encompassing the proposed alternative show no cultural features along the alternative's route. Historic United States Geological Survey quadrangles illustrate scattered houses, unimproved roads and the Western Pacific Railroad along the proposed route.

PFE ROAD/DRY CREEK WATER AND SEWER LINE IMPROVEMENTS

The proposed PFE Road water and sewer improvements involve pipeline construction within a corridor along PFE Road from Watt Avenue on the west to Cook Riolo Road on the east for the water line, along PFE Road from Watt Avenue to the easterly segment of Hilltop Circle then north to the DCWWTP for the proposed sewer force main (two 16 - 20 inch diameter pipelines), and from the intersection of Cook Riolo and PFE roads north on Cook Riolo to the north side of Dry Creek, then east to the DCWWTP for an alternative connection to the DCWWTP. Another alternative connection route exists between PFE Road and the DCWWTP just east of the City of Roseville Corporation Yard for which surveys have not been performed (see Figure 3-6).

On August 19, 2005, the North Central Information Center completed its records search for the proposed PFE Road Water and Sewer Improvements (NCIC File No. PLA-05-120). The information center's staff identified numerous cultural resource studies that had been conducted immediately adjacent to the road rights-of-way along the routes of the proposed water and sewer improvements. Two such studies actually encompass portions of what is considered by the information center as most sensitive: the area along Dry Creek through which the alternative connection route is planned and an unnamed tributary to Dry Creek crossed by PFE Road along which the proposed connection would be located.

Native American archaeological sites along the Dry Creek drainage were the subject of Patti Palumbo's Masters thesis in 1966 (Palumbo 1966). Though information center staff noted some confusion regarding the actual number of archaeological sites located along Dry Creek in the vicinity of the proposed alternative connection, staff reported that as many as four separate locations for sites lie on the north side of the creek. These locations would be on or very near the alternative connection route.

In addition, information center staff pointed to an evaluation of the pony truss bridge on Cook Riolo Road crossing Dry Creek. The evaluation by Eleanor H. Derr indicated that the subject bridge is one of four of its type remaining in the western half of Placer County. An accompanying letter from the Placer County Department of Parks and Museums dated April 30, 1991 stated that because of the rarity of this type of bridge, it may be eligible for listing on the National Register. However, the California Department of Transportation's computer printout, "Historical Significance-Local Agency Bridges" dated August 2, 2000, lists the bridge as "Bridge #19C0117," and described it as located one mile south of Baseline Road, constructed in 1940 and not eligible for the National Register.

Palumbo's study area, according to the information center, extended along an unnamed tributary to the southeast of Dry Creek, which crosses PFE Road and the proposed sewer force main route. Here, within the creek drainage area three hundred feet south of PFE Road and between Antelope North Road and Hilltop Circle is the reported location of CA-PLA-67, an area that yielded stone metates, mortars, pestles, fire-broken rock and other artifacts. The 1961 record form described artifacts found over a large area, but concentrated particularly in one locus next to the tributary.

The only other cultural resource reported by the information center along PFE Road adjacent to the proposed PFE Road Water and Sewer Improvements routes is an old house and outbuildings at 4300 PFE Road recorded in 2003 as Field Number WC2#1. The primary residence on the property was apparently constructed in 1926. The house was not evaluated for California Register or National Register eligibility because permission was not given to enter the property and the structures would not be affected by the utility line installation.

The 1866 General Land Office plat illustrates an unnamed road crossing what is now PFE Road at the PFE-Riolo Road intersection. The map also shows Davis and McClury's House on the east side of Cook-Riolo Road an estimated several hundred feet south of the road's crossing of Dry Creek. Agricultural fields are illustrated at Watt Avenue and PFE Road and on both north and south sides of Dry Creek bordered on the east by what is now Hilltop Circle.

The 1911 United States Geological Survey quadrangles, "Arcade" and "Antelope" illustrate an unimproved road (now PFE Road) and scattered buildings along the proposed routes including the Riolo and Matranga houses in the vicinity of Dry Creek and Riolo Road.

OFF-SITE SEWER CONNECTIONS - SACRAMENTO REGIONAL COUNTY SANITATION DISTRICT

Sewer Alternatives

On August 17, 2005, the North Central Information Center completed a records search for the off-site gravity sewer alternatives (NCIC File No. PLA-05-119/SAC-05-165) (see Figure 3-6). Alternative "A" begins at the proposed lift station location within the western portion of the Specific Plan area, follows Locust Road north then west, then continues west from the west to north bend in Locust, then turns south down Pleasant Grove Road and Sorrento Road to Elkhorn Boulevard where it would tie into the Upper Northwest Interceptor.

Alternative "B" begins at the proposed lift station on Placer Vineyards, then turns south on Locust Road, turns west on Elverta Road, then south on West 6th Street to Elkhorn Boulevard.

Alternative "A-2" lies on a relatively short section of Elverta Road connecting the location of Alternative "A" on the west with Alternative "B" on the east.

The proposed sewer connection on the southeast side of Placer Vineyards proper would connect with a lift station on the south side of Dry Creek immediately east of Watt Avenue, then continue east along the south side of Dry Creek to a second lift station, then cross Dry Creek at Cook Riolo Road and continue along the north side of Dry Creek to the existing DCWWTP.

- **Alternative "A".** The information center noted the following previously recorded cultural resources along Alternative "A": A segment of the Sacramento Northern Railroad grade (CA-PLA-946-H); Sorrento Road (CA-PLA-567-H); Western Pacific Railroad (CA-SAC-464-H); and Elkhorn Boulevard (P-34-743-H). According to the information center's records less than 20% of Alternative "A" has been included in previous cultural resource surveys.

- **Alternative "B".** The information center noted fewer previously recorded cultural resources along Alternative "B": Bridge #24C0314, evaluated by the California Department of Transportation as "not eligible for the National Register"; an unrecorded segment of the Sacramento Northern Railroad on Elwyn Avenue (the southward extension of Locust Road); and Elkhorn Boulevard (P-34-886-H). According to the information center's records, less than 15% of Alternative "B" has been included in previous cultural resource surveys.

- **Alternative "A-2".** The south side of Elverta Road along this short alternative was the subject of a previous cultural resources survey back in 1992 by Ebasco Environmental for the Sacramento Power Project. Ebasco reported an isolated Native American artifact, a flat stone with an abraded or pecked dimple on one surface. The find was made on the southeast side of the intersection of Elverta and Sorrento roads (P-34-744).

OFF-SITE SEWER CONNECTIONS - WATT AVENUE TO DRY CREEK WASTEWATER TREATMENT PLANT (DCWWTP)

This proposed sewer connection crosses Dry Creek east of Watt Avenue and then parallels Dry Creek to an existing force main east of Walerga Road, which extends to the DCWWTP (see Figure 3-6). The updated records search for the Specific Plan area and records searches for the Watt Avenue Road Widening and PFE Road Water and Sewer Improvements along with information from Palumbo's 1966 Master's thesis provide useful data on cultural resources that covers a substantial portion of the proposed sewer connection alignment.

Drawing from these three sources, it is clear that the Dry Creek drainage is sensitive for Native American archaeological resources. CA-PLA-69, a Native American archaeological site exposed in the south bank of Dry Creek on the west side of Watt Avenue was reported back in 1962. Small deposits of buried rocks ("rock pockets") were also noted at this site (excerpted from the Watt Avenue Road Widening records search, NCIC File No. PLA-05-123).

OFF-SITE RECYCLED WATER LINES

One of the two proposed off-site recycled water lines begins at the intersection of Walerga and Fiddyment roads at Baseline Road and extends along Walerga Road to the south side of Dry Creek (Figure 3-5). The 1999 records search for Specific Plan illustrated a previous inspection of the old Walerga Road alignment between Baseline on the north and continuing south across two forks of Dry Creek. At the north fork of Dry Creek at the extreme southeast edge of the Specific Plan area lies DR-5, an isolated find of two prehistoric artifacts. In addition, the 1999 records search identified DR-6, an isolated find of a mano or handstone and a pestle, on the south side of the creek across from DR-5 and an additional prehistoric camp site (CA-PLA-75)

characterized as a lithic scatter adjacent to DR-6 on the south near the west side of Walerga Road (NCIC File No. PLA-99-103).

It is possible that all three sites have been affected by the recent widening of Walerga Road in that vicinity. The 2005 updated records search by the North Central Information Center for the Specific Plan area indicates that no "new" cultural resources have been reported for the area around the Walerga/Fiddyment roads intersection and the Dry Creek vicinity along Walerga Road (NCIC File No. PLA-05-124).

In the future, as the west Placer area builds out, a recycled water line will be constructed from the PGWWTP to serve the Specific Plan area and other areas. It is currently proposed to extend the future recycled water line westward from PGWWTP along Phillip Road to the alignment of Watt Avenue, and then south to Baseline Road where it would tie into other recycled water infrastructure. Due to the very preliminary nature of the planning for this facility and the extended timeframe for its construction, project level research was not performed.

CONSULTATIONS

The consultant initiated contacts with Native Americans in 1999. The first contact was a request to the Native American Heritage Commission for a search of its sacred lands file. It is possible that sacred or religious sites of importance to Native Americans may not be recognized in the field by archaeologists. However, the commission's December 6, 1999 response indicated that the sacred lands file search failed to identify the presence of any Native American cultural resources in the immediate project area. Nonetheless, the commission did identify seven Native American individuals and groups that could have knowledge of cultural resources in the Specific Plan area. The consultant contacted each by mail. In the December 9, 1999, letter sent to each contact, the consultant described the Specific Plan, enclosed a map of the Specific Plan area and asked for any information or concerns regarding cultural resources.

As a result of this solicitation, the consultant received one response. In a June 2, 2000, letter to the consultant, the United Auburn Indian Community's Tribal Historic Preservation Committee indicated that the committee's members had no concerns at the time regarding Specific Plan. However, the committee requested that it be informed as the project progresses (Windmiller *et al.* 2000:20).

On December 1, 1999, the consultant also mailed requests for information or concerns regarding historical resources to Placer County Department of Museums, Placer County Historical Society and the Roseville Historical Society. No responses have been received to date (March 15, 2006).

In the time since these initial consultations, Senate Bill (SB)-18 passed into law. Government Code Section 65352.3 now requires local governments to consult with Native American tribes before the adoption or amendment of a general plan or specific plan proposed on or after March 1, 2005.

The Governor's Office of Planning and Research recommends that local government should send a written request to the Native American Heritage Commission asking for a list of tribes with

whom to consult at the earliest opportunity. A tribal consultation list request form is available on the Native American Heritage Commission website. A sample form is also available from the Office of Planning and Research (OPR).

OPR's Tribal Consultation Guidelines provide the following suggestions:

1. All written requests should be sent to the Native American Heritage Commission via certified mail or by fax.

2. Requests should include the specific location of the area subject to the proposed action, preferably with a map clearly showing the area of land involved.

3. Requests should clearly state that the local government is seeking information about tribes that are on the "SB 18 Consultation List."

4. The Native American Heritage Commission contact information is:

   Native American Heritage Commission
   915 Capitol Mall, Room 364
   Sacramento, CA 95814
   Phone: 916-653-4082
   Fax: 916-657-5390
   http://www.nahc.ca.gov

There is no statutory deadline for the commission to respond to the request. For this reason, OPR recommends an early submittal. However, OPR also recommends to the commission that it respond to such requests within 30 days.

Once a tribal contact list is received from the commission, local government should contact the appropriate tribe(s) and invite them to participate in the consultation. OPR recommends that tribe(s) should be contacted upon receiving the list. OPR also recommends contacting tribe(s) by certified mail with return receipt. OPR's Tribal Consultation Guidelines outlines the recommended contents of the written solicitation (Office of Planning and Research 2005:14-15).

Only if a tribe or tribes are identified by the commission and if that tribe or tribes request consultation after having been contacted by local government, must the local government consult with the tribe(s) on the proposed plan (Government Code Section 65352.3). Each tribe has 90 days from the date it received local government's notification to respond and requests consultation (Government Code Section 65352.3(a)(2).

According to OPR's guidelines, written notice to tribe(s) does not preclude other means of communication. OPR's guidelines also detail other aspects of the consultation process. Placer County contacted the Native American Heritage Commission in May 2005 and received a consultation list of tribes with traditional lands or cultural places within the Placer Vineyards Specific Plan area. The County is currently in the process of complying with the requirements of SB-18, as they apply to the Specific Plan.

METHODOLOGY

Prior to the 1999-2000, 2001 and present studies by the consultant, two entire properties and small portions of three others within what is now the Placer Vineyards Specific Plan area were inspected in the field by archaeologists. In 1982, Peak & Associates conducted a records search and field inspection of what is currently identified as Property #2 (see Figure 3-11 for the location of numbered properties within the Specific Plan area). The archaeologists surveyed the landscape for archaeological resources along transects approximately 30 meters apart. The two previously recorded sites located on the property near Dry Creek, CA-PLA-80 and CA-PLA-82, were re-examined and found to be surface scatters of widely dispersed Native American grinding stone fragments (Peak & Associates 1982:4).

Two linear archaeological field inspections were conducted for the electrical transmission line corridor that crosses the Specific Plan area from northeast to southwest. The transmission line route crosses Properties #12A, #13, #14 and #19 (Figure 3-11). The first study was conducted by Peak and Associates, Inc. in 1979. Field methods were described simply as "the project area was inspected on foot in September" (Peak & Associates 1979:7).

The second study was conducted by Far Western Anthropological Research Group in 1986. The field methods were described as, "walking in transects along the transmission line right-of-way — special attention was paid to the extended right-of-way." The field research was characterized as "an intensive reconnaissance of the areas not covered by Peak (in 1979)." According to the Far Western technical report, much of the ground surface was obscured by heavy grasses while many areas were disturbed by dumping and plowing, which allowed greater visibility of exposed soils. Surface scrapes were conducted periodically to reveal the ground surface. The backdirt piles of burrowing animals were also examined (Mikkelsen 1986:3).

In 1988, what is now Property #19 (Figure 3-11) was inspected by Foothill Archaeological Services. Foothill's field team walked the property along transects that followed ephemeral drainages. The numerous low hills and stream terraces received intensive inspection along zig-zagging transects approximately five meters apart. The surrounding areas were inspected with moderate intensity. Special attention was given to the margins of what the investigators referred to as, "vernal pools." Low, but full ground cover hampered visibility of the ground surface. However, periodic surface scrapes were conducted to reveal the soils. The backdirt from animal burrows was also examined. However, only three person days were expended on the examination of approximately eight hundred acres (Foster, J. W. and D. G. Foster 1988:8).

To compile further data on cultural resources of the Specific Plan area, the Windmiller consultancy conducted archaeological field inspections on those properties for which written permission had been granted. During the 1999-2000 study, the consultant inspected Properties #7, #9, #10, #11, #15, #16, #17, #19 and #20 (now re-numbered #21). Property #19 was reinspected at this time, as it had previously received "intensive" coverage only along its internal drainages (Windmiller *et al.* 2000:20ff).

In 2001, Property #12A and #12B (identified then simply as Property #12) was added to the list for which permission to trespass was granted and the consultant conducted a field inspection of the property at that time (Windmiller 2001). Guided by results from the records searches for the 1999-2000 and 2001 studies, the Windmiller consultancy launched teams of two archaeologists who carried out the archaeological field survey. The field archaeologists were: Dan Osanna, M.A., Francis A. Riddell, M.A., R.P.A. and Ric Windmiller, M.A., R.P.A. The archaeologists inspected the properties from four wheel all-terrain vehicles (ATVs) and on foot. The properties were inspected along closely spaced, parallel transects. In areas of the Specific Plan outside the properties for which permission to trespass was granted, the archaeological field work was limited to three roughly north-south transects along main roads to conclude a brief reconnaissance to help identify areas that could be archaeologically sensitive.

In 2005, permission to inspect additional properties within the Specific Plan was granted to the consultant. Ric Windmiller, M.A., R.P.A. and two assistants again used four-wheel all-terrain vehicles and pedestrian survey methods to inspect properties 1A, 1B, 3, 5C, 6, 23 and 24.

Between 2000-2001 and 2005, the numbering system used to identify properties on in the Specific Plan area changed slightly. Under the 2005 numbering system, Property #1 is divided into Properties #1A and #1B. Property #7 now includes Property #4. Property #20 is now Property #21. As described above, Property #12 is now divided into Properties #12A and #12B.

During the present study, the consultant did not reinspect properties previously inspected in 1999, 2000 and 2001. This means that Property #4, even though it has a new designation, was not examined during the present study, as it was designated a part of Property #7 back in 1999-2000 and was inspected during that previous study.

Architectural historian, Donald S. Napoli, Ph.D., conducted an intensive survey during 1999-2000 of what at the time was considered the area of Placer Vineyards slated for first development. It was Napoli's objective to identify, document and evaluate all buildings and structures within what was then the Phase I area of development. He focused on those buildings and structures that may be eligible for the California Register of Historical Resources. In the remaining portion of Specific Plan area, Napoli's approach was that of a preliminary overview to identify possible historic buildings and structures.

During the present study, architectural historian Carol Roland, Ph.D. built on Napoli's previous work by formally recording and evaluating buildings identified in Napoli's overview on properties for which permission to trespass had been secured. In addition, Roland recorded and evaluated buildings and structures located in the path of proposed off-site road widenings.

HISTORIC BUILDINGS SURVEY

During the initial study of 1999-2000 guided by a review of United States Geological Survey maps, including maps published in the 1950's, the locations of buildings shown on older maps were compared with those illustrated on current maps. When the locations coincided, the spots were marked by the architectural historian as likely sites of buildings that remained from about 1950 and, therefore, may be eligible for the California Register of Historical Resources. The

architectural historian then conducted a field investigation. All likely locations of historic buildings were checked and observations were also made from all public roads.

During the present updated study, the architectural historian also identified buildings and other cultural resources that would be directly affected by proposed road widenings and intersection improvements. The buildings and a cemetery were identified by inspecting aerial photographs with overlays of the proposed extent of the road improvements.

ARCHAEOLOGICAL SURVEY

During the 1999-2000 and 2001 studies, the consultant inspected ten separate properties, each of which was assigned a number (see Figure 2 of Appendix G of this Revised Draft EIR for the location of numbered properties inspected during these two early studies and during the present study including the on-going work by Peak & Associates, Inc.).

The original archaeological field survey was initiated on December 7, 1999. The archaeologists visited properties 7, 9-11, 15-17, 19 and 21) to determine how each property would be accessed, ground conditions, survey strategies and to identify any special problems that could affect the survey. Property #12 was added in 2001. The consultant inspected the property directly without any specific pre-field work visit as the consultant was already familiar with the point of access and general terrain of Property #12. During the present (2005) study, however, the consultant reverted to the method used originally and conducted a pre-field work visit to each property for the purposes of assessing access and field conditions, deciding on field strategies and identifying any potential problems that could affect the inspection of each property.

In the paragraphs below, the specific conditions (and limitations) of each property are reviewed and the methods of field inspection are described.

Property #IA and #IB

Located at the southwest corner of the old Walerga Road and Baseline Road, this property consists of fallow fields on undulating terrain and a wooded area along Dry Creek. The property was inspected by the consultant during the present 2005 study. Most of the area is included in Property #1A. Property #1B consists of a relatively small, uncultivated, dry field frequented by cattle.

The southeast portion of Property #1A borders Dry Creek adjacent to the wooded area. It was here at the edge of an old cultivated field that two prehistoric archaeological sites (the Native American campsite CA-PLA-46 and the isolates of DR-5) were reported some 40 years ago by Mott and Palumbo. Although the field had been cultivated at one time, it now supports dense dry grasses and annuals with patches of star thistle. Visibility of the ground surface is poor.

The adjacent wooded area of Property #1A also borders Dry Creek. The wooded area can be characterized as dense oak parkland. Dense grasses and thistles make up the understory vegetation on the undulating terrain here on the north side of Dry Creek. The ground surface is covered with a thick layer of duff. Inspection of this area was along zig-zagging transects

approximately 15 meters apart. One Native American campsite previously recorded by Palumbo (CA-PLA-46) was reported along the north side of the Dry Creek in the vicinity of this wooded area. All of the terraces along the north side of the creek were carefully inspected by periodic scrapes taken of the ground surface, as there were at least two locations on rises above the creek that would have been suitable for Native American camps.

The adjacent open fields of Property #1A in the non-wooded area also support dense dry grasses and annuals. Star thistle abounds. A deeply entrenched stream runs roughly east to west in the northern portion of the property roughly paralleling Baseline Road. The stream cut banks were examined where they were not totally obscured by cattails and other vegetation.

Along Dry Creek in the locality of the reported archaeological sites, star thistle grows in one large, dense thicket up to four feet high. Inspection of this area was extremely difficult. At intervals and in places where prehistoric archaeological sites would most likely exist, the field team conducted small surface scrapes to check for characteristic sediments and artifacts.

The grass cover of Property #1B was relatively sparse, probably due to the effects of grazing cattle. A firebreak was disced around the property's perimeter. Ground visibility was fair.

The inspection of Property #1A and #1B during the present study placed particular emphasis on relocating the previously reported archaeological sites. Most of the property was inspected along zig-zagging transects approximately 15 to 25 meters apart. Although ground visibility was generally poor, it is unlikely that any unrecorded archaeological sites exist on the majority of this property. However, both high and low terraces adjacent to Dry Creek remain sensitive for Native American archaeological resources. It is possible that the stream near Baseline Road and its immediate environs could also be sensitive for buried Native American archaeological resources.

Property #2

Peak & Associates, Inc. inspected this property in October 1982. The field team surveyed the terrain for archaeological sites along transects 30 meters apart. All exposed ground was examined for evidence of prehistoric occupation or use. In addition, the previously recorded Native American archaeological sites, CA-PLA-80 and CA-PLA-82 were located and examined (*cf.* Peak & Associates 1982:4). The property was not re-examined during the present study, as permission to trespass had not been secured. However, it is unlikely that any significant archaeological resources were overlooked.

Property #3

This property, inspected by the consultant during the 2005 study, is located immediately west of Property #1. It is bounded on the north by Baseline Road and on the west by Watt Avenue. As in Property #1, the terrain is undulating with low hills and broad swales. Dense dry grasses and annuals on this property made inspection for archaeological resources difficult. The deeply entrenched stream described above on Property #1 continues westward through the north portion of Property #3. Again, cut banks were inspected where breaks in the dense cattails and other vegetation allowed. Surface scrapes were also made by the field team on hills and along terraces

near the stream. An unnamed historic road passed through this property, according to the General Land Office plat. Also, since the property is relatively near the map-illustrated location of Eagle House, an early inn, the field team was particularly alert for historic features and historic artifacts. As a fire break had been disced around the perimeter of the property, this transect of bare earth was carefully inspected for any evidence of prehistoric or historic artifacts and features. The field team expended 1.5 staff-days on Property #3 during the 2005 study.

Property #5C

This property consists of fenced fields, mainly level, irrigated pastures actively grazed by cattle. However, portions of three pastures and one additional entire field were dry, unimproved (not leveled) land. Near the geographic center of the property and the west central portion of the property are areas of residences and farm outbuildings. The entire property was inspected by the consultant during the 2005 study.

The irrigated pastures were inspected along transects 25 to 50 meters apart. Here ground visibility was poor, except for bare ground exposed along the engineered ridges between checks designed to direct flood irrigation waters along the narrow pathways across the field. Ditches at one end of each field were also inspected. Ground visibility was much better in the unimproved sections of fields. Two pond areas, both of which were probably widened and deepened sections of old, natural drainages, were carefully inspected around their respective perimeters. One small portion of an irrigated pasture (less than 10 acres) was avoided, as it was densely populated with cows and their young nursing calves. However, the areas around buildings and structures were examined along zig-zagging transects 15 meters apart. Most of the ground around the buildings was bare, except for some minor landscaping. Approximately three person days were expended on the inspection. It is unlikely that any significant archaeological resources were overlooked.

Property #6

This property borders the north side of Dry Creek and abuts Watt Avenue. Before conducting the field inspection during the 2005 study, the field team interviewed an individual who had grown up on the property. Though thoroughly familiar with the grounds, the individual had no knowledge of any Native American archaeological resources on the property. Nonetheless, the field team expended 1.5 person days examining the property along zig-zagging transects 15 to 20 meters apart. Ground visibility was generally poor with high introduced grasses and annuals, especially star thistle. It is likely that the land along Dry Creek retains sensitivity for Native American cultural resources. Therefore, it is possible that buried archaeological resources exist along the creek margin and potentially in the first terrace above the north side of the creek.

Property #7

This property borders the south side of Baseline Road. It was inspected by the consultant during the 1999-2000 study. The property consisted of mostly open field that had been disced. The ground surface was clearly visible; new grass was beginning to appear. The terrain is undulating prairie. The disked surface appeared sandy with areas of exposed variegated beach gravel probably related to the Quaternary Riverbank Formation. The entire property was traversed in

parallel east-west transects approximately 15 meters apart. The rises along meandering drainages that cross the property northwest to southeast was also inspected along two transects paralleling the drainages. Dense grasses in the drainages themselves precluded inspection of these seasonal water courses. Six and one-half person days were expended by the field team on the inspection of Property #7.

Property #8

This property is located along the south boundary of the Specific Plan area immediately east of Watt Avenue and on the north side of Dry Creek. The field inspection was conducted by Peak & Associates, Inc. during 2005. The property is characterized by grassy, undulating terrain with the steepest slopes occurring adjacent to Dry Creek. Grass cover is dense. Peak & Associates' field team inspected the property along transects approximately 15 meters apart. Disturbances from cattle grazing, trails and other openings provided an opportunistic sampling of the ground surface to inspect for archaeological resources (Robert Gerry, personal communication 10/3/2005).

Property #9

This property is located along the south boundary of the Specific Plan area. It was inspected by the consultant during the 1999-2000 study. The property included leveled pastures and southwest to northeast trending seasonal drainages. Grasses were dense in both old (dry) and new (green) fields. The property was examined by the consultant along parallel transects approximately 15 meters apart. The transects were directed along irrigation check ridges where rodent activity was most frequent and soils exposed. Field margins were inspected by the archaeologists, as well. The consultant expended four person days inspecting Property #9.

Property #10

Inspected by the consultant during the 1999-2000 study, Property #10 was mostly level rice fields bordered by high dikes. The southeast portion of the property, however, is a grove of oak trees. The oak woodland was inspected on foot along transects approximately 15 meters apart. Grasses in the oak woodland area were very dense and ground visibility was practically nil except where rodent activity had exposed the soil. The rice fields appeared to have been leveled below the grade of the surrounding land. One of the fields was traversed along parallel transects approximately 15 meters apart. The remaining fields were inspected from the dikes. The dikes were inspected, as well. The rice fields had been cultivated in the recent past and soils were clearly visible.

Property #11

Property #11 was inspected by the consultant during the 1999-2000 study. Located between parcels belonging to Property #9, Property #11 consisted of a series of leveled pastures bisected by a seasonal east-west drainage. The entire property was covered in grass. Density of the grass cover was greatest in the southern portion of the property, which made survey in the southern part difficult. The property was inspected along zig-zagging transects approximately 15 meters apart. The consultant expended two person days on Property #11.

Property #12A and #12B

Property #12 was inspected during the consultant's 2001 study. The northern portion of the property abutting Baseline Road had been contoured for flood irrigation (rice), while the central two-thirds of the property had been leveled in large terraces also for flood irrigation (pasture or alfalfa). Two seasonal drainages crossing the property from east to west had been re-contoured (channelized). The southern one-sixth of the property may have been cultivated for wheat or similar dry-farmed crop.

The expectation of finding any intact archaeological resources in the contoured and channelized areas of the property was low. The probability of finding intact Native American archaeological resources in the southern third of the property where disturbances by farming were much less than the northern two-thirds was still slight due to the distance from major drainages.

The entire property was inspected along transects 15 to 25 meters apart. Two person days were expended on the field survey. The property was open grassland with no more than a few trees located along the channelized drainages. While grass cover hampered observation of the ground surface in the northern two-thirds of the property, visibility was much better in the southern third. Yet, the probability of unobserved archaeological resources existing on Property #12 is low.

Property #14

This property consists of dry, abandoned rice fields separated by curvilinear dikes. The property is located at the northeast corner of Baseline Road and Palladay Road. Visibility of the ground surface was variable. In some places within the rice fields property, ground visibility was relatively good. Along the dikes, introduced grasses, annuals and dry cattails were dense and high. Here, inspection was very difficult. However, as the fields occupied different levels and dikes and elevated boundaries of the property were high, it is apparent that considerable land modification leaves little likelihood for any intact archaeological sites, either historic or prehistoric. The inspection, which was conducted during the present study, consumed 1.5 person days.

Property #15

This property is located in the central portion of the Specific Plan area. The property was inspected by the consultant during the 1999-2000 study. Consisting of a number of leveled, irrigated pastures, the ground surface could be inspected only where occasional rodent burrows brought soil to the surface. Both old (dry) and new (green) pasture grasses were dense. The property was traversed by the consultants along transects 15 meters apart. The transects paralleled the irrigation checks in the pastures where rodent activity was most common. The field margins were inspected, as well. The consultant expended two person days on Property #15.

Property #16

Located between Property #15 on the north and the Specific Plan boundary on the south, this property was inspected by the consultant during the 1999-2000 study. The property was characterized by its undulating, grassy terrain. The consultant's field team expended two person days walking the property along zig-zagging transects approximately 15 meters apart. An open area around an existing mobile home along fence lines was also inspected by the consultant. A modern trash dump on the south side of the property hampered inspection of that portion of the parcel. Ground cover (grass) was densest on the western portion of the property and visibility of the ground surface was poor, except on a fire break that paralleled Palladay Road.

Property #17

This property is situated between Property #15 on the north and Property #16 on the south. One person day was expended on field inspection of this property by the consultant during the 1999-2000 study. Dense dry grasses covered the undulating terrain of Property #17. The consultant inspected the property on foot along transects approximately 15 meters apart. The ground surface was moderately visible.

Property #19

In 1988, Foothill Archaeological Services conducted a field survey of this property. The field survey strategy used in the 1988 study specified transects walked by the archaeologists along the drainages and inspection of the margins around what the archaeologists believed were vernal pools (Foster and Foster, 1988). To check the adequacy of methods used in the 1988 study, the consultant traversed the property in 12 parallel, east-west transects during the 1999-2000 study. Most of the property was lightly disced in much the same fashion as Property #7. Sparse grass had begun to grow, although ground visibility was good on two-thirds of the property. However, the northern third was covered by dense, old (dry) grass. This portion of the property had not been disced prior to the previous season's hay cutting. In the southeast corner of the property, on the south side of an east-west meandering drainage, the terrain was uncultivated hills covered in old dry grasses and star thistle. Visibility of the ground surface in this portion of the property was moderate. The consultant expended two person days inspecting Property #19.

Property #21

This property is located on the south side of Property #19 near the southern boundary of the Specific Plan area. Undulating terrain on this property was covered in old (dry) dense grasses. The consultant inspected the property during the 1999-2000 study along parallel, zigzagging transects approximately 15 meters apart. During that study, the property was designated, "Property 20." Visibility of the ground surface was poor except where rodent activity disturbed the soil. The consultant expended one person day on Property #21.

Property #23

This property consists of a dry, fallow field on the west and small horse paddocks and residences on the east. Three-quarters of the property, the dry fallow field, was inspected along zig-zagging transects approximately 15 to 20 meters apart. Ground visibility was generally poor due to high, dense introduced grasses and annuals. The field was on undulating terrain bordered on the west by the old Sacramento Northern Railroad right-of-way and on the east by Locust Road. The highest portion of the fallow field had been used as a dumping ground for materials gathered from the horse paddocks. Another portion of the field served as a water reservoir of apparently recent construction (less than 45 years old).

The horse paddocks were bare ground. Soil color was easily discerned at a distance. Because of the density of the horse herds in each small paddock, inspection was conducted from the perimeter fences for safety reasons. However, it is unlikely that an archaeological site was overlooked in the process. Similarly, the grounds around the residences were inspected on foot, though not to the extent of disturbing the occupants. One and a half person days were expended in the inspection of Property #23.

Property #24

This property is a single large field previously dry-farmed. The field was fallow during the period of inspection, which was 1.5 person days. Grasses and annuals were low and ground visibility was fair across most of the field. As Property #23, Property #24 is bounded on the west by the old Sacramento Northern Railroad right-of-way and on the east by Locust Road.

The property was inspected along zig-zagging transects 15 to 25 meters apart. The probability is low that any significant archaeological resources were overlooked.

Riego/Baseline Road Intersection Improvements

The following four intersections for which improvements are proposed were inspected for a distance of five hundred feet in each direction. However, because permission to trespass on private property was not secured, inspections were limited to the existing road rights-of-way. The Brewer Road/Baseline Road intersection is included in the Baseline Road discussion below.

Locust/Baseline Intersection. At the Locust/Baseline intersection, (Figure 3-8C) the area was walked along each side of the road on Locust north of Baseline and along Baseline west of Locust. Here an unfenced disced field provided excellent ground visibility on one side, while a graded shoulder provided good visibility on the other. On Locust south of Baseline, visibility of the ground surface was hampered by landscaping to the road's edge on one side and dense, dry grasses and annuals on the other. Dry grasses and annuals were dense on both sides of Baseline east of Locust-ground visibility was extremely poor.

Pleasant Grove/Baseline Intersection (south). Both north and south sides of Baseline/Riego Road (Figure 3-8D) were inspected on foot, except for the north and south sides of Baseline east of the Riego store where grasses and annuals were extremely dense and fence lines were so close to the

busy road as to constitute a hazard for the field team. Both sides of Pleasant Grove Road were inspected on foot. Visibility was variable. There was some bare ground as well as dry grass cover. There is a wide turn around area on the southwest side of the intersection. This area was bare of vegetation and was inspected along five meter transects.

Pleasant Grove/Baseline Intersection (north). Both north and south sides of Baseline at this intersection (Figure 3-8E) were walked, except for a small portion of the north side of Baseline west of Pleasant Grove. This latter area was covered in dense grasses and the fence line was close enough to Baseline Road to constitute a hazard for the field team. Both sides of Pleasant Grove Road north were walked. Ground visibility was good on the shoulder next to the paved road. The embankment on the east side of the road was inspected, as well. On the west side of the road there was open ground with some grass and annuals bordering on rural residential lots.

Riego/Levee Road Intersection. Inspection along the north-south road was confined to the levee (Figure 3-8F). East of the levee, Riego Road crosses a bridge over a broad drainage that marks the eastern extent of Reclamation District 1000. West of the levee road, Riego Road is a part of the rural landscape of Reclamation District 1000, which consists of fields, roads, canals and ditches. On the north side of Riego, west of the levee road is a freshly disced field. On the south, planted and irrigated fields. Ground visibility along the margin of the disced field was excellent. Ground visibility on the south side of Riego Road was poor due to heavy grass cover.

Baseline Road Widening

Inspection for archaeological resources along Baseline Road was confined to the existing road right-of-way, as permission to trespass on most individual properties was not secured. However, the consultant did have permission to enter a number of properties bordering the south side of Baseline Road within the Specific Plan area. During the 1999-2000 and 2001 studies, as well as during the present study, the consultant inspected properties along the Baseline Road right-of-way within the suggested 200-foot wide corridor. In all cases, except Property #7, visibility of the ground surface was minimal due to dense grasses and annuals. Property #7 was examined back in 1999-2000 during which time the ground had been disced and the ground surface was relatively easy to inspect.

During the present study, the major focus was on inspecting the north side of Baseline Road. Here, ground visibility was largely poor due to dense grasses and annuals. The exceptions included an area about 0.5 miles long west of Walerga/Fiddyment Road and an area about 0.2 miles long west of Locust Road. In these areas, ground visibility was reasonably good due to discing and other disturbances.

Watt Avenue Road Widening

A portion of the anticipated 200-foot-wide corridor for the Watt Avenue Road Widening was inspected on both the west and east sides where permission had been granted to trespass on properties located within the Specific Plan area. In these areas, specifically Properties #3, #4, #5C, #6 and #7, the consultant inspected the area adjacent to Watt Avenue along parallel transects five meters apart. Visibility of the ground surface was variable. Bare ground existed

within at least the majority of the corridor on properties 3, 5C and 6. If we include Property #8 that was inspected by Peak & Associates this year (2005), then the entire corridor on the west side of Watt Avenue between Baseline Road and Dry Creek was inspected. However, less than half of the corridor on the east side of Watt between Baseline and Dry Creek was inspected to the full width of the corridor. The half mile that was not inspected to the full width of the corridor was checked in areas where bare ground was exposed within the Watt Avenue right-of-way.

South of Dry Creek, Watt Avenue was inspected entirely within the existing right-of-way. Visibility of the ground surface was variable. A disced field on the northeast corner of Watt and PFE Road provided good visibility of the ground surface, while in areas of development, landscaping prevented inspection.

Off-Site Surface Water Supply Connections

San Juan-Sacramento Suburban Secondary Initial Surface Water Supply. As this pipeline would be confined to the streets in a built environment, Watt Avenue from PFE Road to U Street (Antelope Road) to Walerga Road vicinity, research was confined to the records search. There was no field inspection.

Long-Term Surface Water Connection. This pipeline follows Elverta Road west to the Sacramento River. Research for this alternative was confined to the records search. There was no field inspection.

PFE Road/Dry Creek Water and Sewer Improvements

The proposed PFE Road water and sewer improvements involve pipeline construction in an alignment along PFE Road from Watt Avenue on the west to Cook Riolo Road on the east for the water line. Portions of this corridor were unfenced and the precise right-of-way unknown. However, the field team walked close to PFE road to approximate the width of the right-of-way. Ground visibility was variable, from open, disced fields to rural residential areas. However, landscaping to the road's edge was not common. With the exception of areas of cutbanks, most of the road right-of-way on both north and south sides of PFE road was easily inspected.

The proposed sewer force main (two 16 - 20 inch diameter pipes) is routed along PFE Road from Watt Avenue to the easterly segment of Hilltop Circle then north to the DCWWTP for the proposed sewer force main, and from the intersection of Cook Riolo and PFE roads north on Cook Riolo to the north side of Dry Creek, then east to the DCWWTP for an alternative connection to the DCWWTP. Another alternative connection route exists between PFE Road and the DCWWTP just east of the City of Roseville Corporation Yard for which surveys have not been performed.

The west side of Cook-Riolo Road north to the south side of Dry Creek is largely new residential with landscaping to the road. Both sides of Cook-Riolo were inspected to Dry Creek. The narrow bridge on Dry Creek and the high banks of the road prevented inspection off the road. As no permission to trespass was secured for the land along Dry Creek east to the DCWWTP, no field

inspection was conducted along the creek. Research was restricted to the results of a records search.

PFE Road east of Cook-Riolo, Hilltop Circle and the road on the north side of Dry Creek to the wastewater treatment plant were also inspected within the existing rights-of-way. Ground visibility was good along most of these routes. Construction was underway on the south side of PFE Road in the vicinity of Hilltop Circle. Movement of heavy equipment prevented pedestrian inspection of this small area. However, ground visibility was excellent in the construction zone and no soil discoloration or other evidence of prehistoric or historic archaeological sites were noted from a slow moving vehicle.

The facilities on Hilltop Circle represent a built environment with landscaping and pavement to the road, except in one small area on the east side of Hilltop. Here examination of the original ground surface was not possible. This one small open area was probably fill and may not represent the original sediments.

Off-Site Sewer Connections - Sacramento Regional County Sanitation District

Sewer Alternatives. The gravity sewer alternatives emanate from the western portion of the Specific Plan area and terminate at Elkhorn Boulevard where they would tie into the Upper Northwest Interceptor.

Gravity Sewer Alternatives. Alternative "A" begins at the proposed lift station location within the western portion of the Specific Plan area, follows Locust Road north then west, then continues west from the west to north bend in Locust, then turns south down Pleasant Grove Road and Sorrento Road to Elkhorn Boulevard. The lift station area was inspected during the 1999-2000 study of Property #19. However, it was during the present study that both sides of Locust Road north, then west to its bend northward were inspected on foot within the right-of-way. From this second bend in Locust, west to Pleasant Grove Road, Alternative "A" was inspected as part of the inspection for Property #23. Here, the easternmost portion of the sewer route was largely graveled driveway. However, three quarters of the route west to the old Sacramento Northern Railroad right-of-way was dense grasses and annuals. Field inspection consisted of taking surface scrapes periodically to check for cultural deposits. A modern trash dump (less than 45 years old) was easily identified in the northwest corner of Property #23, despite the grass cover. The short area west from the Sacramento Northern Railroad grade to Pleasant Grove Road was not inspected as permission to trespass was not secured.

Pleasant Grove Road south is largely rural. Ground visibility on both sides of the road was good. Traffic was minimal, which provided ideal conditions for pedestrian inspection. Pleasant Grove Road becomes Sorrento Road in Sacramento County. However, Sorrento ends just south of Elverta Road. Approximately 1.5 miles of the proposed alignment between the end of Sorrento and Elkhorn Boulevard could not be accessed as permission to trespass had not been secured.

Alternative "B" begins at the proposed lift station on Property #19 and extends south along Locust Road, which becomes Elwyn Avenue at the Sacramento County line. The proposed alternative turns west on Elverta Road from Elwyn, continues west for approximately one-

quarter mile, then turns south across private property until it meets West 6th Street for a distance of about one-quarter mile until it again encounters private property for another reach of approximately one-quarter mile. The final reach of this alternative is again on West 6th Street though in the built environment of a residential neighborhood.

The alternative route was inspected on both sides of the public roads. The full width of the 200-foot-wide corridor was inspected within the Specific Plan area, as the route involved Properties #19, #23 and #24. However, the inspection was confined to the road rights-of-way south of the Specific Plan area. Ground visibility was variable. Generally, though, the roadsides provided frequent patches of bare ground and it is unlikely, therefore, that any significant archaeological resources were overlooked.

Alternative "A-2" is a short reach of Elverta Road between Elwyn Avenue and Sorrento Road. The right-of-way between fences on either side of the road was relatively narrow. Ground visibility was poor in areas, as dense grasses often extended close to the road's edge.

Off-Site Sewer Connection - Watt Avenue to Dry Creek Wastewater Treatment Plant (DCWWTP)

This proposed sewer connection crosses Dry Creek east of Watt Avenue and then parallels Dry Creek to an existing force main east of Walerga Road, which extends to the DCWWTP. The updated records search for the Specific Plan area and records searches for the Watt Avenue Road Widening and PFE Road Water and Sewer Improvements along with information from Palumbo's 1966 Master's thesis provide useful data on cultural resources that covers a substantial portion of the proposed sewer connection alignment. Research for the majority of this utility route was limited to the results of records searches and the field study associated with Palumbo's thesis, as permission to enter onto private properties along the proposed route had not been secured.

Off-Site Recycled Water Lines

This proposed off-site recycled water line begins at the intersection of Walerga and Fiddyment roads at Baseline Road and extends along Walerga Road to the south side of Dry Creek (Figure 3-5). This short reach of road was inspected along both sides, though recent construction has created a built environment along portions of the route. Landscaping and pavement precluded inspection in the built areas. Otherwise, ground visibility was variable, which ranged from dense grasses and annuals to bare ground. Road widening and the alteration of the route for Walerga Road has resulted in considerable ground disturbance in the area, generally. Surveys were not performed for the line extending from the PGWWTP.

DESCRIPTION OF RESOURCES

The inventory of cultural resources within the Specific Plan area resulted in the identification of ten archaeological sites, four of which are historic, non-Native American sites, and six of which are prehistoric Native American sites. The non-Native American historic sites include the Sacramento Northern Railroad grade, a historic trash scatter, ruins of a concrete reservoir and a barn foundation. The Native American sites include an isolated find of milling stones and four

camp sites all of which are located along the north bank of Dry Creek. A sixth Native American resource, a prehistoric campsite, was discovered on a high knoll overlooking a seasonal drainage north of Dry Creek. None of the prehistoric archaeological sites are located within the Riego community. However, a portion of one historic site, the Sacramento Northern Railroad grade, is located within the Riego community.

The information center indicates that there are multiple possible locations for some prehistoric sites along Dry Creek. During the present study, the consultant found two additional plausible locations for prehistoric sites within Property #1A along Dry Creek, though no artifacts or other indicators were found in association with these two locations. The ephemeral nature of prehistoric camp sites along Dry Creek makes it difficult to identify with certainty this type of archaeological site. Therefore, the consultant is inclined to designate the margins of Dry Creek as an archaeologically sensitive area.

In the 1999-2000 study, the architectural historian identified buildings and structures at 19 different addresses in the Specific Plan area outside the community of Riego. One or more buildings at 17 of these addresses are 50 years old or older. The community of Riego itself contains approximately 180 substantial buildings; that is, structures larger than a garage. Only about 20 date from 1950 or before. Most of the older buildings are houses, though the Placer Vineyard Specific Plan area as a whole includes a few barns as well.

SPECIFIC PLAN AREA: HISTORIC BUILDINGS

The listings below include only those addresses on the numbered properties within the study area outside the community of Riego for which permission to trespass was secured, or that could be described from public right-of-way and that were considered on the basis of the consultant's 1999-2000 research to have historic buildings. Each address for which buildings and structures are evaluated is referenced by a number corresponding to a specific location on the map in Appendix D: Confidential location of cultural resources of Appendix H of this Revised Draft EIR. In the case where the buildings and structures at a specific address were identified by a similar number in the consultant's 1999-2000 study, that number is enclosed by parentheses (*cf.* Windmiller *et al.* 2000).

1. **8545 Palladay Road.** In the 1999-2000 study, the architectural historian identified the buildings at this address as a complex of buildings including a residence, barn, prefabricated office or dwelling unit and several storage structures. The house, which has metal framed windows and plastic siding, probably replaced an earlier residence in the 1970's. The remaining structures appeared to date from the 1950's and 1960's. The barn could date to an earlier period. The address was revisited during the present study by a second architectural historian. The house was further describe as Minimal Traditional in style and probably dates back to the 1950's. However, the house has been so altered that it is difficult to determine its date of construction. The cladding, windows, doors and porch have been changed or replaced.

2. **Mobilehome.** About one-third mile south of the 8545 Palladay Road address is a mobilehome that could have been brought to the location in the 1960's and 1970's.

3. **P-31-1137: McClellan AFB Outer Runway Beacon.** This building is a small, single story, unornamented military structure with a gable roof and slightly overhanging eaves. The building site is located about two thousand feet west of Watt Avenue on the south side of Baseline Road. The building's gables face north and south. The walls are approximately 10 feet high. A frame platform tops the roof. Asphalt shingles side the building. The west elevation has an open doorway near the center with a window to the right and a vent to the left. On the east elevation is a paneled door. Nearby are two telephone poles without wires. The building is set back from Baseline Road about 30 feet and is surrounded by a security fence topped with barbed wire. The building project was approved in 1951 and construction completed circa 1955.

4. **9280 El Verano Avenue.** This is a Minimal Traditional style house built circa 1950. The house has a cross gable roof with slightly overhanging gables and eaves. The roof has a low pitch that emphasizes the horizontal design of the house. A front entry porch is located near the center of the front elevation. It has a front gable roofed porch supported on 4x4s. Windows are one-over-one double hung with the exception of the multi-light fixed living room window located on the north side of the front facade. The lower wall of the house is clad with a faux stone veneer while the upper walls are covered with asbestos siding.

5. **8875 Watt Avenue.** During the 1999-2000 study, the architectural historian identified this house, probably constructed in the 1930's, which had one story and had been remodeled. A large adjacent barn of the same age was identified nearby. During the present study, this address was revisited as part of the proposed Watt Avenue Widening. A second architectural historian corrected the earlier description during the present study by indicating that the property is a ranch complex including the residence and two barns. The residence is a single-story Tudor Revival house with a cross gable roof. The house has been substantially modified with brick veneer, window reconfiguration and replacement. The first of two barns lies close to the house and is rectangular in plan with a low front gable roof. The north side of the barn roof extends to cover a partially open shed extension. The second barn is also rectangular in plan with a moderately sloped front gable roof with no gable or eave overhang. The west wall of the barn appears open. All three buildings appear to date from the 1930's.

6. **Straight Road.** This single-story cross-gabled house typifies middle-class suburban dwellings constructed after World War II. The building is approached by a long drive sided with trees.

7. **Straight Road.** This building, notable for its low-pitched, hipped roof and brick facing, is a typical suburban ranch house of the late 1940's. Industrial buildings are in the rear of the house location.

8. **Watt Avenue at Dry Creek Bridge (Caltrans Bridge No. 19C0084).** This bridge was identified and evaluated in a previous California Department of Transportation study (California Department of Transportation 2000).

SPECIFIC PLAN AREA: ARCHAEOLOGICAL RESOURCES

The listings below include all of the study area outside the community of Riego. The exception is the Sacramento Northern Railroad grade, which crosses the Specific Plan area including the community of Riego. On those properties for which permission to trespass was secured, the archaeological resources include those identified in records searches as well as those identified during field inspections. On those properties for which permission to trespass was not secured, the archaeological resources include only those identified in records searches.

PV-1 (CA-PLA-944-H): Barn Foundation Site. Located on Property #4, archaeological site PV-1 consists of two features, a concrete barn foundation and a pump house foundation located 90 feet west of the barn foundation. The barn foundation has four parallel foundation walls laid in a north-south direction. The foundations measure approximately 92 feet long by 6 inches wide by 12 inches tall at the highest point. The walls are spaced in pairs with approximately 10 feet between the walls in the pairs and 20 feet separating the pairs, suggesting that the barn most likely had shed roof extensions on each side. The second feature is a pump house foundation with an associated well casing foundation. The pump house foundation is U-shaped with the open end facing east. The west foundation wall measures 14 feet long (north-south), the north foundation wall measures 7 feet (east-west) and the south foundation wall measures 7.5 feet (east-west). The well casing is surrounded by a concrete slab measuring approximately 4 feet square with the 12-inch well casing located in the center. The entire site, located in an open agricultural field, is approximately 110 feet north-south by 140 feet east-west.

PV-2 (CA-PLA-948): Prehistoric Lithic Scatter. Also located on Property #4 is site PV-2, which consists of a sparse scatter of fourteen stone tools. The tools included pestle fragments, a mano fragment, large percussion flakes, core fragments and hammer stones. The site encompasses the summit of the highest knoll on the north side of an old, meandering seasonal drainage. The site extends 75 meters east-west and 43 meters north-south. This archaeological site is characteristic of the small campsites reported by Palumbo along the western portion of Dry Creek. Among Palumbo's Dry Creek archaeological sites, time sensitive artifact styles reflected the Central California Late Horizon prior to European contact ("Upper Archaic/Emergent periods" in the current taxonomy) (Palumbo 1966:186-187). Though the artifacts observed during the field survey were not particularly diagnostic of any one time period, the site could have subsurface cultural deposits and it is possible that Native American use of the site could predate the Upper Archaic and Emergent periods.

PV-3 (CA-PLA-945-H): Historic Trash Scatter. Also located on Property #4, site PV-3 consists of a small scatter of historic trash. The pre-1900 trash scatter included crockery from several different jars, thick bottle glass and white improved earthenware fragments. The trash appears to have been unearthed by the shallow discing in a small swale. The artifacts were scattered for 110 feet east-west (the direction of the discing) and 65 feet north-south, which marks the site boundaries. There was no evidence of associated features. The site lies near the route of an unnamed country road illustrated on the General Land Office plat for which surveys were conducted in 1855 and 1857.

PV-4 (CA-PLA-947-H): Concrete Reservoir. Located in the southeast corner of Property #11, site PV-4 consists of one concrete reservoir structure with associated wood remnants. The concrete reservoir or cistern measures 42 feet north-south, 20 feet east-west and 5 feet high. The concrete structure is buttressed on the west side. The first concrete buttress is located eight feet from the southwest corner and the second is approximately 12 feet from the first. A well with a 12-inch pipe extending from it lies on the northeast end of the concrete structure. In addition to the reservoir, there are two long, rectangular concrete foundations located farther south, outside the Specific Plan area. There are two standing barns or stables adjacent to the foundations that appear to be the same dimensions, indicating that there were a total of four buildings at one time. The size and shape of the buildings suggest that they were poultry barns. The reservoir could have provided water for the ranch operations. That portion of the site located within the Specific Plan area measures 42 feet north-south and 31 feet east-west.

PV-5 (CA-PLA-946-H): Sacramento Northern Railroad Grade. Linear archaeological site PV-5 crosses the western portion of the Specific Plan area northwest to southeast along the west boundary of Properties #23 and #24. The site consists of the old Sacramento Northern Railroad grade. The railroad tracks, ties and trestles have been removed. The railroad grade segment in the Specific Plan area is approximately 1.32 miles long and is presently used as an informal four-wheel all-terrain vehicle road to the Riego store. Condition of the grade is fair. Most of the ballast has been removed, except in places where it is evident that stream rolled gravel, instead of angular crushed rock, was used for the ballast.

CA-PLA-46: Prehistoric Lithic Scatter. The North Central Information Center reported that site CA-PLA-46, located on the north side of Dry Creek, was originally recorded by J.D. Mott in 1959. The site was described as consisting of a prehistoric artifact scatter and bedrock mortars. The artifacts, a complete metate, three manos and one broken metate, were discovered eroding from an artificial ditch that bisected the site. On revisiting the site's reported location on Property #1A during the present study, the consultant could find no evidence of the bedrock mortars, the ditch or the site proper. However, the area was covered in dense grasses and annuals. It is possible that sediments could also have covered the bedrock mortars in the 46 years since the site was originally recorded.

CA-PLA-47: Prehistoric Lithic Scatter and Midden. For the 1999-2000 study, the North Central Information Center reported that site CA-PLA-047 had two possible locations, both on the north side of Dry Creek. According to a 1960 sketch map, the site consisted of a surface scatter of projectile points, manos and metates with an associated dark midden soil. According to the site record, the artifacts and midden were discovered on a slight hill surrounded by vineyard. Earlier this year, 2005, Peak & Associates located the archaeological site on Property #8. The firm's archaeologists describe the site as primarily a surface lithic scatter with flaked artifacts and grinding implements and with debitage (waste flakes) of obsidian and metavolcanic rocks. The site's boundaries appeared obvious, though depth of cultural deposits and extent of previous disturbances were not. Therefore, Peak & Associates conducted test excavations. The field team found intact cultural deposits to a depth of 35 and 40 centimeters. In consultation with the developer, Peak & Associates then executed a program of data recovery involving further archaeological excavations. The excavations have been completed, but a report of the excavations has not yet been produced (pers. comm., Melinda Peak, March, 2006)."

CA-PLA-80: Prehistoric Lithic Scatter. During the 1999-2000 study, the North Central Information Center reported that site CA-PLA-80 is located on a ridge top north of Dry Creek in what would be the southeast corner of Property #2. The site, recorded by Palumbo in 1965, is a prehistoric camp site. Artifacts found by Palumbo included a slate projectile point, a unifacially worked core and a second core of greenstone. Palumbo noted that she did not discover any midden associated with the site. This archaeological site could predate the Upper Archaic and Emergent periods in which Palumbo placed most of the archaeological sites that she examined along Dry Creek. The site was revisited by Peak & Associates during its 1979 field inspection of what is now designated as Property #2.

CA-PLA-82: Prehistoric Lithic Scatter. During the 1999-2000 study, the North Central Information Center reported that site CA-PLA-82 is located on the north side of Dry Creek approximately one-half mile east of Watt Avenue in what would be the south central portion of Property #2. The site, originally recorded by Mott in 1962, was reexamined by Palumbo in 1966. Encompassing approximately two acres, finds on this prehistoric camp site included pestles, manos, cooking stones, bowl mortars, paints, and a hand axe. Palumbo noted that there was no associated midden; however, extensive cultivation had broken many artifacts and disturbed the soil. The site could date to the Upper Archaic or Emergent periods as do many of Palumbo's Dry Creek archaeological sites. The site was revisited by Peak & Associates during its 1979 field inspection of what is now designated as Property #2.

DR-5: Isolated Lithic Scatter. Two artifacts were discovered in an open agricultural field on the north side of Dry Creek immediately west of Walerga Road. The two artifacts are a granite cobble pestle and a granite mano. The area of the finds was located on a terrace above an unnamed seasonal tributary of Dry Creek (Syda 1992). The finds may be true isolates, or they may represent a Native American gathering or camp site. It is possible that the location of these isolates is within the widened portion of Walerga Road. No artifacts in the general area were identified during the present study, despite several attempts to locate other evidence of an archaeological site in this locality of Property #1A.

PV-5 (CA-PLA-946-H): Sacramento Northern Railroad Grade. This segment of the railroad grade is located on the east side of the Riego store within the area of the proposed Baseline and Pleasant Grove roads intersection improvements (south). The north side of Baseline Road lies in Sutter County. The condition of the railroad grade on this north side of Baseline Road is fair. Except for a disced firebreak, the grade appears in fair condition. However, the railroad grade on the south side of Baseline Road in Placer County is in poor condition. Earth moving at some time in the past has destroyed the original appearance of the grade within an area extending several hundred feet south of Baseline.

OFF-SITE INFRASTRUCTURE: ARCHEOLOGICAL RESOURCES

Riego/Baseline Road Intersection Improvements

Two of the intersection improvement projects include cultural resources: the Baseline and Pleasant Grove roads intersection (south) and the Riego and East Natomas roads intersection (Figure 3-8D and 3-8F).

Reclamation District 1000 Rural Historic Landscape. A portion of the proposed Riego and East Natomas roads intersection improvements lies within the east boundary of Reclamation District 1000. The Natomas East Main Drainage Canal Levee and the associated Natomas East Main Drainage Canal together are a part of that historic district. The levee has been previously recorded as CA-SUT-85-H. The levee was designed and constructed by the Natomas Company from 1912 to 1914. The levee was designed to protect Reclamation District 1000 from westward flowing streams. Reclamation District 1000 west of the levee has been described as a large scale land pattern consisting of levees, drainage canals, pumps, irrigation systems, roads, fields and family farms (*cf.* Dames and Moore, Inc. 1996 and Windmiller 2002).

Riego Road/East Main Drainage Canal Bridge. The bridge that crosses the drainage canal on Riego Road lies within the area of proposed improvements for the Riego and East Natomas roads intersection. The bridge is of modern design and construction. The consultant assumes that the bridge is less than 45 years old, as the Northeast Information Center did not include any data on the California Department of Transportation's historic bridge evaluation in the records search for the present study.

Baseline Road Widening

While no extant buildings 45 years old or older appear to be located within the proposed road widening corridor, the information center identified one previously recorded building along side the proposed road widening corridor: the McClellan Air Force Base Instrument Landing System Maintenance Shed (P-31-1137-H). In addition, the consultant identified the old Sacramento Northern Railroad grade (field number PV-5), recorded in Sutter County as CA-SUT-87-H, in Placer County as CA-PLA-946-H and in Sacramento County as CA-SAC-946-H, a portion of which would be located in the road widening corridor. In addition, a historic trash scatter (CA-SAC-945-H) previously recorded in the Specific Plan area is located along side the proposed road widening corridor. During the 1999-2000 study, the information center identified from historic maps the location of "Eagle House," an early inn situated on the north side of Baseline Road that could be located within the road widening corridor.

P-31-1137: McClellan AFB Outer Runway Beacon. This building is a small, single story, unornamented military structure with a gable roof and slightly overhanging eaves. The building site is located about two thousand feet west of Watt Avenue on the south side of Baseline Road. The building's gables face north and south. The walls are approximately 10 feet high. A frame platform tops the roof. Asphalt shingles side the building. The west elevation has an open doorway near the center with a window to the right and a vent to the left. On the east elevation is a paneled door. Nearby are two telephone poles without wires. The building is set back from Baseline Road about 30 feet and is surrounded by a security fence topped with barbed wire. The building project was approved in 1951 and construction completed circa 1955.

PV-5 (CA-PLA-946-H): Sacramento Northern Railroad Grade. This segment of the railroad grade is located on the east side of the Riego store. The north side of the road lies in Sutter County. The condition of the railroad grade on this north side of Baseline Road is fair. Except for a disced firebreak, the grade appears in fair condition. However, the railroad grade on the south side of

Baseline Road in Placer County is in poor condition. Earth moving at some time in the past has destroyed the original appearance of the grade within several hundred feet of Baseline.

PV-3 (CA-PLA-945-H): Historic Trash Scatter. Located on Property #4, site PV-3 consists of a small scatter of historic trash. The pre-1900 trash scatter included crockery from several different jars, thick bottle glass and white improved earthenware fragments. The trash appears to have been unearthed by the shallow discing in a small swale. The artifacts were scattered for 110 feet east-west (the direction of the discing) and 65 feet north-south, which marks the site boundaries. There was no evidence of associated features, although this site lies near the route of an unnamed country road illustrated on the General Land Office plat for which surveys were conducted in 1855 and 1857.

Eagle House. The site of this early inn is illustrated on the General Land Office plat of 1866 for Township 10 North, Range 5 East of the Mt. Diablo Meridian. The site is situated in the northeast one-quarter of Section 4 just north of what today is the location of Baseline Road. On the historic map, both the Sacramento and Nevada Road and the Upper Nevada Road converge on the inn site. Permission to trespass on the subject property was not secured for the present study. Therefore, it is not known if this historic site is located within the proposed road widening corridor.

Watt Avenue Widening

Field inspection of the proposed Watt Avenue Widening was hampered in portions of the area north of Dry Creek and in all areas south of Dry Creek, as permission to trespass beyond the existing road right-of-way was not secured before or during the present study. Therefore, the following description of cultural resources is based on what was visible from the road right-of-way enhanced by the results of records searches by the North Central Information Center and information contained in Palumbo's Masters thesis.

CA-PLA-47: Prehistoric Lithic Scatter and Midden. For the 1999-2000 study, the North Central Information Center reported that site CA-PLA-047 had two possible locations, one of which was possibly on the west side of Watt Avenue at the north side of Dry Creek. Earlier this year, 2005, Peak & Associates located the archaeological site on Property #8 within the Specific Plan area. In consultation with the developer, Peak & Associates executed a program of data recovery involving archaeological excavations. Analysis from the data recovery excavations is underway at the present time (Robert Gerry, personal communication 10/3/2005).

Watt Avenue at Dry Creek Bridge (Caltrans Bridge No. 19C0084). This bridge has been listed and evaluated for National Register of Historic Places eligibility by the California Department of Transportation (California Department of Transportation 2000).

CA-PLA-69 (Lithic Scatter). This site was exposed in a washed out area immediately west of Watt Avenue on the south side of Dry Creek during the flood of 1962. The artifacts were found in a stratum about three feet below the original ground surface. Also noted were buried "pockets" of rock. The site has been considered by archaeologists to be very old.

Union Cemetery. This is a small rural cemetery located on a knoll on the east side of Watt Avenue. The Cemetery is bounded on the north by the Dry Creek Drainage. It is fenced on all boundaries and has an entry gate at the south end of the fence along Watt Avenue. The landscape consists of lawn and a number of mature oak trees. The graves consist of family plots dating from the 1870's to the present day. Among the marked graves within the road widening corridor, only one appears to be 45 years old or older.

8640 Watt Avenue. This single-family residence is a typical ranch house constructed circa 1950. The building has low horizontally-emphasized massing and asymmetrical placement of windows and doors. The hip roof has clipped eaves. The roof drops to a slightly lower level over the attached double garage, which is situated on the north end of the residence. Fenestration consists of large horizontally emphasized windows with sliding panels. The entry consists of a cement slab and there is no porch. The upper walls of the house are clad with lap siding while the lower front wall is covered with brick veneer. The front yard is enclosed with a rail fence and is landscaped with several mature shade trees.

8718 Watt Avenue. This Colonial Revival style residence dates from the 1930's or early 1940's. One and one-half story, it has an L-shaped plan with a steeply pitched side gable roof and symmetrically arranged front gable dormers. A centrally-located and slightly recessed entry door is flanked by single one-over-one multi-light double hung windows. A cement stoop provides access to the entry. The windows are embellished with narrow louvered shutters and built-in flower boxes at the sill. A brick exterior chimney is located on the south facade. The north wing of the house is stepped back from the front facade. Its side gable roof is of slightly lower pitch than that of the main wing. Fenestration is similar to that of the main wing. The building is clad with lap siding. The front yard is enclosed with a high rail fence.

8720 Watt Avenue. This is a vernacular post-World War II house built on a U-shaped plan. Two front gable wings project toward the street with a recessed entry in the center. A long wing extends to the north of the building and includes a portion of the living quarters and a large double garage. The house has a moderately pitched cross gable roof with clipped gables and overhanging eaves with exposed rafters. Fenestration consists of double hung windows except on the north gable wing where a vinyl replacement window has been inserted into an enlarged window opening. A brick chimney pierces the slope of the roof. The house is clad with a narrow lap siding. The front yard is partially enclosed with a wooden rail fence.

8724 Watt Avenue. This Minimal Traditional style house was a popular type of dwelling both before and immediately after World War II. A precursor of the California Ranch House, it exhibits low massing, asymmetrical placement of doors and windows, cut-in covered porches and is generally lacking in ornamental detail. Houses such as this are less linear and generally smaller than the later "Rancher." This particular example of the style is L-shaped in plan with a cross gable roof. The roof is moderately pitched with clipped gables and eaves. The front cross wing projects toward the street on the north side of the front elevation. A cut-in porch extends along the south front facade. The porch is covered by an extension of the principal roof which is supported on plain 2x4 posts. Fenestration has been altered to incorporate vinyl windows. The original window casings have been removed. Cladding is clapboard.

Off-Site Water Lines

San Juan-Sacramento Suburban Secondary Initial Surface Water Supply. The records search failed to identify any archaeological or other cultural resources along this proposed utility route. No field inspection was conducted, as the route lies in the built environment. It is the archaeological consultant's opinion that it is unlikely that buried archaeological resources would be encountered along the proposed route.

Long-Term Surface Water Supply. This utility route was subjected to records search only. No field inspection was conducted. However, at least two-thirds of the route has been the subject of previous cultural resource studies, according to the records search. The route crosses at least five cultural resources: Sorrento Road (CA-SAC-567-H); Western Pacific Railroad (CA-SAC-464-H); East Main Drainage Canal and Levee (CA-SAC-463-H); Elverta Road at the East Main Drainage Canal Bridge (Caltrans Bridge #24C0218) and; Reclamation District 1000 Rural Historic Landscape.

CA-SAC-567-H: Sorrento Road. The road was recorded by Cultural Resources Unlimited in 1993 as a "historic road" appearing on an 1880 Sacramento County Assessor's map. The field archaeologist noted that the most typical historic reach of Sorrento Road was present at Cippa Ranch, where it was recognized as a narrow, slightly raised dirt road. However, the remainder of Sorrento Road is paved (no report reference was provided by the information center). That portion of Sorrento Road open to public access was reinspected during the present study and found to be "modern" in its appearance. Permission to trespass on private property was not secured. Therefore, no current description is available for that portion of Sorrento Road no longer open to public use.

CA-SAC-464-H: Western Pacific Railroad. This railroad is modern in all respects and is in current use (no record forms were included with the records searches).

CA-SAC-463-H: East Main Drainage Canal and Levee. These two associated features of Reclamation District 1000 Rural Historic Landscape were recorded by Dames and Moore in 1994 (*cf.* Dames and Moore 1994; 1996). The features consist of 10.45 miles of levee, referred to as the East Levee along the western edge of the Natomas East Main Drainage Canal. The levee was designed and built by the Natomas Company from 1912 to 1914. It was designed to protect Reclamation District 1000 from streams which flow from the east. East Levee/Natomas Road lies on the crown of the levee. The levee is earthen and averages 40 feet wide at the base, 20 feet wide at the top and is between 10 and 12 feet high.

Elverta Road at East Main Drainage Canal Bridge (Caltrans Bridge No. 240218). This bridge was constructed in 1974 and widened in 1975. It has been documented and evaluated by the California Department of Transportation (California Department of Transportation 2000:173).

Reclamation District 1000 Rural Historic Landscape. Reclamation District 1000 was originally envisioned as levees, drainage canals, pumps, irrigation systems and roads, all of which would be paid for by the sale of land as family farms. The Natomas Company, with a history of large scale water projects dating back to 1851, as well as involvement in mining and agriculture, tackled the

development of Reclamation District 1000 and Reclamation District 1001. The resulting landscape conformed to the twentieth century vision of productive land: Reclamation District 1000 was transformed from seasonally inundated, partly swampy land, to a vast open landscape with a large pattern of fields formed by a grid of canals and roads. This pattern of land use has remained the distinctive feature of Reclamation District1000 since the early 1920's when the infrastructure for the reclamation district was completed (Dames and Moore 1996:15). In recent decades, urban development has replaced many of the farms and the rural landscape is rapidly disappearing.

PFE Road/Dry Creek Water and Sewer Improvements

The records search for an alternate force main alignment from PFE Road, along Cook Riolo Road north to the north side of Dry Creek and then east to the DCWWTP identified five cultural resources actually located on or immediately adjacent to the proposed alignment: four separate locations for Native American archaeological sites and the historic pony truss bridge on Cook Riolo Road crossing Dry Creek. No additional cultural resources were identified during the present study, although most of the proposed alignment north of Dry Creek was not accessible for field inspection, as permission to trespass was not secured.

Records searches encompassing the area of the force main alignment along Watt Avenue from the Specific Plan area south to PFE Road, then east along PFE Road and north on Hilltop Circle to the existing DCWWTP identified five cultural resources actually on or immediately adjacent to the proposed alignment: the Watt Avenue at Dry Creek bridge, two Native American sites adjacent or near Watt Avenue on the north and south sides of Dry Creek, the historic Union Cemetery on the east side of Watt Avenue north of PFE Road and a third Native American archaeological site reported on the south side of PFE Road along an unnamed tributary to Dry Creek. No additional cultural resources were identified along the alignment examined on the existing road rights-of-way. A small portion of this primary alignment in the vicinity of the DCWWTP where the alignment crosses Dry Creek could not be accessed as permission to trespass had not been secured.

- **Watt Avenue/PFE Road Force Main Alignment**

  CA-PLA-47: Prehistoric Lithic Scatter and Midden. For the 1999-2000 study, the North Central Information Center reported that site CA-PLA-47 had two possible locations, one of which was possibly on the west side of Watt Avenue at the north side of Dry Creek. Earlier this year, 2005, Peak & Associates located the archaeological site on Property #8 within the Specific Plan area. In consultation with the developer, Peak & Associates executed a program of data recovery involving archaeological excavations. Analysis from the data recovery excavations is underway (Robert Gerry, personal communication 10/3/2005).

  Watt Avenue at Dry Creek Bridge (Caltrans Bridge No. 19C0084). This bridge was identified and evaluated in a previous California Department of Transportation study (California Department of Transportation 2000).

CA-PLA-69: (Lithic Scatter). This site was exposed in a washed out area immediately east of Watt Avenue on the south side of Dry Creek during the flood of 1962. The artifacts were found in a stratum about three feet below the original ground surface. Also noted were buried "pockets" of rock. The site has been considered by archaeologists to be very old.

Union Cemetery. This is a small rural cemetery located on a knoll on the east side of Watt Avenue. The Cemetery is bounded on the north by the Dry Creek Drainage. It is fenced on all boundaries and has an entry gate at the south end of the fence along Watt Avenue. The landscape consists of lawn and a number of mature oak trees. The graves consist of family plots dating from the 1870's to the present day. Among the marked graves within the road widening corridor, only one appears to be 45 years old or older.

CA-PLA-67: Lithic Scatter. This prehistoric Native American site consists of a surface scatter of milling stones, bowl mortars, pestles, cooking stones and other artifacts discovered in a plowed field on the south side of PFE Road between an unnamed tributary of Dry Creek and Antelope Road. Although artifacts were reportedly strewn over the entire field, the main concentration of artifacts was found approximately three hundred feet south of PFE Road (*cf.* Palumbo 1966).

- **Cook Riolo Road/Dry Creek Alternative Force Main Alignment**

Cook Riolo Road at Dry Creek Bridge (Caltrans Bridge No. 19C0117). This bridge has been described as a "pony truss" bridge constructed of steel trusses, cement curbs, wood 4x4 railing posts with steel railing. The roadway across the bridge is asphalt. Date of construction is 1940, as reported by Cultural Resources Unlimited (Cultural Resources Unlimited 1991).

CA-PLA-42: Prehistoric Camp or Village Site. This site was originally recorded in 1959 on the east side of Cook Riolo Road immediately south of Dry Creek. The original record indicates that old timers of the area believed that the site was originally a mound (possibly a village mound). In 1959, when the site was recorded, the site vicinity was irrigated pasture. The site area was reported as one hundred acres, which would make sense if a mound had existed and then was leveled for pasture and its contents spread over a wide area in the process of land leveling.

CA-PLA-43: Prehistoric Camp or Village Site. This site was originally recorded in 1959 on the east side of Cook-Riolo Road along the north side of Dry Creek. The site's sediments were described as "black." Artifacts identified at the site include a milling stone, large portable granite mortar and a pestle. The site was identified in the creek bank, which could account for the note on the record form that it may be considered an "extension" of CA-PLA-42 recorded by the same individual on the south side of Dry Creek.

CA-PLA-71: Prehistoric Camp or Village Site. This archaeological site was identified in 1963 by the same individual who recorded CA-PLA-42 and CA-PLA-43. The site location was described on the original site record as the north side of Dry Creek, one-eighth mile east of Cook-Riolo Road. The site is described as extending from the creek bank upward (presumably north) to a flat area and extending along Dry Creek for a distance of one-quarter

mile. The site's sediments are described as "black." Artifacts noted in the original record include a charmstone, paint bowl, large bowl, milling stone, pestles and cooking stones. The record indicates that the site was subjected to extensive cultivation. This could account for the quarter mile length of the site, as cultivation can disperse cultural deposits of a once well-defined archaeological site over a considerable area.

CA-PLA-72: Lithic Scatter. This site was identified in 1965 by the individual who recorded sites CA-PLA-42, CA-PLA-43 and CA-PLA-71. On the original record form, the site is described as an area on a ridge of artifacts with no evidence of midden (cultural deposits). The site sketch map and location map place the site on the north side of Dry Creek at the northwest corner of the confluence of a southwest trending tributary to Dry Creek and Dry Creek itself. Palumbo's Masters thesis describes the site as located one hundred yards east of CA-PLA-71. Palumbo reported finding the artifacts for a distance of 45 yards along the ridge close to the ridge edge (presumably the south and southeast sides of the ridge). The artifacts included chipped stone cores, flakes, manos and a metate or milling stone (Palumbo 1966:95-96).

Off-Site Sewer Connections To Sacramento Regional County Sanitation District

- **Sewer Alternatives**

Alternative "A". This alternative begins at the proposed lift station location within the western portion of the Specific Plan area, follows Locust Street north then west, then continues west from the west to north bend in Locust, then turns south down Pleasant Grove Road and Sorrento Road to Elkhorn Boulevard where it would tie into the Upper Northwest Interceptor. The records search noted three cultural resources along this route: a segment of the Sacramento Northern Railroad grade (CA-PLA-946-H), Sorrento Road (CA-PLA-567-H) and Western Pacific Railroad (CA-SAC-464-H). Elkhorn Boulevard (P-34-743-H) was reported as a cultural resource by the information center in its records search. However, the segment of Elkhorn reported by the information center is located west of the East Main Drainage Canal and was considered a feature of Reclamation District 1000 Rural Historic Landscape. The tie-in of Alternative "A" with the Upper Northwest Interceptor along Elkhorn Boulevard lies east of Reclamation District 1000. No additional cultural resources were identified by the consultant during the field inspection along the Alternative "A" alignment.

- **CA-PLA-946-H: Sacramento Northern Railroad Grade.** This segment of the railroad grade is located south of Baseline Road between Locust Road on the east and Pleasant Grove Road on the west. Here, the railroad grade reaches what is probably is greatest height above the surrounding terrain. At the proposed crossing of Alternative "A," the grade is probably 10 feet above the surrounding terrain. Immediately south of the proposed crossing, there is a gap in the grade where a small, presumably wooden trestle spanned a narrow, seasonal drainage. Less than one-quarter mile to the south is a much larger gap in the grade, which was probably the location of a second trestle that spanned a wider seasonal drainage. The top of the grade is now a four wheel all terrain vehicle (ATV) trail

that ends at the Riego store. Condition of the grade is fair. All trestles, ties, rails and much of the ballast have been removed.

- **CA-SAC-567-H: Sorrento Road.** The road was recorded by Cultural Resources Unlimited in 1993 as a "historic road" appearing on an 1880 Sacramento County Assessor's map. The field archaeologist noted that the most typical historic reach of Sorrento Road was present at Cippa Ranch, where it was recognized as a narrow, slightly raised dirt road. However, the remainder of Sorrento Road is paved (no report reference was provided by the information center). That portion of Sorrento Road open to public access was reinspected during the present study and found to be "modern" in its appearance. Permission to trespass on private property was not secured. Therefore, no current description is available for that portion of Sorrento Road no longer open to public use.

- **CA-SAC-464-H: Western Pacific Railroad.** This railroad is modern in all respects and is in current use (no record forms were included with the records searches).

- **Alternative B.** This alternative begins at the proposed lift station on Placer Vineyards, then turns south on Locust Street, turns west on Elverta Road, then south again on West 6th Street to Elkhorn Boulevard. The information center noted the following previously recorded cultural resources along Alternative "B": Bridge No. 24C0314 on Elwyn Avenue at the Natomas East Tributary No. 1 evaluated by the California Department of Transportation and a reach of the Sacramento Northern Railroad grade that crosses Elwyn Avenue. The consultant recorded the previously unrecorded segment of the Sacramento Northern Railroad grade. However, no additional archaeological resources were noted along this alternative.

  - **Elwyn Avenue at Natomas East Tributary No. 1 (Caltrans Bridge No. 24C0314).** This two-lane concrete and steel bridge was constructed in 1984. It was documented and evaluated by the California Department of Transportation (California Department of Transportation 2000:175).

  - **Sacramento Northern Railroad Grade-Elwyn Avenue Segment.** This segment of the Sacramento Northern Railroad grade crosses Elwyn Avenue from southeast to northwest for a distance of approximately one hundred feet in either direction from the Elwyn Avenue centerline. Condition of the grade southeast of Elwyn is good. The intact grade is approximately 15 feet wide across the top, 27 feet wide across the bottom and 10 to 12 feet high above the surrounding terrain. Elwyn Road is elevated at the point of the old railroad crossing. On the northwest, however, the grade is in poor condition. Here the grade is not elevated more than a few feet above the surrounding terrain and earth moving within the old railroad right-of-way has destroyed considerable evidence of the grade itself. On both sides of Elwyn, most of the ballast and all of the ties and rails have been removed.

- **Alternative A-2.** This alternative lies on a relatively short section of Elverta Road connecting the location of Alternative "A" on the west with Alternative "B" on the east. The information center reported that a previous cultural resources study had been conducted along this alternative. The study noted a single find: an isolated Native American artifact found on the

southeast side of the intersection of Elverta and Sorrento roads (P-34-744). Field inspection of this alternative during the present study did not yield any further archaeological resources.

- **P-34-744: Nutting Stone.** This isolated artifact has been previously described as a small, flat piece of sandstone with an abraded or pecked dimple on one surface. The artifact was found about 300 feet east of Sorrento Road adjacent to a fence separating a pasture from Elverta Road.

Watt Avenue to Dry Creek Wastewater Treatment Plant (DCWWTP)

This proposed sewer connection crosses Dry Creek east of Watt Avenue and then parallels Dry Creek to an existing force main east of Walerga Road, which extends to the DCWWTP. The updated records search for the Specific Plan area and records searches for the Watt Avenue Road Widening and PFE Road Water and Sewer Improvements along with information from Palumbo's 1966 Master's thesis provide useful data on cultural resources that covers a substantial portion of the proposed sewer connection alignment. As permission to trespass on properties adjacent to the public roads was not secured, most of this alignment was not field inspected during the present study. Therefore, the known cultural resources along the alignment are described from previous records searches and Palumbo's Master's thesis. Using these sources, the consultant identified nine Native American archaeological sites, one isolated Native American artifact and two bridges located on or adjacent to the proposed sewer connection alignment. Note: the following listing of sites includes sites along the existing force main in the vicinity of Cook-Riolo Road. These sites would not be disturbed by the proposed construction, which is primarily to occur between Watt Avenue and Walerga Road.

CA-PLA-47: Prehistoric Lithic Scatter and Midden. For the 1999-2000 study, the North Central Information Center reported that site CA-PLA-047 had two possible locations, one of which was possibly on the west side of Watt Avenue at the north side of Dry Creek. Earlier this year, 2005, Peak & Associates located the archaeological site on Property #8 within the Placer Vineyards Specific Plan area. In consultation with the developer, Peak & Associates executed a program of data recovery involving archaeological excavations. Analysis from the data recovery excavations is currently underway (Robert Gerry, personal communication 10/3/2005).

Watt Avenue to Dry Creek Bridge (Caltrans Bridge No. 19C0084). This bridge has been listed and evaluated for National Register of Historic Places eligibility by the California Department of Transportation.

CA-PLA-69: Lithic Scatter. This site was exposed in a washed out area immediately east of Watt Avenue on the south side of Dry Creek during the flood of 1962. The artifacts were found in a stratum about three feet below the original ground surface. Also noted were buried "pockets" of rock. The site has been considered by archaeologists to be very old.

CRU-91-1-4: Isolated Mano Fragment. This isolated find was noted by the information center as located on the south side of Dry Creek immediately east of Watt Avenue.

CA-PLA-76: Prehistoric Camp Site. In her 1966 Master's thesis, Palumbo describes the site as located on the south side of Dry Creek, 40 to 50 feet diameter and distinguished only by cultural debris on the surface. Artifacts included projectile points, chipped stone debitage or waste material, manos, milling stones, mortar and pestles (Palumbo 1966:58-59). The 1999 records search for Specific Plan states that archaeologist Alfred Farber revisited the site in 1991 and could find no evidence of it.

CA-PLA-81: Prehistoric Camp Site. In her 1966 Master's thesis, Palumbo describes this archaeological site as located on the south side of Dry Creek and consisting of surface artifacts found over an area approximately 40 feet in diameter. No cultural deposit was evident. The artifacts included chipped stone debitage (waste materials), manos, a milling stone and a pestle (Palumbo 1966:64-66). Peak & Associates revisited the site in 1982 and briefly described it as a surface scatter of widely dispersed stone tool fragments (Peak & Associates 1982:4).

CA-PLA-77: Prehistoric Camp Site. This site is described as a small area on the south side of a slough on the south side of Dry Creek characterized by a surface scatter of artifacts. The concentration of artifacts was confined to a 20-foot by 30-foot area. The artifacts included chipped stone debitage (waste materials), manos, a milling stone and a small lump of red hematite (ochre) (Palumbo 1966:77-78). Though records searches did not pinpoint the location of this site, it may be situated at or near sewage disposal ponds illustrated on the current United States Geological Survey topographic map "Citrus Heights."

CA-PLA-42: Prehistoric Camp or Village Site. This site was originally recorded in 1959 on the east side of Cook Riolo Road immediately south of Dry Creek. The original record indicates that old timers of the area believed that the site was originally a mound (possibly a village mound). In 1959, when the site was recorded, the site vicinity was irrigated pasture. The site area was reported as one hundred acres, which would make sense if a mound had existed and then was leveled for pasture and its contents spread over a wide area in the process of land leveling.

Cook Riolo Road at Dry Creek Bridge (Caltrans Bridge No. 19C0117). This bridge has been described as a "pony truss" bridge constructed of steel trusses, cement curbs, wood 4x4 railing posts with steel railing. The roadway across the bridge is asphalt. Date of construction is 1940, as reported by Cultural Resources Unlimited (Cultural Resources Unlimited 1991).

CA-PLA-43: Prehistoric Camp or Village Site. This site was originally recorded in 1959 on the east side of Cook-Riolo Road along the north side of Dry Creek. The site's sediments were described as "black." Artifacts identified at the site include a milling stone, large portable granite mortar and a pestle. The site was identified in the creek bank, which may account for the note on the record form that it may be considered an "extension" of CA-PLA-42 recorded by the same individual on the south side of Dry Creek.

CA-PLA-71: Prehistoric Camp or Village Site. This archaeological site was identified in 1963 by the same individual who recorded CA-PLA-42 and CA-PLA-43. The site location was described on the original site record as the north side of Dry Creek, one-eighth mile east of Cook-Riolo Road. The site is described as extending from the creek bank upward (presumably north) to a flat area and extending along Dry Creek for a distance of one-quarter mile. The site's sediments are

described as "black." Artifacts noted in the original record include: a charmstone, paint bowl, large bowl, milling stone, pestles and cooking stones. The record indicates that the site was subjected to extensive cultivation. This may account for the quarter mile length of the site, as cultivation can disperse cultural deposits of a once well-defined archaeological site over a considerable area.

CA-PLA-72: Lithic Scatter. This site was identified in 1965 again by the individual who recorded sites CA-PLA-42, CA-PLA-43 and CA-PLA-71. On the original record form, the site is described as an area on a ridge of artifacts with no evidence of midden (cultural deposits). The site sketch map and location map place the site on the north side of Dry Creek at the northwest corner of the confluence of a southwest trending tributary to Dry Creek and Dry Creek itself. Palumbo's Masters thesis describes the site as located 100 yards east of CA-PLA-71. Palumbo reported finding the artifacts for a distance of 45 yards along the ridge close to the ridge edge (presumably the south and southeast sides of the ridge). The artifacts included chipped stone cores, flakes, manos and a metate or milling stone (Palumbo 1966:95-96).

Off-Site Recycled Water Line

This proposed off-site recycled water line begins at the intersection of Walerga and Fiddyment roads at Baseline Road and extends along Walerga Road to the south side of Dry Creek. Most of this area was inspected on the ground. However, the consultant found no "new" archaeological resources. Three previously recorded Native American archaeological resources were noted in the records searches: DR-5, an isolated find of two prehistoric artifacts; DR-6, an isolated find of a mano and a pestle and; CA-PLA-75, a prehistoric camp or gathering site. It is possible that all three sites may have been impacted by the recent widening of Walerga Road in that vicinity.

DR-5: Isolated Lithic Scatter. Two artifacts were discovered in an open agricultural field on the north side of Dry Creek immediately west of Walerga Road. The two artifacts are a granite cobble pestle and a granite mano. The area of the finds was located on a terrace above an unnamed seasonal tributary of Dry Creek (Syda 1992). The finds may be true isolates, or they may represent a Native American gathering or camp site. It is possible that the location of these isolates is within the widened portion of Walerga Road.

DR-6: Isolated Lithic Scatter. This isolated find of two artifacts was reported by the information center simply as a mano and a pestle located on the south side of Dry Creek across from DR-5. This would place the location of the find on the west side of Walerga Road. However, the find location may now be within the widened portion of Walerga Road.

CA-PLA-75: Prehistoric Camp Site. No record of this site was available from the information center. However, the site is described in Palumbo's Master's thesis as a scatter of chipped stone waste materials, a mano, milling stone and grooved stone found on a knoll on the south side of this northern branch of Dry Creek. As DR-6 and CA-PLA-75 lie in close proximity to one another, they may both be manifestations of the same archaeological site. Both locations of artifacts are in the area of road widening and new residential development and may no longer exist.

PALEONTOLOGY

A preliminary paleontological survey was conducted within the Specific Plan area by Davis[2] Consulting Earth Scientists on July 12, 2001. Further surveying was conducted in 2005 to incorporate off-site infrastructure. The survey is included as Appendix H of this Revised Draft EIR. Information compiled by the paleontological consultant is at a reconnaissance level. Geologic units reflect those found within existing reports; however, the Specific Plan area was traversed in the field to confirm the general characterization of units contained in the literature. Field reconnaissance consisted of road cut exposures along existing roads (Baseline Road and PFE Road). The better known Chico and Ione formations, deposits containing paleomarine fossils, flora and petrified wood, are not exposed, at least surficially, within the Specific Plan area.

A literature search was conducted for potential finds in the Riverbank and Turlock Lake Formations. The University of California Museum of Paleontology (UCMP) Invertebrate and Vertebrate Locality databases were queried, as well as references from other projects in the region. The Sierra College Natural History Collection was visited, and Mr. Richard Hilton was interviewed regarding local fossil discovery.

The Specific Plan area consists of Pleistocene-age alluvium, consisting of fine-grained outwash materials locally capped by fan terraces. Entrenchment by Dry Creek and other localized young distributary drainages lend evidence that cyclic climatically driven events in conjunction with regional uplift have intermittently filled pre-existing channels as downcutting to lower base levels has proceeded over the past one million years (Shlemon, 1967). All of these westward trending drains are captured by the north-to-south human-made Natomas Main Drain, which empties into the American River.

The Geologic Map of the Sacramento quadrangle (Wagner et al, 1981) shows this area as Qtl (Turlock lake Formation) on the east, with Qr (riverbank Formation) covering the majority of the site on the west. Soils developed on these deposits are dominantly Fiddyment, Cometa, Kaseberg, San Joaquin and Cometa (Rogers et al, 1981).

Natural vegetation consists of annual grasses and forbs with patchy oaks. Much of this area has a history of being dry farmed for small grains; however, some fields have been leveled for rice production or other cash crops.

The deposits are well exposed in road cuts along Baseline and PFE Roads. Outcrops viewed are mainly the topographic high points of undulating terrain, which show well-developed soils, *Typic* and *Abruptic Durixeralfs* of the San Joaquin and Fiddyment soil series. Included in these are isolated areas of lesser-developed soils, *Palexeralfs* of the Cometa or Romona soil series and clay-rich *Epiaquic Duirxererts* or *Haploxerts* of the Alamo series soils. The degree of soil development is consistent with the mapped deposits of the Riverbank Formation, mainly associated with the San Joaquin series, and the Fiddyment series, mainly associated with the Turlock Lake Formation. The well-known fossil-rich Chico Formation located mainly south of Roseville was not identified in the field within the Specific Plan area.

The area west of the Sacramento County line where the water trunk line extension is proposed is shown as Qb (Basin deposits). These deposits are of low potential for paleonotological resources because they postdate the last glacial period. The trunk lines proposed east of the site are in the Turlock Lake Formation and have moderate to low potential for macrovertebrate fossils.

A search of the UCMP database turned up neither invertebrate nor vertebrate resources associated with the Turlock Lake Formation. Three "hits" came up for paleovertebrates in the Riverbank Formation in the Sacramento Area, one at the Teichert gravel pit and two from Chicken Ranch Slough 1 & 2 in Sacramento County. There were no recorded invertebrates. There are no recorded finds for Placer County for either the Riverbank or Turlock Lake Formations.

Personal communication with Mr. Richard Hilton, Professor of Geology at Sierra College, confirmed that a high number of vertebrate fossils have been collected from the Arco Arena area, where ground slough, bison, coyote, camel and mammoth bones were unearthed in the Riverbank Formation. Additionally, fossil leaf impressions are known to occur in the Turlock Lake Formation near the intersection of Old Auburn Road and Sierra College Boulevard. American horse, bison and mammoth bone have been documented in the Turlock Lake Formation along the railroad tracks north of Roseville, near Athens Road.

Close inspection of deep road cut exposures along Baseline and PFE Roads did not reveal identifiable vertebrate or botanical remains.

SURFACE WATER SUPPLY SETTING

As stated in Section 3.4 in Chapter Three of this Revised Draft EIR, an initial surface water supply of 6,000 AFA is proposed to serve the Specific Plan area. This water would be diverted from the American River system. The American River has an annual runoff of approximately 3.6 million AF and is a major contributor to the Sacramento River (PCWA 1998). The Sacramento River has an annual runoff of approximately 18 million AF (PCWA 2001).

It is also recognized that a water supply of 11,500 AFA will be required to meet the needs of the Specific Plan buildout. This 11,500 AFA is part of the PCWA's pending amendatory CVP contract with the USBR for 35,000 AFA. This water would be diverted from the Sacramento River, which has an annual runoff of approximately 18 million AF (PCWA 2001). The entire 35,000 AFA of the PCWA CVP contract water was used for the project's incremental contribution analysis (for further description of the cumulative analysis, see Section 4.3.4 of this Revised Draft EIR.

REGIONAL SETTING

Shasta Reservoir

Archaeological records indicate that Native Americans used the forests and waters in the Shasta area for at least seven thousand years prior to European occupation. The Pit River and Wintu Indians were the predominant groups inhabiting the area around Shasta and Keswick reservoirs.

Numerous prehistoric sites are known within the drawdown zone of Shasta Reservoir. Small camps in particular are known to exist within this zone, and with fluctuating water levels and the lack of vegetation, they are periodically exposed to wave and wind action that has the potential to deteriorate the sites. Looting of exposed sites is also a problem in this area.

In 1991, Reclamation consulted with the State Historic Preservation Officer regarding historical archaeological sites potentially affected by the Shasta Outflow Temperature Control Project (Reclamation 1991a). It was determined that the dam itself, constructed in 1938, is eligible for inclusion in the National Register of Historic Places due to its historical and engineering significance.

Trinity Reservoir

Prior to the construction of Trinity Dam, the valley below Trinity Reservoir was inhabited by the Upper Trinity Wintu Indians. Prehistoric evidence dates back two thousand to three thousand years, although the area was probably inhabited even before that (Arnold, M., U.S. Forest Service, pers. comm., 1994). Archaeological surveys during the 1950's documented very large village sites that are believed to have been inhabited year-round. These sites were destroyed when the valley was flooded after construction of the dam. As at Shasta Reservoir, many known prehistoric sites at Trinity Reservoir are subject to ongoing damage as a result of fluctuating water levels which expose them to wind and wave action, and consequently looting (M. Arnold, U.S. Forest Service, pers. comm., 1994).

Extensive gold mining and logging took place in the Trinity Reservoir area during the historic period. The valley inundated by the construction of Lewiston Dam contains several large homestead areas and two, or possibly three, historic communities (M. Arnold, U.S. Forest Service, pers. comm., 1994).

Sacramento River

The Sacramento River region is rich in historic and prehistoric resources. Considerable archaeological research has been conducted in the area, including early work that defined central California's prehistory. Of particular importance are the region's large, deep midden sites, which provide information on prehistoric culture extending over thousands of years. Historic archaeological sites and architectural resources are plentiful because this area was settled early in California's history. As in other parts of the Central Valley, resources related to agricultural development are prevalent.

Lower Sacramento River

At least 31 cultural resources studies have been conducted for the lower segment of the Sacramento River, and a minimum of 27 sites and 42 historic structures have been recorded. Three of the prehistoric sites, all burial mounds, are considered eligible for the National Register of Historic Places (NRHP): CA-SAC-16, CA-SAC-43, and CA-SAC-164. Burials were noted at two other prehistoric mound sites, but their status is unknown at this time. A 1990 survey of prehistoric site CA-SAC-268, originally recorded by Riddell in 1960, revealed no cultural

material, and no further work was recommended (Bouey 1990). The remaining 17 prehistoric sites, recorded in the 1930's and 1950's, were not relocated during more recent surveys/augering, and are believed to have been destroyed during levee construction.

The Natomas Main Drainage Canal (CA-SAC-430H) (now Steelhead Creek) meets the Sacramento River on its northern bank, roughly 0.75 mile west of its confluence with the American River. To the consultants' knowledge, this historic feature has not been evaluated. Two segments of the levee system at the confluence have been recorded as historical features (LAR-16 and LAR-18); the first has been determined eligible, and the other is unevaluated (Nilsson et al, 1995). In addition to these features, the tiny river town of Freeport, founded in the 1860's as an early tidewater railroad terminal (Thompson 1957), has the potential to be determined an important historical resource.

Other eligible or potentially eligible historic resources along the lower Sacramento include a rural historic landscape district (Reclamation District 1000), Washington Water Company Water Tower, Sacramento Weir and Yolo Bypass, St. Joseph's Church and Rectory, Leonidis Taylor Monument, and 37 houses built between 1855 and 1900. Fifteen of these houses are part of the historic Lisbon District (YOL-HRI-9/287-301), a community settled by Portuguese immigrants during the 1850's. This district, which is characterized by early pioneer-style houses, became the largest Portuguese community in the area by 1900 (K. Les, 1986). Of the 37 houses along this stretch of the river that are listed in the Historic Property Data File for Yolo County (State Historic Preservation Office [SHPO]), only one (John White House) was not recommended for the National Register; the other 36 are listed as "appears eligible" or "may become eligible," either as separate properties or as contributors to a National Register district. All of these properties are on South River Road, adjacent to the river, but the distance of each from the riverbank cannot be determined at this time. It is safe to assume that they are located outside the river levees. The banks of the lower Sacramento River are considered highly sensitive for archaeological and historical resources.

AREA SETTING

Folsom Reservoir

Many studies have been carried out in and adjacent to the Folsom Reservoir basin, beginning with the Smithsonian Institution Basin River Surveys (Drucker, 1948) and continuing into the 1990's (Waechter, 1992 and 1993). These studies, and the sites recorded for them, are summarized in Scott, 1995, and Waechter and Mikesell, 1994. The consensus among these researchers was that the nature and extent of the effects to cultural resources from reservoir operation depended on several factors, most notably the location of a cultural property within the reservoir basin. Sites within the zone of seasonal fluctuation or drawdown suffered the greatest impacts, primarily in the form of erosion/scouring, deflation, hydrologic sorting, and artifact displacement caused by waves and currents. Sites located lower in the reservoir, within the deep pool (including those adjacent to old river floodplains), were more likely to be covered with silt, which sometimes formed a protective cap. Sites at or near the high water line, and sites exposed during drawdown, suffered both erosion and vandalism. The various reservoir studies also

indicated, however, that even sites that have been inundated for a few decades can still contain viable research data (Waechter and Mikesell, 1994).

There are nearly two hundred sites recorded at the reservoir, and many more undoubtedly lie beneath the waterline. Among these are 126 prehistoric sites or components, some with remnant patches of midden (Waechter and Mikesell, 1994). Human burials are noted on a few of the early (1940's and 1950's) site records, but the present status of these burials is unknown. The 59 historic-period sites recorded at the reservoir are mostly related to Gold Rush-era mining, settlement, and transportation. Many of the sites show signs of adverse effects from wave action, inundation, and/or recreation use at the reservoir (Waechter, 1992 and 1993; Waechter and Mikesell, 1994). Any changes in water levels caused by increased or decreased diversions from the reservoir, or from points upstream, have the potential to affect many important or unevaluated cultural resources within the reservoir basin. It is also the case, however, that many of the cultural deposits in the upper part of the reservoir, where water-level fluctuation is greatest, have been scoured down to bare granitic sand. Conversely, sites below this zone have suffered much less from seasonal water-level fluctuations.

There are two kinds of potentially adverse effects to cultural resources from changes in water levels in Folsom Reservoir: *increased cycles of inundation and drawdown*, resulting in more erosion and scouring of sites, and more rapid breakdown of organic materials through more frequent wetting and drying; and *exposure of previously inundated resources*, subjecting these resources to increased weathering, vandalism, and other factors (Waechter and Mikesell 1994). Under current operating conditions, the zone of greatest seasonal water-level fluctuation, and thus of greatest potential impact to cultural sites, is approximately 395 to 466 feet msl, where fluctuation events often exceed one per year. This implies, among other things, that cultural sites at or above 395 feet msl already have suffered serious impacts that have greatly compromised their integrity and destroyed much of their data potential. Large-scale surveys by Far Western (Waechter 1992, 1993) observed that many, though not all, of the cultural deposits within this zone have been scoured down to bare granitic sand. For this reason, additional impacts from the proposed Specific Plan water supply may be less significant (that is, could result in less data loss in the 395- to 466-foot zone than elsewhere within the reservoir.) Therefore, mitigation for impacts within this zone could be less extensive (and thus less costly) than for other areas. Conversely, sites below this zone, and especially those below 380 feet msl, have suffered much less from seasonal water-level fluctuations, and new impacts to these sites probably would be more significant in terms of data loss.

Lower American River

A 1999 records search revealed 36 recorded sites (22 prehistoric, 13 historic, 1 multi-component) on the American River between Folsom Dam and the Sacramento River. Of the 22 prehistoric sites, 4 have been determined eligible for the NRHP, three are ineligible, and 15 are unevaluated. These sites include village mounds and village middens, small camps, bedrock mortar stations, and flaked stone scatters. Several ethnographic Maidu settlements were located along the river, especially on the north bank (Wilson and Towne, 1978); at least some of the recorded villages undoubtedly represent these settlements.

Historic sites recorded on the American River consist of dredge tailings, segments of the Western and Transcontinental railroads, bridge abutments, a pump house, features associated with the Folsom hydroelectric power system (CA-SAC-429H), stone foundations, a cemetery (CA-SAC-192/H), and segments of the historic levee system (LAR-16, LAR-18). Segment LAR-16 has been recommended as eligible to the NRHP; segment LAR-18 remains unevaluated (Nilsson, et al., 1995). In general, the lower American River is considered highly sensitive for archaeological and historical resources, especially historic mining remains.

4.6.3 REGULATORY SETTING

FEDERAL

Any project that involves federal undertakings, lands, funds, or permits must comply with Section 106 of the National Historic Preservation Act (NHPA; amended 1999); this Act defines important ("*significant*") resources as those listed on, or eligible for listing on, the National Register of Historic Places. Section 106 and its implementing regulations require federal agencies to provide the Advisory Council on Historic Preservation an opportunity to comment on actions that will affect historic properties.

STATE

CEQA statutes (Public Resources Code Section 21001(b) *et seq*. and the State CEQA Guidelines require planning agencies to carefully consider the potential effects of a project on historical resources. Under the recently revised and adopted CEQA Guidelines in Section 15064.5, a "historical resource" includes: a resource listed in or eligible for the California Register of Historical Resources; or listed in a local register of historical resources; or identified in a historical resource survey and meeting requirements in Section 5024.1(g) of the Public Resources Code; or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines historically significant, provided the determination is supported by substantial evidence in light of the whole record; or a resource so determined by a lead agency as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

Under CEQA Guidelines, "A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment" [Section 15064.5(b)]. "Substantial adverse change" is ". . . physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired [Section 15064.5(b)(2)].

While alteration of the setting of an archaeological site that is eligible only for its information potential may not affect the site's significant characteristics, alteration of a property's location (viz., removing or damaging all or part of the site) may have a significant adverse effect.

CEQA Guidelines Section 15126.4(b)(3) states, "Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature." The Guidelines further state that preservation in place is the preferred manner of mitigating impacts, and that preservation ". . . may be accomplished by, but is not limited to, the following":

1. Planning construction to avoid archaeological sites;

2. Incorporation of sites within parks, greenspace, or other open space;

3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site.

4. Deeding the site into a permanent conservation easement.

(CEQA Guidelines, Section 15126.4, subd. (b)(3)(B).)

The CEQA Guidelines state, "when data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken" [CEQA Guidelines, Title 14, Section 15126.4(b)(3)(C)]. However, "data recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource…" [CEQA Guidelines, Title 14, Section 15126.4(b)(3)(D)].

Section 15064.5 (e)(1) and (2) of the CEQA Guidelines provides the following guidance with regard to the accidental discovery of human remains:

> In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
>
> 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
>
> A. The coroner of the County must be contacted to determine that no investigation of the cause of death is required, and
>
> B. If the coroner determines the remains to be Native American:
>
> 1. The coroner shall contact the Native American Heritage Commission within 24 hours.
>
> 2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased native american.
>
> 3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human

remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

   A. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

   B. The descendant identified fails to make a recommendation; or

   C. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

CEQA also requires planning agencies to consider the effects of a project on "unique archaeological resources." If an archaeological site meets the definition of a unique archaeological resource (Public Resources Code Section 21083.2), then the site must be treated in accordance with the special provisions for such resources, which include time and cost limitations for implementing mitigation.

California law also protects Native American burials, skeletal remains and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains (California Health and Safety Code Section 7050.5, California Public Resources Code Sections 5097.94 *et seq.*).

Senate Bill (SB)-18, (Government Code Section 65352.3) now requires local governments to consult with Native American tribes before the adoption or amendment of a general plan or specific plan proposed on or after March 1, 2005. The Governor's Office of Planning and Research recommends that local government should send a written request to the Native American Heritage Commission asking for a list of tribes with whom to consult at the earliest opportunity. A tribal consultation list request form is available on the Native American Heritage Commission website. A sample form is also available from the Office of Planning and Research (OPR). SB-18 compliance for the Placer Vineyards Specific Plan is discussed above under "CONSULTATIONS."

LOCAL

The following is a brief summary of the regulatory context under which historic and cultural resources are managed at the local level in Placer County.

Placer County General Plan

The *Placer County General Plan* calls for the identification, protection and enhancement of important historical, archaeological, paleontological and cultural sites and their contributing environment (Placer County 1994:101-103). This goal, related policies and implementation programs are outlined below:

Goal 5.D: To identify, protect, and enhance Placer County's important historical, archaeological, paleontological and cultural sites and their contributing environment.

Policies

5.D.1. The County shall assist the citizens of Placer County in becoming active guardians of their community's cultural resources.

5.D.2. The County shall solicit the cooperation of the owners of cultural and paleontological resources, encourage those owners to treat these resources as assets rather than liabilities, and encourage the support of the general public for the preservation and enhancement of these resources.

5.D.3. The County shall solicit the views of the Native American Heritage Commission and/or the local Native American community in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.

5.D.4. The County shall coordinate with the cities and municipal advisory councils in the county to promote the preservation and maintenance of Placer County's paleontological and archaeological resources.

5.D.5. The County shall use, where feasible, incentive programs to assist private property owners in preserving and enhancing cultural resources.

5.D.6. The County shall require that discretionary development projects identify and protect from damage, destruction, and abuse, important historical, archaeological, paleontological, and cultural sites and their contributing environment. Such assessments shall be incorporated into a countywide cultural resource data base, to be maintained by the Department of Museums.

5.D.7. The County shall require that discretionary development projects are designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less than significant level and/or shall be mitigated by extracting maximum recoverable data. Determinations of impacts, significance, and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups), historical, or paleontological consultants, depending on the type of resource in question.

5.D.8. The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

5.D.9. The County shall use the State Historic Building Code to encourage the preservation of historic structures.

5.D.10. The County will use existing legislation and propose local legislation for the identification and protection of cultural resources and their contributing environment.

5.D.11. The County shall support the registration of cultural resources in appropriate landmark designations (i.e., National Register of Historic Places, California Historical Landmarks, Points of Historical Interest, or Local Landmark). The county shall assist private citizens seeking these designations for their property.

5.D.12 The County shall consider acquisition programs as a means of preserving significant cultural resources that are not suitable for private development. Organizations that could provide assistance in this area include, but are not limited to, the Archaeological Conservancy, The Nature Conservancy, and the Placer Land Trust.

Implementation Programs

5.4 The County shall prepare, adopt, and implement procedures for review and approval of all County-permitted projects involving ground disturbance and all building and/or demolition permits that will affect buildings, structures, or objects 45 years of age or older.

5.5 The County shall develop preservation incentive programs for owners of important cultural and paleontological resources, using such mechanisms as the Mills Act, the Historic Preservation Easement program, the Certified Local Government program, and the Heritage Tourism program.

5.6 The County shall establish a formal Placer County Register of Historical Properties to facilitate preservation of the locally-significant historical properties that do not qualify for State or Federal listings.

5.7 The County shall consider pursuing the following cultural resource management programs and shall explore possible funding sources to support these programs:

1. Pursuit of status as a Certified Local Government to facilitate state funding and technical assistance from the State Office of Historic Preservation.

2. Preparation, adoption, and implementation of a cultural resources ordinance that provides definitions and standards for identification and protection of cultural resources and provides penalties for their disturbance; and

3. Establishment of the staff position of cultural resources coordinator. The coordinator would provide archaeological and architectural historian expertise to the activities outlined above and would maintain a countywide cultural resource database. The coordinator would also provide assistance to the public in understanding cultural resource concerns and in fulfilling cultural resource legislative requirements.

Dry Creek/West Placer Community Plan

The Dry Creek/West Placer Community Plan area includes valley grasslands, riparian woodlands, valley woodlands and cultivated and grazed agricultural lands. The environmental resources element of the community plan identifies goals and policies for the protection, identification and enhancement of historic sites and for the development of resource-based park sites (Placer County Planning Department 1990:117-120).

The cultural resources section of the *Dry Creek/West Placer Community Plan* is outlined below:

The intent of the cultural resources element is to determine goals and policies affecting historic and archaeologically or culturally significant areas. This section shall also provide goals and policies affecting recreation facilities for the area (goals and policies specific to historical resources are italicized).

Goals:

1. Recognize that the Dry Creek/West Placer Community Plan area is a unique community, which should incorporate development standards that enhance the area's separate cultural, sociological and physical identity.

2. Preserve areas of outstanding historical, cultural, or archaeological significance.

3. Provide a variety of park and recreation facilities to meet the needs of all segments of the population living in the Dry Creek area.

4. Encourage activities, events and the development of community recreational facilities which are desired by the local citizens and which encourage the interaction of the residents in the pursuit of common interests.

5. Protect and enhance the character of the Dry Creek/West Placer Community Plan area and maintain the community as a scenic, tranquil, family and farm oriented (residential/agricultural community) area that is compatible with the physical and natural constraints and features present in the community.

6. Designate, protect, and conserve the natural resources of the area especially where such resources can add to the variety of recreation activities available.

7. To maintain some flexibility in the development of park areas to allow for changing trends in recreation activities.

8. In the long term, establish a public agency or district to generate funds for the maintenance, protection, operation, and development of park and recreation as well as open space areas.

Policies:

1. Identify and protect from destruction and abuse all representative and unique historical, cultural and archaeological sites.

2. Encourage and promote legislation for the protection of notable historical sites and artifacts.

3. Provide future park facilities in accordance with park standards and location guidelines as set forth in the Parks and Recreation Section of this plan.

4. Require the dedication of land and/or payment of fees, in accordance with state law, in order to acquire and develop public recreation facilities, open space, or areas of historical or archaeological significance.

5. Support and cooperate with volunteer groups and organizations that provide recreation activities and events for area residents.

6. Encourage compatible recreational use of open space areas and riparian areas along streams and creeks in the area, where feasible.

7. Encourage the development of multipurpose facilities which can function as recreational sites, open space areas and for historic preservation.

8. Require site specific studies for archaeological or historical sites in all instances where land development has the potential to have a detrimental impact on these sites.

Implementation Program:

All historical and archaeological sites should be located and evaluated. If deemed important, these sites should be made known to the Placer County Historical Advisory Board. This Board may support a listing of the site with the State of California as a Point of Historical Interest. Furthermore, all known sites should be brought to the attention of the County Museum's office whose staff and volunteers will be implementing a cultural resource inventory throughout Placer County.

4.6.4 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Under the California Environmental Quality Act (CEQA), historical resources are recognized as a part of the environment (Public Resources Code Sections 21001(b), 21083.2, 21084(e), 21084.1). 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, or important in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (Public Resources Code Section 5021.1).

In 1992, the Public Resources Code was amended as it affects historical resources. The amendments included creation of the California Register of Historical Resources (Public Resources Code Sections 5020.4, 5024.1 and 5024.6). While the amendments became effective in 1993, it was not until January 1, 1998, that the implementing regulations for the California Register were officially adopted (Public Resources Code Section 4850 *et seq*.).

The California Register is an authoritative listing and guide for state and local agencies and private groups and citizens in identifying historical resources. This listing and guide indicates which resources should be protected from substantial adverse change. The California Register includes historical resources that are listed automatically by virtue of their appearance on or eligibility for certain other lists of important resources. The Register includes historical resources that have been nominated by application and listed after public hearing. Also included are historical resources listed as a result of an evaluation by specific criteria and procedures adopted by the State Historical Resource Commission.

The criteria used for determining the eligibility of a cultural resource for the California Register are similar to those developed by the National Park Service for the National Register of Historic Places. However, criteria of eligibility for the California Register were reworded to better reflect California history.

Any building, site, structure, object or historic district meeting one or more of the following criteria may be eligible for listing in the California Register:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

2. It is associated with the lives of persons important to local, California, or national history;

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or

4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Eligibility for the California Register also depends on the integrity, or the survival of characteristics of the resource that existed during its period of significance. Eligible historic resources must not only meet one of the above criteria, but also they must retain enough of their historic character or appearance to convey the reasons for their importance, or retain the potential to yield significant scientific or historical information or specific data.

Like the process of evaluating historical resources for National Register eligibility, California Register evaluations include the consideration of seven aspects of integrity: location, design,

setting, materials, workmanship, feeling and association. The evaluation of integrity must be judged with reference to the particular criterion or criteria under which a resource may be eligible for the California Register. However, the implementing regulations specifically caution that alterations of a historic resource over time may themselves have historical, cultural or architectural significance.

Most often, historical resources eligible for the California Register will be 50 years old or older. However, the new implementing regulations stipulate that "a resource less than fifty years old may be considered for listing in the California Register if it can be demonstrated that sufficient time has passed to understand its historical importance."

Under criteria based on the State CEQA Guidelines, the project would be considered to have a significant impact on cultural resources if it would result in any of the following:

- A substantial adverse change in the significance of a historical resource that is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or a local register of historic resources;

- A substantial adverse change in the significance of a unique archaeological resource;

- Disturbance or destruction of unique paleontological resource or site or unique geologic feature; or

- Disturbance of any human remains, including those interred outside of formal cemeteries.

CEQA provides that a project may cause a significant environmental effect where the project "may cause a *substantial adverse change in the significance of an historical resource*" (Pub. Resources Code, Section 21084.1 [emphasis added]). CEQA Guidelines Section 15064.5 defines a "substantial adverse change in the significance of an historical resource" to mean "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be *materially impaired*" (CEQA Guidelines, Section 15064.5, subd. (b)(1) [emphasis added]).

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

> The significance of an historical resource is materially impaired when a project:
>
> (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
>
> (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its

identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

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

(CEQA Guidelines, Section 15064.6, subd.(b)(2).)

Section 21083.2 of the Public Resources Code addresses unique archaeological resources. "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, there is a high probability that it meets the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person. [Public Resources Code Section 21083.2 (g)]"

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment are described in the code. To the extent that unique archaeological resources are not preserved in place or left in an undisturbed state, mitigation measures shall be required as provided in the code. The code also places limitations on the extent, cost and timing of mitigation measures that can be required by the lead agency.

According to CEQA Guidelines Sections 15064.5 and 15126, a project is considered to have significant impacts if it will disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group or a paleontological site. Based on this guideline, the proposed Specific Plan was considered to have a significant impact if it resulted in:

- Damage or destruction of any significant prehistoric or historic properties;
- Neglect of a property resulting in its deterioration or destruction; or
- Damage or destruction of any unrecorded archaeological sites or features.

Section 106 of the National Historic Preservation Act defines an important cultural resource as one that is associated with important persons or events, or that embodies high artistic or architectural values, or that has scientific value (36 CFR 60.6). Where a cultural resource has not been evaluated for its importance, it is treated as potentially important until an evaluation can be done.

SURFACE WATER SUPPLY STANDARDS OF SIGNIFICANCE

Recently, the Sacramento Area Flood Control Agency (SAFCA) has coordinated with the SHPO and the Advisory Council on Historic Preservation to ensure compliance with Section 106 of the NHPA as part of its continuing effort to implement long-term flood control at Folsom Dam. This coordination has resulted in the development of a research design to guide future inventory, evaluation and data recovery, and/or protection of archaeological resources that could be affected by reoperation at Folsom Dam. This research design could be carried out when the water level in the reservoir has been sufficiently reduced for purposes of flood control. The research design calls for an enhanced inventory, site evaluation, and data collection or preservation at selected sites. Where there are many sites of the same type, evaluation and/or data recovery may be done on a *representative sample* of the sites, rather than all. Accordingly, much of the research, inventory, and other mitigation for potential cultural resource impacts at Folsom Reservoir have already been identified and committed.

The impact indicators and significance thresholds used to evaluate impacts to cultural resources by off-site infrastructure (water supply) are presented in Table 4.6-1.

Table 4.6-1
Cultural Resources Impact Indicators and Significance Thresholds

Indicator	Significance Thresholds
Reservoir water levels	Increased erosion, scouring, and hydrologic sorting at archaeological sites from increased cycles of inundation and drawdown
Reservoir and river water levels	Increased exposure of previously inundated sites or increased inundation of sites that lie above the present waterline

Source: SWRI, Inc. 2001

OVERVIEW

The land encompassed by the Specific Plan area lies in an ecotonal or “edge” area with respect to prehistoric Native American cultural resources. While prehistoric archaeological site-density for the entire Specific Plan area is low, site-density is high along Dry Creek, which is comparable to that for the major rivers in Central California.

Post-Native American settlement in the Specific Plan area centered on farming and ranching. However, the land was suitable for few uses, such as livestock grazing and dry farming. A segment of the Sacramento Northern Railroad grade crosses the Specific Plan area. At one time, the Sacramento Northern was this country’s longest interurban electric railroad.

After World War II, increased air traffic in the Sacramento region prompted construction of an instrument landing system for McClellan Air Force Base. As a consequence, an outer runway beacon was constructed by the Air Force within the Specific Plan area.

Considering the size of the Specific Plan area, impacts to historical resources potentially eligible for the California Register of Historical Resources are relatively few, because of the marginal nature of the land for Native Americans and subsequent farming and ranching. However, CEQA provides that a project causes a significant environmental effect where the project "may cause a *substantial adverse change in the significance of an historical resource*" (Pub. Resources Code, Section 21084.1 [emphasis added]). CEQA Guidelines Section 15064.5 defines a "substantial adverse change in the significance of an historical resource" to mean "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be *materially impaired*" (CEQA Guidelines, Section 15064.5, subd. (b)(1) [emphasis added]). For this reason, impacts to potentially eligible historic resources may be significant and unavoidable and are treated as such in this Revised Draft EIR.

None of the cultural resources identified within the Specific Plan area or along the off-site infrastructure areas that were studied appear to meet the definition of "unique archaeological resources." Therefore, the potential effects of the Specific Plan and off-site infrastructure on cultural resources are listed by the potential eligibility of those resources for the California Register in Tables 4.6-2 through 4.6-9.

Under "Development Plan" in the Table 4.6-2, abbreviations are given for "Business Park" (BP), "Low-Density Residential" (LDR), "Medium-Density Residential" (MDR), and "Special Planning Area" (SPA).

Table 4.6-2
Cultural Resources of the Placer Vineyards Specific Plan Area[1]

Cultural Resource		Location	California Register Eligibility		Development Plan	
Number or Name	**Type**	**Property Number**	**Yes**	**No**	**Park or Open Space**	**Other**
8545 Palladay Road	Buildings	22		x		MDR
Mobilehome	Building	15		x		MDR
3. P-31-1137 (McClellan AFB Outer Runway Beacon)	Building	4		x		BP
4. 9280 El Verano Avenue	Building	SPA		x		SPA
5. 8875 Watt Avenue	Buildings	5B		x		MDR
6. Straight Road	Building	5A	x			MDR
7. Straight Road	Building	2	x			MDR
8. Bridge #19C0084 (Watt Avenue at Dry Creek)	Bridge	6 & 8		x		N/A
PV-1: CA-PLA-944-H (Barn Foundation)	Historic Site	4		x		BP
PV-2: CA-PLA-948 (Lithic Scatter)	Prehistoric Site	4	x			MDR
PV-3: CA-PLA-945-H (Trash Scatter)	Historic Site	4		x		BP

Table 4.6-2
Cultural Resources of the Placer Vineyards Specific Plan Area[1]

Cultural Resource		Location	California Register Eligibility		Development Plan	
Number or Name	**Type**	**Property Number**	**Yes**	**No**	**Park or Open Space**	**Other**
PV-4: CA-PLA-947-H (Concrete Reservoir)	Historic Site	11		x		LDR
PV-5: CA-PLA-946-H (Sacramento Northern Railroad Grade)	Historic Site	23, 24, SPA	x			SPA
CA-PLA-46 (Lithic Scatter)	Prehistoric Site	1A	x		Open Space	
CA-PLA-47 (Camp Site)	Prehistoric Site	8	x		Open Space	
CA-PLA-80 (Lithic Scatter)	Prehistoric Site	2	x		Open Space	
CA-PLA-82 (Lithic Scatter)	Prehistoric Site	2	x		Open Space	
DR-5 (Isolate)	Prehistoric Isolate	1A	x		Open Space	
Source: Placer Vineyards Specific Plan Cultural Resources Inventory and Overview, 2000 and 2005.						

Table 4.6-3
Cultural Resources Located Within Proposed Riego/Baseline Intersection Improvements

Cultural Resource		Location				California Register Eligibility	
Number or Name	**Type**	**Baseline-Locust**	**Baseline-Pleasant Grove**	**Riego-Pleasant Grove**	**Riego-Natomas Levee**	**Yes**	**No**
Sacramento Northern Railroad Grade-Riego Segment	Historic Site		x				x
Riego Road-East Main Drainage Canal Bridge	Bridge				x		x
Reclamation District 1000	Historic District				x	x	
Source: Placer Vineyards Specific Plan Cultural Resources Inventory and Overview, 2000 and 2005.							

Table 4.6-4
Cultural Resources Identified Along Baseline Road Widening

Cultural Resource		Location		California Register Eligibility	
Number or Name	**Type**	**Within Existing ROW**	**Within or Near 200' Corridor**	**Yes**	**No**
P-31-1137 (McClellan AFB Outer Runway Beacon)	Building		x		x
CA-PLA-946-H (Sacramento Northern Railroad Grade-Riego Segment)	Historic Site	x			x
CA-PLA-945-H (Trash Scatter)	Historic Site		x		x
Eagle House	Historic Site		?	?	
Source: Placer Vineyards Specific Plan Cultural Resources Inventory and Overview, 2000 and 2005.					

Table 4.6-5 Cultural Resources Identified Along Watt Avenue Road Widening					
Cultural Resource		Location		California Register Eligibility	
Number or Name	Type	Within Existing ROW	Within or Near 200' Corridor	Yes	No
CA-PLA-47 (Camp Site)	Prehistoric Site		x	x	
Bridge #19C0084 (Watt Avenue at Dry Creek)	Bridge	x			x
CA-PLA-69 (Lithic Scatter)	Prehistoric Site		x	x	
Union Cemetery	Historic Site		x	x	
8640 Watt Avenue	Building		x		x
8720 Watt Avenue	Building		x		x
8724 Watt Avenue	Building		x		x
8718 Watt Avenue	Building		x		x
Source: Placer Vineyards Specific Plan Cultural Resources Inventory and Overview, 2000 and 2005.					

Table 4.6-6 Cultural Resources Identified Along Off-Site Water Lines					
Cultural Resource		Location		California Register Eligibility	
Number or Name	Type	San Juan-Sacramento Suburban Connection	Long-term Connection (Sacramento River)	Yes	No
CA-SAC-567-H (Sorrento Road-Unpaved Portion)	Historic Site		x	x	
CA-SAC-464-H (WP Railroad)	Historic Site		x		x
CA-SAC-463-H (E Main Drainage Canal & Levee)	Historic Site		x	x	
Bridge #240218 (Elverta Road at East Main Drainage Canal)	Bridge		x		x
Reclamation District 1000	Historic District		x		x
Source: Placer Vineyards Specific Plan Cultural Resources Inventory and Overview, 2000 and 2005.					

Table 4.6-7 Cultural Resources Identified Along PFE Road/Dry Creek Water and Sewer Improvements					
Cultural Resource		Location		California Register Eligibility	
Number or Name	Type	Primary Alignment	Alternate (Dry Creek) Alignment	Yes	No
CA-PLA-47 (Camp Site)	Prehistoric Site	x		x	
Bridge #19C0084 (Watt Avenue at Dry Creek)	Bridge	x			x

Table 4.6-7
Cultural Resources Identified Along PFE Road/Dry Creek Water and Sewer Improvements

Cultural Resource		Location		California Register Eligibility	
Number or Name	Type	Primary Alignment	Alternate (Dry Creek) Alignment	Yes	No
CA-PLA-69 (Lithic Scatter)	Prehistoric Site	x		x	
Union Cemetery	Historic Site	x		x	
CA-PLA-67 (Lithic Scatter)	Prehistoric Site	x		x	
Bridge #19C0117 (Cook Riolo Road at Dry Creek)	Bridge		x		x
CA-PLA-42 (Camp Site)	Prehistoric Site		x	x	
CA-PLA-43 (Camp Site)	Prehistoric Site		x	x	
CA-PLA-71 (Camp Site)	Prehistoric Site		x	x	
CA-PLA-72 (Lithic Scatter)	Prehistoric Site		x	x	

Source: Placer Vineyards Specific Plan Cultural Resources Inventory and Overview, 2000 and 2005.

Table 4.6-8
Cultural Resources Identified Along Off-Site Sewer Connections

Cultural Resource		Location			California Register Eligibility	
Number or Name	Type	Alt. "A"	Alt. "A-2"	Alt. "B"	Yes	No
CA-PLA-946-H (Sacramento Northern Railroad Grade)	Historic Site	x			x	
CA-SAC-567-H (Sorrento Road-unpaved segment)	Historic Site	x			x	
CA-SAC-464-H (WP Railroad)	Historic Site	x				x
Bridge #24C0314 (Elwyn Ave a Natomas East Tributary 1)	Bridge			x		x
Sacramento Northern Railroad Grade, Elwyn Road Segment	Historic Site			x		x
P-34-744 ("Nutting Stone")	Isolate		x			x

Source: Placer Vineyards Specific Plan Cultural Resources Inventory and Overview, 2000 and 2005.

Table 4.6-9
Cultural Resources Identified Along Watt Avenue to Dry Creek Wastewater Treatment Plant Sewer Connection and Off-Site Recycled Water Line Alignments

Cultural Resource		Location		California Register Eligibility	
Number or Name	Type	Watt Ave. to DCWTP Sewer	Recycled Water Line	Yes	No
CA-PLA-47 (Camp Site)	Prehistoric Site	x		x	
Bridge #19C0084 (Watt Avenue at Dry Creek)	Bridge	x			x
CA-PLA-69 (Lithic Scatter)	Prehistoric Site	x		x	
CRU-91-I-4 (Isolate)	Isolate	x			x
CA-PLA-76 (Camp Site)	Prehistoric Site	x		x	
CA-PLA-81 (Camp Site)	Prehistoric Site	x		x	

Table 4.6-9 Cultural Resources Identified Along Watt Avenue to Dry Creek Wastewater Treatment Plant Sewer Connection and Off-Site Recycled Water Line Alignments					
Cultural Resource		Location		California Register Eligibility	
Number or Name	Type	Watt Ave. to DCWTP Sewer	Recycled Water Line	Yes	No
CA-PLA-77 (Camp Site)	Prehistoric Site	x		x	
CA-PLA-42 (Camp Site)	Prehistoric Site	x		x	
Bridge #19C0117 (Cook Riolo Road at Dry Creek)	Bridge	x			x
CA-PLA-43 (Camp Site)	Prehistoric Site	x		x	
CA-PLA-71 (Camp Site)	Prehistoric Site	x		x	
CA-PLA-72 (Lithic Scatter)	Prehistoric Site	x		x	
DR-5 (Isolate)	Isolate		x	x	
DR-6 (Isolate)	Isolate		x	x	
CA-PLA-75 (Camp Site)	Prehistoric		x	x	
Source: Placer Vineyards Specific Plan Cultural Resources Inventory and Overview, 2000 and 2005.					

4.6-I Development of the Specific Plan Area could destroy or alter known historic or unique archaeological resources.

Using CEQA Guidelines and advisories to determine the significance of historical resources, six known unique archaeological sites (CA-PLA-948, CA-PLA-46, CA-PLA-47, CA-PLA-80, CA-PLA-82 and DR-5), one historic archaeological site (segment of CA-PLA-946-H) and two extant houses (6. Straight Road and 7. Straight Road) are considered eligible or potentially eligible for the California Register of Historical Resources within the Specific Plan area. Destruction or alteration of these sites is a ***potentially significant and unavoidable impact.***

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to unique archaeological sites to a *less than significant level*. However, the measure would not reduce the impact to historical resources to a less than significant level; therefore, the impact must remain *significant and unavoidable*:

4.6-1 *Prior to any ground-disturbing activity within five hundred feet of historical resources and unique archaeological resources,, archaeological surface inspections shall be completed to determine if each respective site still exists and, if so, archaeological test excavations shall be conducted to the extent necessary to determine if further mitigation is necessary. If determined to be necessary, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the archaeological resources, shall be prepared by a qualified professional archaeologist and adopted by the County prior to any excavation. The data recovery plan shall be deposited with the California Historical Resources Regional Information Center.*

4.6-2 Development of the Specific Plan Area could destroy or alter unknown historical and/or unique archaeological resources.

It is possible that cultural resources other than those described, including human remains, buried structures and other artifacts, exist within the Specific Plan area. Destruction or alteration of such resources is a ***potentially significant and unavoidable impact.***

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to unique archaeological sites to a *less than significant level*. However, the measure will not reduce the impact to historical resources to a less than significant level; therefore, the impact must remain *significant and unavoidable*:

4.6-2a *In the event of the accidental discovery or recognition of any human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains, until compliance with the provisions of Section 15064.5 (e)(1) and (2) of the CEQA Guidelines has occurred.*

4.6-2b *If any artifacts or other indications of cultural resources 45 years old or older are found once ground-disturbing activities are underway, the find shall be immediately evaluated by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation shall be made available, as provided in Section 15064.5 of the CEQA Guidelines. Work may continue on other parts of the project site while historical or unique archaeological resource mitigation takes place.*

4.6-2c *Prior to the issuance of any permits for construction, including demolition permits, for properties that have not been previously inspected by an archaeologist or previously inspected by an architectural historian, a qualified archaeologist and/or architectural historian, as appropriate, shall be retained to identify and evaluate any cultural resources, and determine if further mitigation, may be necessary, and recommend any such potential mitigation to the County for its consideration. The County will assess the feasibility of any proposed mitigation (e.g., avoidance of the historical resource) and impose the mitigation where feasible in light of Specific Plan policies and land use assumptions. The necessity of inspection by an architectural historian includes any buildings potentially eligible for the California Register of Historical Resources, but for which the identification and evaluation process (the filling out of Primary, Building and Location record forms distributed by the California Office of Historic Preservation) has not been completed.*

4.6-2d *An orange construction fencing shall be placed around the California Register-eligible sites located in open space, if construction, including trail and fire break building, is conducted within one hundred feet of the archaeological resource. Placement of the*

fencing must be done in consultation with an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric archaeology.

4.6-2e *An archaeologist shall participate in the preconstruction meeting(s) to inform the participants of the sensitivity and location of any California Register-eligible sites in the vicinity of grading or construction.*

4.6-2f *Any California Register-eligible site located in the open space that will be within one hundred feet or closer to public access (e.g., road, trail or firebreak), public facility or private residence shall be enclosed with permanent fencing designed to help prevent trespass. Each enclosure shall be constructed with a locked gate. A sign at each enclosure shall explain site values, interpret site history (or prehistory), identify prohibited uses and warn of penalties for violations.*

4.6-2g *To help insure the long-term preservation of those California Register-eligible archaeological resources located in the open space, the CC&Rs shall include a clause that prohibits the collecting, digging or removal of any stone, artifact or other prehistoric or historic object from the open space.*

4.6-2h *If human remains are discovered, all work shall stop in the immediate vicinity of the find and the County Coroner must be notified, according to Section 7050.5 of the California Health and Safety Code. If the remains are Native American, the Coroner will notify the Native American Heritage Commission, which in turn will inform a most likely descendant. The descendant will then recommend to the landowner appropriate disposition of the remains and any grave goods.*

4.6-3 Development of the Specific Plan Area could destroy or alter unknown paleontological resources.

It is possible for macrovertebrate fossil remains to be present at isolated localities, particularly within the Riverbank Formation. Resources recovered from the Sacramento County sites were mainly associated with fine-grained basin-type materials, which likely were paleowatering holes for large animals, now extinct, such as the American horse, camel or possibly mastodon. This impact is ***potentially significant.***

<u>Mitigation Measure</u>

Implementation of the following mitigation measures would reduce this impact to a *less than significant level**:***

4.6-3a *Should paleontological resources be identified at a particular site, the project manager shall cease operation until a qualified professional can provide an evaluation. Mitigation shall be conducted as follows:*

1. *Identify and evaluate paleontologic resource by intense field survey where impacts are considered high;*

2. *Assess effects on identified sites;*
3. *Consult with the institutional/academic paleontologists conducting research investigations within the geological formations that are slated to be impacted;*
4. *Obtain comments from the researchers;*
5. *Comply with researchers' recommendations to address any significant adverse effects where determined by the County to be feasible pursuant to Mitigation Measure 4.6-3b.*

4.6-3b *In considering any suggested mitigation proposed by the consulting paleontologist, County Planning Department Staff shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, Specific Plan policies and land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for paleontological resources is carried out.*

OFF-SITE INFRASTRUCTURE

4.6-4 Implementation of the Riego/Baseline Road intersection improvements could adversely affect the Reclamation District 1000 Rural Historic Landscape.

As noted above, Reclamation District 1000 is a recognized historic landscape. The addition of improvements that would significantly modify this historic landscape, or add new elements to the landscape could alter the historic landscape district. However, because of its large size, it is doubtful that any impact to Reclamation District 1000 from intersection improvement would diminish its eligibility for the National Register of Historic Places or the California Register of Historical Resources. Therefore, this is a ***less than significant impact.***

Mitigation Measure

No mitigation measures are required.

4.6-5 Implementation of the Baseline Road widening project could adversely affect the historic archaeological site of "Eagle House," an early inn.

This historical archaeological site has not been identified in the field; its approximate location has been estimated from historic maps. If it exists, destruction or alteration of this building site, an historical resource, is a ***potentially significant and unavoidable impact.***

Mitigation Measure

Implementation of the following mitigation measure would ensure that any undiscovered historic resources are properly inspected and recorded, but would not reduce historical resource impacts, to a less than significant level due to the potential for their destruction or degradation under circumstances where their preservation or protection would defeat or frustrate implementation of Specific Plan policies. The impact is, therefore, considered *significant and unavoidable*:

4.6-5 *Prior to any ground disturbing or demolition work for intersection improvements, road widenings and utilities construction, an on-the-ground inspection shall be conducted of the areas outside existing public rights-of-way by a qualified archaeologist and/or architectural historian, as appropriate. Such inspections will at a minimum include a field inspection, the recording on forms distributed by the California Office of Historic Preservation of any cultural resources 45 years old or older, an assessment of eligibility for the California Register of Historical Resources and qualification as a "unique archaeological resource," and a technical report that follows California Office of Historic Preservation guidelines for contents and format. The report shall contain any feasible mitigation measures to be implemented by the applicant. In some cases, an updated records search by the appropriate information center of the California Historical Resources Information System may be necessary if the proposed routes change or if there is more than a year delay between the present study (2005) and said field inspection(s).*

4.6-6 Implementation of the Watt Avenue widening project could destroy or alter two unique archaeological sites and a portion of one historic cemetery.

Using CEQA guidelines and advisories to determine the significance of cultural resources, two unique archaeological sites (CA-PLA-47 and CA-PLA-69) and one historic cemetery (Union Cemetery) are eligible or potentially eligible for the California Register of Historical Resources. However, archaeological site, CA-PLA-47, has undergone data recovery and if all necessary field work is completed at this site and the scientifically consequential information has been gathered, then under CEQA statutes and guidelines, the site is no longer eligible for the California Register under criterion 4 (Information Potential). Destruction or alteration of unique archaeological sites is a ***potentially significant impact.*** Alteration of the Union Cemetery frontage is a ***potentially significant and unavoidable impact.*** In addition, road widening could affect burial sites located within the road widening area and reinterrment could be necessary. Because the Union Cemetery is still active, any affected burials could be relocated to another part of the Cemetery, or to other available sites owned by Roseville Public Cemetery District.

<u>Mitigation Measure</u>

Implementation of Mitigation Measure 4.6-5 would reduce impacts to unique archaeological sites to a *less than significant level*. However, in light of the legal principles governing the assessment of effects on historical resources, as explained above under "OVERVIEW," the measure would not reduce the impact to historical resources (Union Cemetery) to a less than significant level; therefore, the impact must remain *significant and unavoidable*. The following mitigation measure is intended to address the reinterrment of burials within the proposed road widening:

4.6-6 *Placer County shall coordinate with Roseville Public Cemetery District to facilitate the reinterrment of any burials affected by the Watt Avenue road widening prior to any physical disturbance of Cemetery frontage. Project applicants shall fully compensate*

the Cemetery and County for any costs incurred during the grave site testing and reinterrment process.

4.6-7 Implementation of the Long-Term Surface Water Supply line could alter or destroy portions of two historic sites and one historic district.

Using CEQA guidelines and advisories to determine the significance of historical resources, two historic sites [CA-SAC-567-H (the unpaved portion of Sorrento Road) and CA-SAC-463-H (the East Main Drainage Canal and Levee)] and one historic district (Reclamation District 1000 Rural Historic Landscape) are eligible for the California Register. Because of their large size, it is doubtful that any impact to Reclamation District 1000 and the East Main Drainage Canal and Levee would diminish their eligibility for the National Register of Historic Places or the California Register of Historical Resources. However, the impact to the historic unpaved portion of Sorrento Road could affect the potential eligibility of that cultural resource for the California Register. Further, these resources are within the jurisdictions of Sacramento and Sutter counties and Placer County cannot compel the adoption of mitigation measures under such circumstances. Destruction or alteration of the Sorrento Road site is a ***potentially significant and unavoidable impact.***

Mitigation Measure

Even if Placer County did have jurisdiction over the affected resource, implementation of Mitigation Measure 4.6-5 would not reduce the impact to historical resources to a less than significant level; therefore, the impact must remain *significant and unavoidable.*

4.6-8 Implementation of a sewer force main along Watt Avenue and PFE Road could alter or destroy portions of three unique archaeological sites and one historic cemetery.

Using CEQA guidelines and advisories to determine the significance of historical resources, three unique archaeological sites (CA-PLA-47, CA-PLA-69 and CA-PLA-67) and the historic Union Cemetery are potentially eligible for the California Register. All four of these sites may be affected by the sewer force main project. However, CA-PLA-47 has undergone data recovery and may no longer be eligible for the California Register. Destruction or alteration of these sites is a ***potentially significant and unavoidable impact.***

Mitigation Measure

Implementation of Mitigation Measure 4.6-5 would reduce the impact to unique archaeological sites to a *less than significant level*. However, the measure will not reduce the impact to historical resources to a less than significant level; therefore, the impact must remain *significant and unavoidable*.

4.6-9 Implementation of the alternative sewer force main along Cook-Riolo Road and Dry Creek could alter or destroy portions of four unique archaeological sites.

The following four unique archaeological sites may be damaged by the Alternative Force Main project: CA-PLA-42, CA-PLA-43, CA-PLA-71 and CA-PLA-72. Destruction or alteration of these sites is a ***potentially significant impact.***

Mitigation Measure

Implementation of Mitigation Measure 4.6-5 would reduce unique cultural resource impacts related to the alternative sewer force main to a *less than significant level*.

4.6-10 Implementation of Sewer Line (SRCSD) Alternative "A" could alter or destroy a portion of two historic sites.

Using CEQA guidelines and advisories to determine the significance of historical resources, two historic archaeological sites (CA-PLA-946-H, the Sacramento Northern Railroad grade along the west boundaries of the Specific Plan area between the south boundary of the Specific Plan area and one hundred feet south of Baseline Road, and CA-SAC-567-H, the unpaved historic portion of Sorrento Road) are potentially eligible for the California Register. Destruction or alteration of these sites is a ***potentially significant and unavoidable impact.***

Mitigation Measure

The following mitigation measure in conjunction with Mitigation Measure 4.6-5 would reduce impacts to the Sacramento Northern Railroad grade to a *less than significant level*. In addition implementation of Mitigation Measure 4.6-5 would assist in reducing impacts to Sorrento Road, however, it would not reduce Sorrento Road impacts to a less than significant level. Further, the resource is within the jurisdictions of Sacramento County and Placer County cannot compel the adoption of mitigation measures under such circumstances. Therefore, the impact must remain *significant and unavoidable*.

4.6-10 *If the Off-Site Gravity Sewer Alternative "A" is selected, then disturbance of the California Register-eligible segment of CA-PLA-946-H, the Sacramento Northern Railroad grade, shall be avoided by using jack and bore construction techniques under the railroad grade for placement of the sewer line.*

4.6-11 Implementation of the Watt Avenue to DCWWTP sewer connection project could damage or destroy several unique archaeological sites.

Using CEQA guidelines and advisories to determine the significance of cultural resources, the following unique archaeological sites are potentially eligible for the California Register: CA-PLA-47 (the excavations have been completed, but a report of the excavations has not yet been produced); CA-PLA-69; CA-PLA-76; CA-PLA-81; CA-PLA-77; CA-PLA-42; CA-PLA-43; CA-PLA-71; CA-PLA-72. Destruction or alteration of these sites is a ***potentially significant impact.***

Mitigation Measure

Implementation of Mitigation Measure 4.6-5 would reduce unique archaeological resource impacts associated with the proposed sewer connection project to a *less than significant level*.

4.6-I2 Implementation of the DCWWTP Off-Site Recycled Water Line project could damage or destroy portions of one unique archaeological site and the location of two isolated finds.

Using CEQA guidelines and advisories to determine the significance of cultural resources, the following locations of two isolates, DR-5 and DR-6, and the unique archaeological site, CA-PLA-75 are potentially eligible for the California Register of Historical Resources. Destruction or alteration of the site and finds is a ***potentially significant impact.***

Mitigation Measure

Implementation of Mitigation Measure 4.6-5 would reduce off-site cultural resource impacts to a *less than significant level*.

4.6-I3 Expansion of the DCWWTP and SRWTP may affect cultural resources.

As yet undefined improvements may be necessary at one or both of the two wastewater treatment plants to accommodate future wastewater flows. Both sites are adequate in size and any improvements would be undertaken in conjunction with and adjacent to existing plant infrastructure. This Revised Draft EIR relies on information contained in the *Roseville Regional Wastewater Treatment Service Area Master Plan Environmental Impact Report*, which was certified by the City of Roseville City Council on November 16, 1996 (SCH #93092079) for plant site cultural resources information for DCWWTP. Analysis with regard to SRWTP facilities relies on the *Sacramento Regional Wastewater Treatment Plant 2020 Master Plan Environmental Impact Report* (SCH #2002052004).

Records searches and field surveys were conducted for the Roseville Master Plan EIR, but no resources were reported as occurring within the DCWWTP plant site. Impacts to resources were found to be ***potentially significant***, but capable of being mitigated to a less than significant level.

Records searches and field surveys were conducted for the Sacramento Regional Wastewater Treatment Plant Master Plan EIR, but no resources were reported as occurring within the SRWTP plant site. Impacts to resources were found to be ***potentially significant***, but capable of being mitigated to a less than significant level.

Mitigation Measure

The following mitigation measures appearing in the *Roseville Regional Wastewater Treatment Service Area Master Plan Environmental Impact Report* have been adopted by the City of Roseville, and are incorporated herein, and will reduce any impacts to cultural resources related to plant expansion to a *less than significant level.*

4.6-13a *Halt work if cultural resources are discovered. If concentrations of prehistoric or historic period cultural materials are encountered, all work in the vicinity of the find(s) should halt until a qualified archaeologist is retained, evaluates the material, and makes recommendations for further action.*

4.6-13b *Halt work if human remains are encountered. If human remains are encountered, all work should stop in the vicinity of the bone and the County Coroner should be notified immediately. The procedures outlined in the CEQA Guidelines Section 15064.5(e) should be followed, if human burials are judged to be Native American origin.*

The following mitigation measure appearing in the *Sacramento Regional Wastewater Treatment Plant 2020 Master Plan Environmental Impact Report* has been adopted by Sacramento County, and is incorporated herein, and will reduce any impacts to cultural resources related to plant expansion to a *less than significant level.*

4.6-13c *Should any cultural resources, such as structural features, unusual amounts of bone, shell, artifacts, human remains, or architectural remains be encountered during any development activities, work shall be suspended and the Department of Environmental Review and Assessment (DERA) shall be immediately notified. At that time, DERA shall coordinate any necessary investigation of the find with appropriate specialists as needed. The SRCSD shall be required to implement any mitigation deemed necessary by DERA for the protection of cultural resources. In the event of discovery of human remains, all work is to stop and the County Coroner shall be immediately notified pursuant to Section 5097.97 of the California Public Resources Code and Section 70950.5 of the California Health and Safety Code. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.*

4.6-I4 Impacts to undiscovered cultural resources may occur in unsurveyed areas.

Although a number of off-site infrastructure sites and corridors were surveyed for the Specific Plan project, not all areas were accessible to project proponents. Several of those properties have been described during discussion of the above impacts. In addition, certain off-site infrastructure has not yet been defined or precisely located, such as the PGWWTP recycled water line. Impacts to unique archaeological resources in areas where field surveys have not been performed are ***potentially significant***. Impacts to historic resources ***are potentially significant and unavoidable.***

Mitigation Measure

4.6-14 *Prior to any ground disturbing or demolition work for intersection improvements, road widenings and utilities construction, an updated records search through the California Historical Resources Information System shall be performed and on-the-ground inspection will be conducted by a qualified archaeologist and/or architectural historian, as appropriate. Such inspections will at a minimum include a field*

inspection, the recording on forms distributed by the California Office of Historic Preservation of any cultural resources 45 years old or older, an assessment of eligibility for the California Register of Historical Resources and qualification as a "unique archaeological resource," and a technical report that follows California Office of Historic Preservation guidelines for contents and format. The report shall contain any feasible mitigation measures to be implemented by the applicant.

INITIAL SURFACE WATER SUPPLY

As stated in Section 3.4 in Chapter Three of this Revised Draft EIR, an initial surface water supply of 6,000 AFA is proposed to serve the Specific Plan area. The analysis which follows determines potential effects of the diversion of the proposed Specific Plan initial surface water supply.

4.6-I5 The off-site infrastructure areas could affect water surface elevations at Shasta and Trinity Reservoirs.

The modeling results indicate that under the proposed Specific Plan initial water supply, there would be no increase in maximum water surface elevations at Shasta or Trinity reservoirs during each month of the 70-year simulation period, relative to the existing condition. With regard to maximum drawdown, the minimum end-of-month water surface elevation would either remain unchanged, or be reduced by a maximum of up to one foot msl at either reservoir under the proposed Specific Plan initial water supply, relative to the existing condition (Template Output B-66 and B-67). Thus, there would be no increase in exposure or inundation of cultural resources within the drawdown zone relative to the existing condition. Consequently, impacts to cultural resources at Shasta and Trinity reservoirs resulting from changes in maximum and minimum water levels would be ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.6-I6 The off-site infrastructure areas could affect flows of the upper and lower Sacramento River/Delta.

Under the proposed Specific Plan initial water supply, over the 70-year period, the average maximum and minimum monthly mean flows on the Sacramento River from Keswick Reservoir would remain unchanged, except for the months of September and June, when they would be reduced negligibly (i.e., by up to 0.3% and 0.1%, respectively) relative to the existing condition. Similarly, at Freeport, the average maximum and minimum monthly mean flows would be reduced negligibly (i.e., by up to 0.3% or 24 cfs) relative to the existing condition (Template Output B-80, B-81, B-84, and B-85). These flow results indicate that at these very small flow changes, no new areas of the riverbank would be inundated or exposed, relative to the existing condition. Therefore, impacts to cultural resources along the upper and lower Sacramento River from changes in river flows would be ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.6-I7 The off-site infrastructure areas could affect water surface elevation at Folsom Reservoir.

The modeling results indicate that, under the proposed Specific Plan initial water supply, there would be no increase in maximum elevations at Folsom Reservoir during each month of the 70-year simulation period, relative to the existing condition. With regard to maximum drawdown, the minimum end-of-month water surface elevation would be reduced or increased by up to one-foot msl under the proposed Specific Plan initial water supply, relative to the existing condition (Template Output B-65). Such changes are immeasurable and considered negligible. Thus, since there would be no substantial change in minimum or maximum water surface elevation, impacts to cultural resources at Folsom Reservoir resulting from changes in maximum and minimum water levels would be ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.6-I8 The off-site infrastructure areas could affect flows of the lower American River.

For the lower American River, the maximum and minimum monthly mean flows over the 70-year simulation were compared between the existing condition and the proposed Specific Plan initial water supply. In order to estimate the magnitude and frequency of bank exposure and bank inundation along the lower American River, two locations were assessed: Nimbus Dam and the river mouth (confluence with the Sacramento River).

A stage/discharge relationship has not been developed for the entire reach of the lower American River. For this reason, it is difficult to quantify precisely the potential for exposure of inundation of cultural resources along the banks of the lower American River. Intuitively, higher water surface elevation would occur under higher flows and lower water elevations under lower flows. A comparison of flows under the existing condition and the proposed Specific Plan initial water supply provides an estimate of relative changes in river stage that could result.

No significant sites are expected to have survived within the riverbed itself near Nimbus Dam. Lower flows, therefore, would not expose previously submerged (and intact) cultural resources. It is possible that historic-era (post 1869) shipwrecks lie beneath the silty river bottom near the mouth, and that very low river flows could expose these resources. However, the magnitude of the changes predicted under the proposed Specific Plan initial water supply is so small that such occurrences are highly unlikely (Template Output B-79). Also, known resources along the riverbanks (two historic levees, a portion of the Natomas East Main Drainage Canal and prehistoric mound CA-SAC-26) lie outside the present river channel, and decreases in river flows would have no impact on these resources. Therefore, lower flows are not a concern with regard to cultural resources.

The proposed Specific Plan initial water supply would result in mean river flows downstream of Nimbus Dam at the mouth that would be virtually identical, relative to the existing condition (Template Output B-78). Therefore, there would be no increase in inundation under higher flows, and, accordingly, no impacts to cultural resources along the American River from changes in river flows. Thus, impacts to cultural resources downstream of Nimbus Dam would be ***less than significant.***

Mitigation Measure

No mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.6-19 The proposed Specific Plan could contribute to cumulative impacts on historic or prehistoric resources.

The project in combination with other reasonably foreseeable projects would increase the density of development in the area and could further threaten significant cultural resources in the vicinity. Therefore, this cumulative impact is considered ***potentially significant***. Professional archaeologists generally recognize that population growth increases the probability for vandalism and other purposeful as well as inadvertent acts that destroy significant archaeological resources. However, the degree of probability is unknown as such cumulative impacts, if any, would be difficult to measure.

There is no feasible mitigation for the indirect cumulative impacts related to an increased population in Placer County. Such indirect cumulative impacts would be ***significant and unavoidable*** and the project's contribution, based on the project's size and the number of resources encountered, would be ***cumulatively considerable***.

Mitigation Measure

Implementation of Mitigation Measures 4.6-1, 4.6-2a-h, 4.6-3a-b, 4.6-4, and 4.6-10 would reduce impacts, but not to a less than significant level; therefore, the impact is *significant, unavoidable, and cumulatively considerable.*

OFF-SITE INFRASTRUCTURE – LONG-TERM SURFACE WATER SUPPLY

As stated in Section 3.4 in Chapter Three of this Revised Draft EIR, it is recognized that a water supply of 11,500 AFA will be required to meet the needs of the Specific Plan buildout. This 13,000 AFA is part of the PCWA's pending amendatory CVP contract with the USBR for 35,000 AFA. This water would be diverted from the Sacramento River, which has an annual runoff of approximately 18 million AF (PCWA 2001). The entire 35,000 AFA of the PCWA CVP contract water was used for the project's incremental contribution analysis (for further description of the cumulative analysis, see Section 4.3.4 of this Revised Draft EIR). The full CVP contract amount of 35,000 AFA (long-term water supply) was evaluated based on the premise that this higher diversion amount provides a conservative representation of potential

impacts associated with increased diversions from the Sacramento River to meet the proposed Specific Plan long-term water supply needs.

The analysis below consists of two parts: first, an analysis to determine the effect of the proposed Specific Plan water supply in combination with all past, present, and reasonably foreseeable future projects (cumulative analysis); and second, if a significant cumulative impact is found, an analysis to determine the incremental contribution of the long-tem water supply to the cumulative impact. If the modeling results indicated that potentially significant or significant impacts would occur under the full (35,000 AFA) long-term water supply, then further evaluation would be performed to look more closely at the future Specific Plan long-term water supply project's 11,500 AFA diversion potential to affect environmental resources.

4.6-20 The off-site infrastructure areas could be affected by changes in flows in the lower American River, Sacramento River, and Sacramento-San Joaquin Delta and changes in water surface elevation at Shasta, Trinity and Folsom Reservoirs.

The *American River Basin Cumulative Report* evaluated the potential for future impacts to cultural resources associated with the lower American River, Sacramento River, Sacramento-San Joaquin Delta, and Folsom, Shasta and Trinity reservoirs. The results of this analysis indicated there would be ***no potentially significant cumulative impacts*** on lower American River flows, Folsom Reservoir elevation, Trinity Reservoir elevation, the upper and lower Sacramento River, and the Delta.

The Cumulative Report, did, however, identify potentially significant cumulative impacts to cultural resources associated with Shasta Reservoir elevation. Under the cumulative condition, there would not be significant increases in maximum monthly water surface reservoir elevation, relative to the existing condition, throughout the 70-year period of simulation. However, with regard to maximum drawdown, a comparison of the minimum end-of-month water surface elevations between the cumulative and existing conditions indicates that the minimum water surface elevation for each month would be from 8 to 45 feet msl lower, relative to the existing condition. This could result in increased exposure of cultural resources and represents a ***potentially significant cumulative impact*** to cultural resources at Shasta Reservoir.

Incremental Contribution of the Long-Term Water Supply. The proposed Specific Plan long-term water supply would not contribute to the reductions in minimum water surface reservoir elevation that would occur under the cumulative condition in any month of the year. In fact, under the proposed long-term water supply, there would be increases of up to one foot msl in the minimum and average end of the month elevation at Shasta Reservoir, relative to the cumulative condition (Template Output H-66). In 836 of the 840 months modeled, Shasta Reservoir end of the month elevation would remain equivalent to or greater than those elevations under the cumulative condition (Technical Appendix G-181 to G-192). Therefore, the proposed long-term water supply would not contribute significantly to increases in the exposure of cultural resources at Shasta Reservoir, and hence, would have no cumulatively considerable contribution to future significant impacts to Shasta Reservoir cultural resources. As the long-term water supply would not contribute to the impacts that occur under the cumulative condition, it would also have no

cumulatively considerable contribution to the impacts that occur under the cumulative condition. This impact is therefore considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

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4.7

Transportation and Circulation

4.7 TRANSPORTATION AND CIRCULATION

4.7.1 INTRODUCTION

This section of this Revised Draft EIR analyzes the transportation and circulation impacts associated with development of the *Placer Vineyards Specific Plan*, including roadways, transit services and bicycle facilities. The traffic analysis is conducted under existing, cumulative (2025) conditions and "super" cumulative conditions. It also includes analysis of a 2015 condition of development (Appendix I), and an analysis for Roseville based on the same assumptions used by the City of Roseville for their Capital Improvement Program (CIP).

This section is organized to include three parts. The first two parts are the environmental and regulatory settings. The Environmental Setting describes the existing transportation system and relevant characteristics of the proposed project. The Regulatory Setting describes the applicable transportation policies (including County General Plan policies), standards and regulations that apply to the Specific Plan. The third part describes the impact analysis and identifies specific proposed mitigation measures. Printouts of *Detailed Traffic Analysis Intersection Calculations* are available for review at the location identified in Section 2.9 of this Revised Draft EIR.

TRANSPORTATION ANALYSIS SCENARIOS

The traffic associated with full development of the proposed Specific Plan was estimated under existing and future (2025) conditions. The following conditions and scenarios of development were defined and evaluated:

EXISTING CONDITIONS

- Existing No Project scenario
- Existing Plus Project scenario

CUMULATIVE CONDITIONS

- Cumulative No Project scenario
- Cumulative Plus Project scenario
- Cumulative Plus Project with Mitigated Transportation Network scenario

SUPER-CUMULATIVE CONDITIONS

- Super-Cumulative Plus Project scenario

In addition, a discussion of an interim condition (2015) is provided in Appendix I.

The evaluation of the above conditions and scenarios is documented in this section of this Revised Draft EIR. Comparing traffic conditions under these conditions and scenarios provides a comprehensive basis for determining the traffic impacts of the proposed Specific Plan. To

determine the traffic impacts, the traffic associated with full development of the Specific Plan area was compared to a No Project scenario for the same time frame, as follows:

- The traffic impacts under the Existing Plus Project scenario were determined by comparing its traffic operations to the Existing No Project scenario.

- The traffic impacts under the Cumulative Plus Project scenario were determined by comparing its traffic operations to the Cumulative No Project scenario.

In addition to the above project conditions and scenarios, the following set of project alternatives was defined and evaluated:

- Blueprint Alternative
- 50% Density Reduction Alternative
- Rural Density Alternative

The evaluation of these three project alternatives is documented in Chapter Six of this Revised Draft EIR.

4.7.2 ENVIRONMENTAL SETTING

Evaluation of the operating characteristics of the existing circulation system in the vicinity of the Specific Plan area is the initial task in defining the transportation impacts of the Specific Plan. The following sections discuss existing roadway functions, traffic volumes, and traffic Levels of Service, as well as transit services and bicycle facilities.

STUDY AREA ROADWAY SYSTEM

The traffic analysis covers an area from north of Baseline Road to Elverta Road on the south, and from Hwy 65 on the east to Hwy 70/99 on the west. The study area (shown in Figures 4.7-1 and 4.7-2) for this traffic impact analysis covers portions of four jurisdictions: Placer County, Sutter County, Sacramento County and the City of Roseville.

The Circulation Plan Diagram in the *Placer County General Plan* depicts the circulation system for unincorporated Placer County by use of a set of roadway classifications. The roadway classification system has been developed to guide Placer County's long range capital improvement planning and programming. Roadways are classified in this system based on the linkages they provide and their function, both of which reflect their importance to the land use pattern, traveler, and general welfare. The County's functional classification system recognizes differences in roadway function and standards between urban/suburban areas and rural areas.

The roadway classifications are as follows:

- **Local streets** provide direct access to abutting land and access to the collector street system. The public uses these streets for local circulation. They carry little, if any, through traffic, and generally carry very low traffic volumes.

- **Collector roadways** are intended to "collect" traffic from local streets and carry it to roadways higher in the street classification hierarchy (e.g., arterials). The public uses these roadways as secondary circulation routes, and they generally carry light to moderate traffic volumes. Access to abutting land is normally permitted, but may be restricted to certain locations dependent upon future traffic volumes. In urban/suburban areas, major collector roadways will generally carry higher traffic volumes than minor collectors, and thus require more right-of-way and have more access restrictions.

- **Arterial roadways** are fed by local and collector roadways and provide linkages to the state highway system, as well as linkages to and between communities and major activity centers. The public uses these roadways as primary circulation routes for through traffic, and they carry higher volumes of traffic than local streets and collector roadways. In urban/suburban areas, major arterials will generally carry higher traffic volumes than minor arterials, and thus require more right-of-way and have more access restrictions. Rural arterial roadways may or may not carry high traffic volumes, but do provide primary access routes for through travel in rural areas of the county.

The existing roadway network in the vicinity of the Specific Plan area consists of state highways, arterials, collectors and local roadways. The key roadways shown in Figures 4.7-1 and 4.7-2 are described below.

- **Baseline Road** is an east-west rural arterial that runs along the northern boundary of the Specific Plan area. This roadway extends from the Sutter County line to Foothills Boulevard in the city of Roseville. Within Sutter County, this roadway becomes Riego Road, while east of Foothills Boulevard this roadway becomes Main Street. Baseline Road and Riego Road connect Roseville, west Placer County and south Sutter County with Hwy 70/99. East of Watt Avenue, Baseline Road carries about 12,600 vehicles per day, while west of Watt Avenue, Baseline Road carries 10,400 vehicles per day.

- **Watt Avenue** is a north-south arterial that crosses the Specific Plan area. This roadway runs from Baseline Road south to Florin Road in Sacramento County. Watt Avenue connects west Placer County with Interstate 80 and extends across the American River to provide access to U.S. 50. The roadway becomes South Watt Avenue at Jackson Road (Hwy 16), and becomes Elk Grove-Florin Road at Florin Road. Elk Grove-Florin Road continues south to Stockton Boulevard at Hwy 99 in the community of Elk Grove. Within Placer County, Watt Avenue has two travel lanes and carries about 7,100 vehicles per day.

- **PFE Road** is an east-west rural arterial that extends from Watt Avenue west to the city of Roseville, where it becomes Atkinson Street. East of Watt Avenue, this roadway carries about 4,700 vehicles per day.

- **Walerga Road** is a two-lane rural arterial that extends from Baseline Road south to Roseville Road in Sacramento County. It provides access between western Placer County and the Antelope area of Sacramento County. Walerga Road carries about 14,900 vehicles per day near Baseline Road.

- **Fiddyment Road** is a two-lane north-south rural arterial that extends north from Baseline Road along the western boundary of the city of Roseville to Moore Road, southwest of the city of Lincoln. North of Baseline Road, Fiddyment Road carries about 19,600 vehicles per day.

- **Brewer Road** is a two-lane north-south rural collector that extends from Baseline Road north across western Placer County. It terminates just south of the Bear River, which is the Yuba County line.

- **Locust Road** is a two-lane north-south rural collector that extends from the Sacramento County line north to Sunset Boulevard West. In Sacramento County this roadway becomes Elwyn Avenue.

- **Pleasant Grove Road is** a two-lane north-south rural arterial that runs along the Placer County/Sutter County line from Baseline Road south to the Sacramento County line, where it becomes Sorrento Road. Pleasant Grove Road also extends north of Riego Road, beginning about one-quarter mile west of its southern section, and runs north to the Yuba County line where it becomes Forty Mile Road. Pleasant Grove Road carries about 1,600 vehicles per day south of Baseline Road**.**

Palladay Road, 16th Street, Dyer Lane, Tanwood Avenue, Colburn Street, Newton Street, and Straight Road are two-lane rural local roadways that provide access to private properties within the Specific Plan area.

EXISTING TRAFFIC LEVELS OF SERVICE

Determination of traffic impacts of the proposed project is based upon projected roadway volumes and comparisons to roadway capacities. Roadway operating conditions are described using the concept of "Levels of Service."

Level of Service (LOS) is a qualitative measure of the effect of a number of factors which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operation costs. Levels of Service are designated "A" through "F," from the best to worst, which cover the entire range of traffic operations that might occur. Level of Service "E" describes conditions approaching or at maximum capacity.

Under the *Placer County General Plan*, the County has established a standard of LOS "C" for all roadways and intersections except those for within one-half mile of state highways, where the standard is LOS "D". Two types of Level of Service analyses were conducted in the unincorporated Placer County portion of the study area: peak hour intersection analysis and daily

segment-based Level of Service analysis. Tables 4.7-1, 4.7-2, 4.7-3, and 4.7-4 summarize the Level of Service criteria used for these analyses.

Table 4.7-I
Level of Service Definitions - Signalized Intersections (Placer, Sacramento and Sutter Counties)

LOS	V/C	Description
A	0.00-0.60	**Free Flow/Insignificant Delays:** No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.
B	0.61-0.70	**Stable Operation/Minimal Delays:** An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted.
C	0.71-0.80	**Stable Operation/Acceptable Delays:** Major approach phases fully utilized. Most drivers feel somewhat restricted.
D	0.81-0.90	**Approaching Unstable/Tolerable Delays:** Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delays.
E	0.91-1.00	**Unstable Operation/Significant Delays:** Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
F	>1.00	**Forced Flow/Excessive Delays:** Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections.

Note: V/C = Volume/Capacity
Sources: Circular 212, Transportation Research Board, 1981.

Table 4.7-2
Level of Service Criteria - Signalized Intersections (State Highways)

Level of Service (LOS)	Control Delay Per Vehicle (seconds)	Description
A	≤ 10.0	Very low control delay. Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	Generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS "A," causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.

Table 4.7-2 Level of Service Criteria - Signalized Intersections (State Highways)		
Level of Service (LOS)	**Control Delay Per Vehicle (seconds)**	**Description**
F	> 80.0	This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.
Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.		

Table 4.7-3 Level of Service Definitions - Unsignalized Intersections	
Level of Service (LOS)	**Average Delay per Vehicle (sec/vehicle)**
A	0 to 5.0
B	5.1 to 10.0
C	10.1 to 20.0
D	20.1 to 30.0
E	30.1 to 45.0
F	> 45.0
Source: Highway Capacity Manual, Transportation Research Board, 1994.	

Table 4.7-4 Level of Service Definitions - Daily Segment Based Analysis					
Roadway Capacity Class	**Maximum Daily Traffic Volume Per Lane for Each Level of Service Designation**				
	A	**B**	**C**	**D**	**E**
1) Arterial – High Access Control	6,000	7,000	8,000	9,000	10,000
2) Arterial – Moderate Access Control	5,400	6,300	7,200	8,100	9,000
3) Arterial and Collector – Low Access Control	4,500	5,250	6,000	6,870	7,500
4) Expressway[1] – Level Terrain	4,050	6,620	9,450	12,150	13,500
5) Freeway – Level Terrain	6,300	10,620	13,680	16,740	18,000
[1] Capacity assumes one-half minimum spacing between access points, grade separations at high volume intersections and signalization at low volume intersections. Used for portions of Baseline Road west of Watt Avenue under certain analysis scenarios. Source: Placer County General Plan Update, Countywide General Plan, Draft Environmental Impact Report, Placer County, 1994, except expressway.					

Figure 4.7-3 shows the existing daily traffic volumes on roadways in the unincorporated areas of Placer County in the vicinity of the Specific Plan area. The daily segment-based analysis criteria used to evaluate these roadways are consistent with the methodologies used in the *Placer County General Plan EIR*. Arterial roadways were evaluated using the criteria for "moderate access control arterials", while the criteria for "low access control arterials" were used for collector roadways. Table 4.7-5 contains the daily segment-based analysis for existing conditions.

Table 4.7-5 Existing Roadway Segment Levels of Service – Unincorporated Placer County				
Roadway	**Segment**	**No. of Lanes**	**ADT**	**LOS**
Baseline Road	East of County Line	2	10,100	A
Baseline Road	East of 16th Street	2	10,400	A
Baseline Road	East of Country Acres	2	10,400	B
Baseline Road	East of Watt Avenue	2	12,600	B
Baseline Road	East of Walerga Road	3	15,100	A
Walerga Road	South of Baseline Road	2	14,900	D
Watt Avenue	South of Baseline Road	2	7,100	A
PFE Road	East of Watt Avenue	2	4,700	A
PFE Road	East of Walerga Road	2	7,200	A

Note: ADT = average daily traffic
Source: DKS Associates, 2005.

Placer County uses the *Transportation Research Board Circular 212* (critical movement) method to evaluate Levels of Service at its signalized intersections. Analysis of Level of Service at unsignalized intersections is based upon the methodology found in the Transportation Research Board's *Highway Capacity Manual*. This method calculates Level of Service based on the delay on each of the stop-sign controlled movements at the intersection. For this Revised Draft EIR, the Level of Service for stop-sign controlled intersections is based on the average delay for all movements in the intersection. Table 4.7-6 summarizes existing peak hour conditions for key study intersections in unincorporated Placer County (see Figure 4.7-4 for intersection locations). The existing traffic volumes and lane geometry at each intersection in Table 4.7-5 are provided in Appendix I.

Table 4.7-6 Existing P.M. Peak Hour Levels of Service at Study Intersections in Unincorporated Placer County				
Intersection		**Level of Service**	**LOS Criteria**	
North-South Roadway	**East-West Roadway**		**Signalized Intersections (V/C Ratio)**	**Unsignalized Intersections (Delay)[1]**
Locust Road	Baseline/Riego Rd	E		46.8
Brewer Road	Baseline/Riego Rd	A		0.6
Watt Avenue	Baseline Road	E	0.94	
Fiddyment Road	Baseline Road	D (F)[2]	0.87 (>1.00)[2]	
Watt Avenue	PFE Road	C		16.3
Walerga Road	PFE Road	E	0.93	
Cook Riolo Road	PFE Road	B		10.2

[1] Average delay for all movements at intersection, including uncontrolled movements. Delay on some stop-signed controlled left-turn movements may be substantial, but typically impact a limited number of vehicles.
[2] Observed long queues indicate intersection operates at LOS "F".
Source: DKS Associates, 2005.

The study area also covers the western portion of Roseville. Under Cumulative conditions, an analysis of all signalized intersections in the city of Roseville using the City's Capital

Improvement Program (CIP) analysis methodology was conducted at the City's request. The study area also covers a portion of Sacramento County south of the Specific Plan area and a portion of south Sutter County that is west of the Specific Plan area. Levels of Service in these portions of the study area were calculated using the methodologies and policies of those jurisdictions as outlined below.

The *City of Roseville General Plan* states that it should strive to maintain LOS "C" on its roadway system. The City's Level of Service policy allows the City Council to take an action to accept degradation in the Level of Service of one or more of its signalized intersections from the levels identified in the 2020 CIP as long as 70% or more of the total signalized intersections in the city would operate at LOS "C" or better.

Roseville uses a modified version of the Circular 212 (critical movement) method that was adopted as part of Roseville's CIP to evaluate its intersections. This modified method assumes intersection capacities that are approximately 7% higher than the Circular 212 method used by Placer County. Table 4.7-7 summarizes existing peak hour intersection conditions for study intersections in Roseville (see Figure 4.7-5 for intersection locations). The existing traffic volumes and lane geometry at each intersection in Table 4.7-7 are provided in Appendix I.

Table 4.7-7
Existing P.M. Peak Hour Levels of Service at Study Intersections – City of Roseville

Intersection		Existing Conditions		
		Level of Service	LOS Criteria	
North-South Roadway	East-West Roadway		Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]
1 Fiddyment Road	Blue Oaks Blvd	C		14.3
2 Fiddyment Road	Pleasant Grove Blvd	B	0.62	
3 Junction Boulevard	Baseline Road	A	0.48	
4 Woodcreek Oaks Blvd	Blue Oaks Blvd	B	0.65	
5 Woodcreek Oaks Blvd	Pleasant Grove Blvd	C	0.75	
6 Woodcreek Oaks Blvd	Baseline Road	B	0.64	
7 Foothills Boulevard	Blue Oaks Blvd	D	0.89	
8 Foothills Boulevard	Pleasant Grove Blvd	C	0.73	
9 Foothills Boulevard	Junction Boulevard	F	1.03	
10 Foothills Boulevard	Baseline Road	D	0.81	
11 Foothills Boulevard	Cirby Way	E	0.99	
12 Riverside Avenue	Cirby Way	F	1.08	
13 Washington Boulevard	Pleasant Grove Blvd	C	0.76	
14 Fiddyment Road[2]	Baseline Road	C	0.76	

Note: Intersection numbers refer to Figure 4.7-5.
[1] Average delay for all movements at intersection, including uncontrolled movements. Delay in some stop-sign controlled left-turn movements may be substantial, but typically impacts a limited number of vehicles.
[2] This intersection is also analyzed under the Placer County methodology (see Table 4.7-6). The volume-to-capacity ratio and level of service standards differ due to different lane capacity assumptions.
Source: DKS Associates, 2005.

Unlike Placer, Sacramento and Sutter counties, Roseville does not use a daily segment-based analysis to evaluate impacts on its roadway system. Figure 4.7-6 shows the existing daily traffic volumes on Roseville roadways within the study area.

The portion of Sacramento County north of Elkhorn Boulevard was included in the traffic analysis study area. Sacramento County uses a LOS "E" standard for urban areas and a LOS "D" standard for rural areas. All of the roadways in the study area are located in an urban area. Like Placer County, Sacramento County uses a daily segment-based analysis to evaluate its roadways. Sacramento County's criteria for the segment-based analysis are the same as those used by Placer County. Figure 4.7-7 shows the existing daily traffic volumes on Sacramento County roadways within the study area. Table 4.7-8 contains the daily segment-based analysis for existing conditions on these roadways.

Table 4.7-8
Existing Roadway Segment Levels of Service – Sacramento County

Roadway	Segment	No. of Lanes	ADT	LOS
Elverta Road	East of Hwy 70/99	2	5000	A
Elverta Road	East of Rio Linda Boulevard	2	8,000	A
Elverta Road	East of 16th Street	2	10,400	A
Elverta Road	West of Watt Avenue	2	19,000	F
Watt Avenue	North of Elverta Road	4	19,400	A
Watt Avenue	North of Antelope Road	4	28,900	D
Watt Avenue	North of Elkhorn Boulevard	4	37,900	F
Walerga Road	North of Elverta Road	4	24,700	B
Walerga Road	North of Antelope Road	4	40,300	F
Walerga Road	North of Elkhorn Boulevard	4	31,100	D
16th Street	North of Elverta Road	2	400	A

Note: ADT = average daily traffic
Source: DKS Associates, 2005.

Sacramento County uses a modified version of the Circular 212 (critical movement) method to evaluate its signalized intersections. This modified method assumes intersection capacities that are about 10% higher than the Circular 212 method that is used by Placer County. Table 4.7-9 summarizes existing peak hour intersection conditions for study intersections in Sacramento County (see Figure 4.7-8 for intersection locations). The existing traffic volumes and lane geometry at each intersection in Table 4.7-9 are provided in Appendix I.

Table 4.7-9
Existing Peak Hour Levels of Service at Study Intersections – Sacramento County

Intersection		A.M. Peak Hour			P.M. Peak Hour		
		Level of Service	LOS Criteria		Level of Service	LOS Criteria	
North-South Roadway	East-West Roadway		Signalized Intersection (V/C Ratio)	Signalized Intersection (V/C Ratio)		Signalized Intersection (V/C Ratio)	Signalized Intersection (Delay)[1]
1 Hwy 70/99	Elverta Road	A		8.4	A		8.3
2 16th Street	Elverta Road	A		1.6 [1]	A		2.3 [1]
3 Watt Avenue	Elverta Road	A	0.56		A	0.60	

Table 4.7-9 Existing Peak Hour Levels of Service at Study Intersections – Sacramento County							
Intersection		A.M. Peak Hour			P.M. Peak Hour		
		Level of Service	LOS Criteria		Level of Service	LOS Criteria	
North-South Roadway	East-West Roadway		Signalized Intersection (V/C Ratio)	Signalized Intersection (V/C Ratio)		Signalized Intersection (V/C Ratio)	Signalized Intersection (Delay)[1]
4 Walerga Rd	Elverta Road	D	0.86		C	0.76	
5 Watt Avenue	Antelope Road	C	0.73		C	0.77	
6 Walerga Rd	Antelope Road	C	0.73		D	0.89	
7 Watt Avenue	Elkhorn Blvd	C	0.76		B	0.70	
8 Walerga Rd	Elkhorn Blvd	B	0.68		D	0.89	
9 Watt Avenue	Don Julio Blvd	A	0.51		C	0.74	
10 Watt Avenue	Air Base Drive	B	0.63		E	1.00	
11 Watt Avenue	Roseville Rd	D	0.88		E	0.97	
12 Watt Avenue	I-80 WB	B		16.6	B		14.1

Note: Intersection numbers refer to Figure 4.7-8
[1] Average delay for all movements at an unsignalized intersection, including uncontrolled movements. Delay on some stop-signed controlled left-turn movements may be substantial, but typically impacts a limited number of vehicles.
Source: DKS Associates, 2005.

Traffic forecasts indicate that the roadways in Sutter County that would experience significant changes in traffic volumes due to assumed development of the South Sutter County Specific Plan area are Riego Road and Hwy 70/99. Thus, these roadways are included in the traffic analysis study area. Sutter County has set a standard of LOS "D" for its roadway system in the *Sutter County General Plan 2015*. Figure 4.7-7 shows the existing daily traffic volumes on Sutter County roadways in the study area. Table 4.7-10 contains the daily segment-based analysis for existing conditions on these roadways using the same criteria as Placer and Sacramento counties.

Table 4.7-10 Existing Roadway Segment Levels of Service – Sutter County				
Roadway	Segment	No. of Lanes	ADT	LOS
Hwy 70/99	South of Riego Road	4	32,000	A
Hwy 70/99	North of Riego Road	4	29,000	B
Riego Road	East of Hwy 70/99	2	9,900	A

Note: ADT = average daily traffic
Source: DKS Associates, 2005.

Intersection Levels of Service in Sutter County were evaluated using the Circular 212 method. Table 4.7-11 summarizes existing peak hour intersection conditions for study area intersections in Sutter County (see Figure 4.7-8 for intersection locations). The existing traffic volumes and geometry at each intersection in Table 4.7-11 are provided in Appendix I.

Table 4.7-11 Existing P.M. Peak Hour Levels of Service at Study Intersections – Sutter County				
Intersection		Existing Conditions		
			LOS Criteria	
North-South Roadway	East-West Roadway	Level of Service	Signalized Intersection (Delay)	Unsignalized Intersection (Delay)[1]
Hwy 70/99	Riego Road	B	13.6	
Natomas Road	Riego Road	C (F)[2]		16.3 (50)[2]
Pleasant Grove North	Riego Road	C (F)[2]		20.9 (50)[2]
Pleasant Grove South	Riego Road	D (F)[2]		28.9 (50)[2]

Note: Intersection number refers to Figure 4.7-8.
[1] Average delay for all movements at intersection, including uncontrolled movements. Delay on some stop-signed controlled left-turn movements may be substantial, but typically impacts a limited number of vehicles.
[2] Observed delay is greater than the calculated delay.
Source: DKS Associates, 2005.

Two types of Level of Service analyses were conducted on the Caltrans facilities in the study area: peak hour intersection analysis and daily segment-based Level of Service analysis. Tables 4.7-2, 4.7-3 and 4.7-4 summarize the Level of Service criteria used for these analyses.

Figure 4.7-7 shows the existing daily traffic volumes on Caltrans roadways in the vicinity of the Specific Plan area. Hwy 70/99 north of Elverta Road was evaluated using the criteria for "expressway", while the criteria for "freeways" were used for the other freeways. Table 4.7-12 contains the daily segment-based analysis for existing conditions.

Table 4.7-12 Existing Freeway Segment Levels of Service – State Highways				
Roadway	Segment	Existing Conditions		
		Lanes[1]	ADT[2]	LOS
Hwy 70/99[3]	North of Riego Road	4	29,000	C
Hwy 70/99[3]	South of Riego Road	4	32,000	C
Hwy 70/99	South of Elverta Road	4	40,500	B
Hwy 65	North of Pleasant Grove Blvd	4	76,000	F
Hwy 65	South of Pleasant Grove Blvd	4	83,400	F
I-80	West of Watt Avenue	10	145,000	D
I-80	East of Auburn Boulevard	12	240,000	F
I-80	West of Riverside Avenue	8	184,200	F
I-80	East of Riverside Avenue	6	165,000	F
Business 80	West of Watt Avenue	6	133,000	F

1: Excluding carpool lanes.
2: ADT = average daily traffic, excluding HOV traffic
3: Evaluated as expressway, not as a freeway
Source: DKS Associates, 2005.

Caltrans uses the Transportation Research Board's *Highway Capacity Manual* method to evaluate Levels of Service at its signalized intersections. This method calculates Level of Service

based on the average intersection delay. Table 4.7-13 summarizes existing peak hour conditions for key study intersections on state highways (see Figure 4.7-4 for intersection locations). The existing traffic volumes and lane geometry at each intersection in Table 4.7-13 are provided in Appendix I.

Table 4.7-13
Existing P.M. Peak Hour Levels of Service at Study Intersections – State Highways

Intersection		Existing Conditions	
Freeway	Roadway	Level of Service	Signalized Intersection LOS (Delay)
1 Hwy 70/99	Riego Road	B	13.6
2 Hwy 70/99	Elverta Road	A	8.3
3A Hwy 65 SB	Pleasant Grove Blvd	C	20.8
3B Hwy 65 NB	Pleasant Grove Blvd	C	30.7
4A I-80 WB	Riverside Avenue	C	21.7
4B I-80 EB	Riverside Avenue	C	26.3
5 I-80 WB	Watt Avenue	B	14.1

Note: Significant impacts are highlighted in bold letters
Source: DKS Associates, 2005

EXISTING TRANSIT SERVICE

Local transit service in Placer County is currently provided by local governments and social service agencies. Most of the services are oriented towards senior citizens, disabled persons and other transit dependents, and are not geared towards commuters or congestion relief. Fixed-route service providers in south Placer County include Placer County Transit, Lincoln Transit, Roseville Fixed Route and Roseville Commuter Service. However, none of these transit routes serves the Specific Plan area. The Sacramento Regional Transit District (RT) provides fixed-route transit service in Sacramento County. The closest RT bus routes to the Specific Plan area are Routes 19, 84 and 101, which do not serve areas north of Watt Avenue and Black Saddle Drive (just north of Elverta Road, about one mile south of the Specific Plan area).

The vicinity of the Specific Plan area is not served by "dial-a-ride" transit services. Consolidated Transportation Services Agency, an independent provider of demand responsive transportation services to the elderly and disabled, provides services in portions of Placer County, but they do not serve the vicinity near the Specific Plan.

EXISTING BICYCLE FACILITIES

Bicycle facilities in Placer County are classified as follows:

- **Class I:** Off-street bike trails or paths which are physically separated from streets or roads used by motorized vehicles.

- **Class II:** On-street bike lanes with signs, striped lane markings and pavement legends.

- **Class III:** On-street bike routes marked by signs and shared with motor vehicles and pedestrians. Optional four-inch edge lines painted on the pavement.

There is a very limited bikeway system in the vicinity of the Specific Plan area.

Placer County adopted a *Bikeway Master Plan* in 1988. That plan covered much of Placer County, but not areas west of Watt Avenue.

PROPOSED GENERAL PLAN AND COMMUNITY PLAN AMENDMENTS

The following amendments to the *Placer County General Plan* related to transportation and circulation are proposed by the applicants and are considered herein (language to be added is shown in underline; language to be deleted is shown in strikethrough):

> Policy 3.A.7. The County shall develop and manage its roadway system to maintain the following minimum levels of service (LOS), or as otherwise specified in a Community or Specific Plan.
>
> a. LOS "C" on rural roadways, except within one-half mile of state highways where the standard shall be LOS "D."
>
> b. LOS "C" on urban/suburban roadways except within one-half mile of state highways where the standard shall be LOS "D."
>
> c. <u>An LOS no worse than specified in the Placer County Congestion Management Program (CMP) for the state highway system.</u>
>
> The County may allow exceptions to these levels of service standards where it finds that the improvements or other measures required to achieve the LOS standards are unacceptable based on established criteria. In allowing any exception to the standards, the County shall consider the following factors:
>
> - The number of hours per day that the intersection or roadway segment would operate at conditions worse than the standard.
> - The ability of the required improvement to significantly reduce peak hour delay and improve traffic operations.
> - The right-of-way needs and the physical impacts on surrounding properties.
> - The visual aesthetics of the required improvement and its impact on community identity and character.
> - Environmental impacts including air quality and noise impacts.

- Construction and right-of-way acquisition costs.

- The impacts on general safety.

- The impacts of the required construction phasing and traffic maintenance.

- The impacts on quality of life as perceived by residents.

- Consideration of other environmental, social, or economic factors on which the County may base findings to allow an exceedance of the standards.

Exceptions to the standards will only be allowed after all feasible measures and options are explored, including alternative forms of transportation.

~~Policy 3.A.8 The County's level of service standards for the State highway system shall be no worse than those adopted in the Placer County Congestion Management Program (CMP).~~

Policy 3.A.12 The County shall require an analysis of the effects of traffic from all land development projects. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project consistent with Policy 3.A.7. Such improvements may include a fair share of improvements that provide benefits to others.

The following amendments to the *Dry Creek/West Placer Community Plan* related to transportation and circulation are proposed by the applicants and are also considered herein (language to be added is shown in underline; language to be deleted is shown in strikethrough):

Policy 9. The level of service (LOS) on roadways and intersections identified on the Capital Improvement Program (CIP) shall be a Level C or better. The first priority for available funding shall be the correction of potential hazards. ~~Land development projects shall be approved only if LOS C can be sustained on the CIP roads and intersection after:~~

~~a. Traffic from approved projects has been added to the system.~~
~~b. Improvements funded by this program have been constructed.~~

The County may allow exceptions to this level of service (LOS) standard where it finds that the improvements or other measures required to achieve the LOS standard are unacceptable based on established criteria. In allowing any exception to the standard, the County shall consider the following factors:

- The number of hours per day that the intersection or roadway segment would operate at conditions worse than the standard.

- The ability of the required improvement to significantly reduce peak hour delay and improve traffic operations.

- The right-of-way needs and the physical impacts on surrounding properties.

- The visual aesthetics of the required improvement and its impact on community identity and character.

- Environmental impacts including air quality and noise impacts.

- Construction and right-of-way acquisition costs.

- The impacts on general safety.

- The impacts of the required construction phasing and traffic maintenance.

- The impacts on quality of life as perceived by residents.

- Consideration of other environmental, social, or economic factors on which the County may base findings to allow an exceedance of the standards.

Exceptions to the standard will only be allowed after all feasible measures and options are explored, including alternative forms of transportation.

SPECIFIC PLAN PROPOSED TRANSPORTATION AND CIRCULATION-RELATED GOALS AND POLICIES

The following goals and policies related to transportation and circulation are contained in the proposed Specific Plan

Goal 5.1 Create and maintain a balanced, multi-modal transportation system that provides for the efficient and safe movement of people, goods, and services.

Goal 5.2 Provide a complete network of transportation improvements including thoroughfares, arterials, collectors, and local roadways.

Goal 5.3 Locate roadways, wherever possible, adjacent to open space, public facilities, and multi-family residential and commercial uses to minimize the need for sound walls.

Goal 5.4 Minimize street widths, orient homes to front on low-volume connector streets, and provide landscape corridors that improve the streetscape environment.

Goal 5.5 Minimize traffic congestion in Placer Vineyards by discouraging regional thru-traffic on collector and local residential streets.

Goal 5.6 Promote public transit systems as an alternative means of transportation to reduce traffic congestion.

Goal 5.7 Provide a system of on- and off-street trails that connect to destinations within the Plan Area and to the regional trail network.

Goal 5.8 Baseline Road, Watt Avenue, and their intersections with side streets shall be planned, designed, constructed, and operated to handle high thru-traffic volumes with minimum delay.

Policies: (Note, all figure and table references that follow in this section are to the Specific Plan)

Policy 5.1 Level of Service Standards. Within the boundaries of the Specific Plan Area and on its boundaries, the Placer Vineyards roadway system will be developed and managed to accommodate a Level of Service (LOS) D. Outside the Specific Plan Area, roadways shall conform to General Plan Standards that require the County to develop and maintain a minimum LOS "C" for rural and urban/suburban roadways, except within one-half mile of state highways where the standard shall be LOS "D", or as provided in Policy 5.2.

Policy 5.2 Exceptions to General Plan Level of Service Standards. The County will allow exceptions to these LOS standards where it finds that the improvements or other measures required to achieve the LOS standards are unacceptable based on established criteria. In allowing any exception to the standards, the County shall consider the following factors:

1. The number of hours per day that the intersection or roadway segment would operate at conditions worse than the standard

2. The ability of the required improvement to significantly reduce peak hour delay and improve traffic operations

3. The right-of-way needs and the physical impacts on the surrounding properties

4. The visual aesthetics of the required improvement and its impact on community identity and characters

5. Environmental impacts, including air quality and noise impacts

6. Construction and right-of-way acquisition costs

7. The impacts on general safety

8. The impacts of the required construction phasing and traffic maintenance

9. The impacts on quality of life as perceived by residents

10. Consideration of other environmental, social, or economic factors on which the County may base findings to allow an exceedance of the standards

Exceptions to the standards will be allowed only after all feasible measures and options are explored, including alternative forms of transportation.

Policy 5.3 Roadway System. The roadway system shall comply with Figure 5.2, the street sections in Figure 5.3, and the policies and design guidelines presented in this chapter and in Chapter VI, "Community Design." Figure 5.2 is intended to be a guide to internal roadway traffic needs. As each area is developed, additional roundabouts or traffic signals may be added in the future, as determined necessary by the County, for traffic flow and traffic calming. Local streets providing property access are not indicated in Figure 5.2.

Policy 5.4 Street Section Design. The project shall dedicate rights-of-way of sufficient width to accommodate all future anticipated lanes, including auxiliary lanes, and intersection widening for dual left-turn lanes and free right-turn lanes. The street sections proposed in Figure 5.3 are generally consistent with Placer County street standards and shall conform to the following standards. Refer also to Chapter VI, "Community Design," for more specific landscape and streetscape design guidelines.

1. The landscape corridor lots of all streets shall be dedicated at the same time as street rights-of-way. See Figures 6.1 through 6.3 for street corridor design concepts for Baseline Road, Watt Avenue, and Dyer Lane.

2. Thoroughfares: Baseline Road and Watt Avenue.

   The General Plan describes thoroughfares as major arterial streets designed to carry high volumes of thru-traffic with limited travel delay. Baseline Road and Watt Avenue shall be designed as thoroughfares with on-street bike lanes adjacent to 50-foot landscape corridors and meandering bike and pedestrian trails. They shall also include 20-foot-wide landscape medians with turnouts provided at no more than 1,100-foot intervals to provide access for emergency vehicles and landscape maintenance.

   Baseline Road is projected to become six lanes divided by a raised median. Figure 5.3, Section A, illustrates the proposed street sections for Baseline Road.

   At ultimate build-out, Watt Avenue is anticipated to be six to eight lanes with two lanes dedicated for bus rapid transit (BRT) right-of-way. Figure

5.3, Section B, illustrates the proposed initial phasing and ultimate build-out street sections for Watt Avenue with and without the BRT system.

Thoroughfares will provide limited access at the locations indicated in Figure 5.2. No new connections shall be allowed on thoroughfare roads in addition to those shown in Figure 5.2 unless it can be shown that the new connection will benefit overall traffic flows. Access points shall be coordinated with the County to prevent driveways with parking along thoroughfare roads.

3. Arterials: Dyer Lane and 16th Street.

Arterial streets are high-volume streets with limited, controlled intersections. Their proposed street sections are illustrated in Figure 5.3, Sections D and E. Local and collector roadways feed arterial streets to provide linkages between neighborhoods and major employment centers. Arterial roads shall be designed to be four-lane divided streets with 14-foot medians, on-street bike lanes, and 35-foot landscape corridors with separated, meandering multi-use trails. Turnouts shall be provided in the medians at no more than 1,100-foot intervals to provide access for emergency vehicles and landscape maintenance work.

Arterials will provide limited access with minimum intersection spacing at approximately every one-quarter mile (1,200 feet). Right-in/right-out access points without median breaks may be provided spaced at a minimum of 600 feet. Residential uses abutting arterial streets should be screened appropriately with sound walls and landscape buffers.

4. Major Collector Streets

Major collector streets carry moderate traffic volumes. Major collector street sections are illustrated in Figure 5.3, Section F.

Major collector streets provide access to individual development areas, neighborhoods, schools, parks, and other community amenities. Major collector streets are generally characterized as two-lane roadways with on-street bike lanes, parallel parking, and separated tree lined sidewalks within a 20-foot landscaped corridor to buffer adjacent land uses. The minimum distance from intersections to driveways shall be 600 feet or a distance determined appropriate by the County for safe access and traffic flow.

5. Collector Streets

Collector streets carry light to moderate traffic volumes. Collector street sections are illustrated in Figure 5.3, Sections G, H, and TC2. Collector

streets provide access to individual development areas, neighborhoods, schools, parks, and other community amenities. Collector streets are generally characterized as two-lane roadways with on-street bike lanes, parallel parking, and separated tree-lined sidewalks within an 18-foot landscaped corridor to buffer adjacent land uses. The minimum distance from intersections to driveways shall be 300 feet or a distance determined appropriate by the County for safe access and traffic flow.

6. Commercial Streets

Commercial streets are roadways that serve parcels within the commercial, business park, Power Center, and Town Center areas. They typically do not include bike lanes. Standards for commercial streets not included in the Town Center are shown in Figure 5.3, Section C1. Standards and street sections for the Town Center commercial streets are provided in Figure 5.3, Section TC1, and in Figures 6.12 through 6.14 of Chapter VI, "Community Design."

7. Local Streets

Local streets are not located in the circulation diagram. They provide access to neighborhoods within the Plan Area and include non-residential and residential streets. Local streets are low traffic volume, two-lane roadways with parallel parking, separated sidewalks, and tree-lined landscape parkways. Local streets will be determined in conjunction with specific site development at the time of tentative map submittal. Sections for local residential streets and cul-de-sacs are provided in Figure 5.3, Sections R1, R2, and R3.

Policy 5.5 Preservation of oak trees on Dyer Lane. To the extent possible, the roadway alignment for Dyer Lane shall be designed to avoid removing and disturbing the existing oak trees on Dyer Lane.

<u>Roadway Design Guidelines</u>

Roadways shall be designed according to the following guidelines:

1. Roads shall be designed for their dual roles as vehicular and non-vehicular transportation corridors with landscape berms or open space parkways, containing bicycle and pedestrian trails.

2. Local roadways shall be located to facilitate local circulation and shall discourage regional thru-traffic. Regional thru-traffic shall be concentrated on Baseline Road and Watt Avenue.

3. Thoroughfares, Baseline Road and Watt Avenue, shall be located at the perimeter of major development areas.

4. A finer grain network of connector streets shall be located to provide convenient access to all land use parcels.

5. East-west connector streets shall generally provide through connections between and through land use areas while north-south connector streets may be more discontinuous, terminating at parks, open space and neighborhood entries.

6. Multiple points of access to development areas are encouraged, to maximize the number of streets that carry traffic and the distribution of traffic loads from each development area.

7. Neighborhoods should be designed with internal connecting streets to encourage a more open and accessible network for residents and improve the distribution of traffic throughout the roadway network. However, cul-de-sac roads are not excluded within residential areas as long as they are not excessively used.

8. Development areas and commercial sites shall be interconnected to allow for internal circulation and minimize impacts on adjacent arterial roadways.

9. Cul-de-sac roads should be no greater than 800 feet in length.

10. Streetscapes shall be designed in accordance with the design guidelines found in Chapter VI, "Community Design."

Policy 5.6 Regional Transportation Improvements. Relative to the traffic impacts generated by the project, Placer Vineyards landowners and the County shall define development agreements to ensure that the project pays for its fair share of transportation improvements.

Policy 5.7 Off-site Transportation Improvements. Placer Vineyards shall provide traffic signals and off-site intersection improvements, in conjunction with development in the Plan Area at the following locations:

1. Riego Road and East Natomas Road
2. Riego Road and Pleasant Grove Road
3. Baseline Road and Pleasant Gove Road

Policy 5.8 On-site Transportation Improvements. The Placer Vineyards development shall fund and construct all transportation network improvements, including roadway design, traffic signalization, and traffic calming, necessary to support the new development when and as they are needed.

Policy 5.9 Concurrency. Roadway improvements shall be constructed to coincide with the demands of new development as required to satisfy minimum level of service standards, as set by this Specific Plan.

Policy 5.10 Local Intersection Improvements. Placer Vineyards shall provide local intersection improvements as guided by Figure 5.2.

1. Signalized intersections for the thoroughfares, Baseline Road and Watt Avenue, are provided in Figure 5.2 at the following locations. On Baseline Road, signalized intersections are located on Locust Road, Dyer Lane (west), Palladay Road, 16th Street, 14th Street, 12th Street, Tanwood Avenue, Watt Avenue, Dyer Lane (east) and Park Street. On Watt Avenue, signalized intersections shall be provided at A Street, Town Center Drive (east), Oak Street and Dyer Lane. On Dyer Lane, signalized intersections are provided at A Street (east and west), Town Center Drive (east and west), 18th Street, Palladay Road, 16th Street, Tanwood Avenue and 11th Street. For commercial developments on A Street, signalized intersections shall be provided at Palladay Road, 16th Street, 14th Street and 12th Street.

2. Baseline Road and Watt Avenue intersections shall be planned and designed to accommodate the needs of thru-traffic. This will include traffic synchronization and intersection designs that favor through movements and minimize conflict points. This may also include additional turning lanes or other special features, such as pedestrian amenities that highlight intersection crossings

3. Roundabouts shall be located along the major east-west collector streets and lower volume traffic streets, focused at the intersections of residential neighborhoods.

4. Roundabouts shall be considered as an alternative, where all-way stops or traffic signals are indicated in the future (i.e., project build-out).

5. The County shall also reserve the right to require additional traffic signals or roundabouts in the future, as determined to be necessary for traffic flow or safety.

6. The County shall also reserve the right to modify the minimum distance from a street intersection to a development driveway, as determined to be necessary for the traffic flow or safety of a specific site condition.

Policy 5.11 Access within the Development Site. Primary access to development will be avoided on high-volume arterial and thoroughfare roadways, and instead will be provided on collector or neighborhood streets and shall comply with the following standards.

1. Thoroughfares shall provide limited access. No driveways shall be permitted on Baseline Road or Watt Avenue. Access to properties fronting on Baseline Road shall be provided mainly from A Street and to a lesser extent from the roads that connect A Street to Baseline Road. Access to parcels from these connector roads shall be located at sufficient distance from Baseline Road so as not to impede the flow of traffic or create safety issues.

2. Access to development sites from thoroughfares and arterials allowing for left turns into and out of the sites shall be limited to the identified signalized intersections in the Placer Vineyards Specific Plan, unless otherwise required under future development patterns.

3. Minor right-turn-in and right-turn-out access points may be permitted by the County upon further detailed review and analysis of potential traffic and circulation impacts.

4. See Figure 6.18 in Chapter 6, "Community Design," for conceptual site access designs for neighborhood commercial sites on high-volume roadways.

Policy 5.12 Minimizing Barriers to Access. The circulation and site plans for individual developments proposed within the Plan Area shall minimize barriers to access by pedestrians, the disabled, and bicyclists. Handicap ramps shall be incorporated into the design of all intersections and bicycle racks shall be located convenient to all retail, office, and civic sites.

Policy 5.13 Fire and Emergency Access. All new development shall be coordinated with the local fire department to ensure that adequate emergency access is provided to all development areas and that emergency access routes are designed to the specification of the Placer County Fire Department

Policy 5.14 Sound Walls. Use of sound walls is discouraged. Where sound walls are required because of noise levels and traffic volumes on major streets, screen landscaping and mounding should be provided to minimize their visual impact and create a more attractive streetscape. Refer to Section 4.10 for additional policies related to noise levels and to Section 6.4.3 for walls, fences, and screening techniques and design guidelines.

Policy 5.15 Traffic Calming Roadway Design. Use of traffic calming roadway design techniques in the design of residential streets and intersections is required. Techniques may include corner bulb-outs at intersections, traffic circles and rotaries, chokers, chicanes, etc. See the chart below and Figure 5.4 for recommended traffic calming designs. In all cases, traffic calming devices shall

be designed not to restrict access by emergency vehicles or inadvertently limit emergency response times below the required level of service standard.

Policy 5.16 Bus Rapid Transit System. A public transit system and dedication of the right-of-way corridor for future bus rapid transit with feeder bus network shall be provided along Watt Avenue from Baseline Road to the Dyer Lane intersection just north of Dry Creek.

Policy 5.17 Streetcar Right-of-Way. Dedication of rights-of-way for a future streetcar system shall be provided along the north side of Town Center Drive, extending from the transit center on Watt Avenue to the Town Center, ending at 16th Street.

Policy 5.18 Multi-modal Transit Center. A transit center will be located on Town Center Drive to serve as a transfer point for regional and local transit services. The transit center site shall be of sufficient size to accommodate all future anticipated uses. It will include covered shelters, bus staging areas, park-and-ride lots, and bicycle storage facilities.

Policy 5.19 Transit Service and Facilities. Placer Vineyards shall participate in regional service with connection to light rail transit on Watt Avenue in Sacramento County, Regional University, Galleria Mall, and other regional centers. As each parcel is developed, provisions for bus stops, turnouts, shelters, park-and-ride lots, bike lockers, lighting, and other transit support facilities will be examined and constructed.

Policy 5.20 Provision of Park-and-Ride Lots. Park-and-ride lots shall be established and maintained at the Town Center and transit center at the East Village Center. The majority of the park-and-ride spaces shall be accommodated in the transit center where a majority of local and regional commute trips will be concentrated. A minimum of 50 spaces shall be provided in the Town Center, established as shared parking. Other smaller park-and-ride lots are encouraged to be established as a shared parking use incorporated into the overall parking design of other commercial and office centers or adjacent to public transit.

In total, a minimum of 193 parking spaces shall be distributed between the park-and-ride lots. More park-and-ride lots should be provided, especially adjacent to neighborhood activity centers, transit routes, and major transit corridors to encourage ridesharing, promote use of public transit, and reduce air pollution.

Policy 5.21 Trail System. Trails shall be provided as identified by Figure 5.6, "Off-Street Trails Diagram."

Policy 5.22 Types of Trails. Trails shall be provided within the Plan Area that offer a variety of experiences, including trails within and between parks and other public open space lands or to schools, and trails that connect to regional trails and transit facilities within and outside of the Plan Area.

Policy 5.23 Provision of Trails. Private developers shall incorporate trail routes that are within their proposed tentative maps as identified in the trails diagram (see Figure 5.6). Placer Vineyards trails shall conform to the following standards.

1. In the Dry Creek corridor only, Class I bicycle trails shall be 12-foot-wide, asphalt concrete paving with 2-foot-wide decomposed granite trails on both sides of the asphalt concrete paving.

2. In all other areas, Class 1 bicycle trails (10-foot wide, asphalt concrete paving) will be provided with 2-foot-wide decomposed granite jogging paths provided on both sides of the asphalt concrete paving.

3. In open space areas, natural surface multi-use trails may be set a minimum of 10 feet off the asphalt concrete paving trail (for activities such as equestrian riding and mountain biking).

4. Informational signs will be placed throughout the trail system (e.g., "2.4 miles to Town Center").

5. Trails will be set back a minimum of 10 feet from residences.

6. Trails will be set back a minimum of 25 feet from preserved or reconstructed wetlands.

7. Collapsible bollards will be placed at entries to restrict vehicular access where trails and streets intersect.

8. Trail crossings of drainage ways will occur at appropriate intervals.

9. Traffic calming methods and signage shall be used to enhance the safety of the trail systems where they cross major or collector streets.

10. A Class I trail crossing shall be provided under the Watt Avenue bridge within the Dry Creek corridor.

11. A Class I trail shall also be provided on the east side of the Dry Creek bridge and along Watt Avenue, extending to the Placer/Sacramento County line. The Class I trail on the east side of the bridge will be separated from traffic by a concrete railing.

Policy 5.24 Construction of Bike Trail Improvements. Bike trail improvements are planned to connect Morgan Creek to Gibson Ranch Park. Landowners shall design and construct bike trail improvements within the open space portions of their property. according to the following standards and provisions of the Development Agreement.

1. In conjunction with the construction of a core backbone roadway system, a set of core backbone trails adjacent to these roadways, as described in Section 9.3 and the Public Facilities Financing Plan, shall be constructed at the same time that the core backbone roadways are constructed.

2. Landowners shall install sections of the trail when it installs subdivision improvements within the parcels adjacent to the open space. Trail connections to the core backbone trails shall be included as part of the subdivision improvements.

3. Bike trail sections shall be constructed and improved according to Figure 5.6, "Off-Street Trails Diagram." Bike trails shall be designed in accordance with the County's design standards for off-street bike trails and the guidelines provided in the Specific Plan.

4. Landowners shall proceed to complete the construction of bike trail improvements at the same time that they install and complete the balance of the subdivision improvements for the parcel(s) adjacent to the open space.

5. Landowners shall be responsible for all costs associated with the design and construction of bike trail improvements, including the costs of preparing required plans and drawings and obtaining all required permits.\

6. Upon completion of bike trail improvements by the landowner, the County shall accept the dedication of the bike trail and applicable open space area and assume ownership and maintenance of these facilities, provided that the cost of maintenance shall be funded by the County Service Area.

Policy 5.27 Provision for Equestrian Trails. An east-west equestrian trail connection is proposed within the open space buffer areas adjacent to the Placer/Sacramento County line. It will connect the Plan Area to the facilities in Gibson Ranch Park and link into the equestrian trail system proposed along the south side of Dry Creek, as directed by the Dry Creek/West Placer Community Plan.

4.7.3 REGULATORY SETTING

A number of County standards, plans and programs apply to the evaluation of transportation impacts of the proposed project. These standards cover the primary aspects of the transportation system (operations and design).

PLACER COUNTY GENERAL PLAN POLICIES

The *Placer County General Plan* policies addressing transportation and circulation are identified below. A separate discussion is provided for Policy 3.8.7 at the end of this section.

3.A.2 Streets and roads shall be dedicated, widened, and constructed according to the roadway design and access standards generally defined in Section I of this *Policy Document* and, more specifically, in *community plans* and the County's *Highway Deficiencies Report*. Exceptions to these standards may be necessary but should be kept to a minimum and shall be permitted only upon determination by the Public Works Director that safe and adequate public access and circulation are preserved by such exceptions.

3.A.3 The County shall require that roadway rights-of way be wide enough to accommodate the travel lanes needed to carry long-range forecasted traffic volumes (beyond 2010), as well as any planned bikeways and required drainage, utilities, landscaping, and suitable separations. Minimum right-of-way criteria for each class of roadway in the county are specified in Part I of this *Policy Document*.

3.A.6 The County shall require all new development to provide off-street parking, either on-site or in consolidated lots or structures.

3.A.9 The County shall work with neighboring jurisdictions to provide acceptable and compatible levels of service and joint funding on the roadways that may occur on the circulation network in the Cities and the unincorporated area.

3.A.10 The County shall strive to meet the level of service standards through a balanced transportation system that provides alternatives to the automobile.

3.A.12 The County shall require an analysis of the effects of traffic from all land 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.

3.A.14 The County 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. Exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues.

3.B.2 The County shall promote the provision of high quality transit service in transit corridors designated in Figure I-7 in Part I of the Policy Document.

3.B.3 The County shall consider the need for future right-of-way in reviewing and approving plans for development. Rights-of-way may be either exclusive or shared with other vehicles.

3.D.5 The County shall continue to require developers to finance and install pedestrian walkways, equestrian trails, and multi-purpose paths in new development, as appropriate.

3.D.7 The County shall, where appropriate, require new development to provide sheltered public transit stops, with turnouts.

PLACER COUNTY GENERAL PLAN POLICY 3.A.7 AND DRY CREEK/WEST PLACER COMMUNITY PLAN LEVEL OF SERVICE STANDARDS

Under *Placer County General Plan* Policy 3.A.7, the County has established a standard of LOS "C" or better for its roadway system, or as otherwise specified in a community plan or specific plan. The *Dry Creek/West Placer Community Plan* also sets a LOS "C" standard. Consequently, LOS "A", "B", and "C" are considered acceptable, while "D", "E" and "F" are unacceptable. Within one-half mile of a state highway, LOS "D" is considered acceptable under the *Placer County General Plan*. In addition, community plans and specific plans may set standards that differ from LOS "C" for roadways and intersections within the plan boundaries. Exceptions are also allowed based on the following considerations:

- The number of hours per day that the intersection or roadway segment would operate at conditions worse than the standard.
- The ability of the required improvement to significantly reduce peak hour delay and improve traffic operations.
- The right-of-way needs and the physical impacts on the surrounding properties.
- The visual aesthetics of the required improvement and its impact on community identity and character.
- Environmental impacts including air quality and noise impacts.
- Construction and right-of-way acquisition costs.
- The impacts on general safety.
- The impacts of the required construction phasing and traffic maintenance.
- The impacts on quality of life as perceived by residents.
- Consideration of other environmental, social or economic factors on which the County may base findings to allow an exceedance of the standards.

The Specific Plan has established a standard of LOS "D" or better for its roadway system. This covers all roadways and intersections both internal to the project and on the project boundaries, including Baseline Road.

PLACER COUNTY IMPROVEMENT STANDARDS

Roadway improvements within Placer County must conform to a set of standard plans that detail County standards for pavement width, lighting, drainage, sewer, and other roadside facilities. Roadway facilities associated with the proposed Specific Plan must meet or exceed these standards.

PLACER COUNTY CAPITAL IMPROVEMENT PROGRAM (CIP)

The Placer County CIP identifies roadway improvements that are needed to meet the County's Level of Service standards. The County has established eleven benefit districts, each of which has a separate CIP and associated traffic impact fee. The CIP identifies roadway improvements and facilities within each district needed as a result of future development. The CIP also provides details on funding sources for each project, including amounts to be collected through the Traffic Impact Fee Program. Traffic impact fees are based on Dwelling Unit Equivalents and are charged on all new development within a district, regardless of type or location. Traffic impact fees are indexed to construction costs and are adjusted annually. The CIP and fees are periodically updated as conditions change to account for approvals to major land use projects and reflect completed roadway improvements or updates to local community plans.

PLACER COUNTY BIKEWAY MASTER PLAN

The *Placer County General Plan* calls for the development of a comprehensive bikeway system that would provide connections between the major urban areas of the county, with linkages to bikeway systems in other jurisdictions. The County adopted the *Placer County Regional Bikeway Plan* in 2002 to provide guidelines for the development of a countywide network of bicycle facilities and design standards (based on Caltrans standards) for new bicycle facilities.

PLACER COUNTY TRUCK ROUTES

Placer County has not developed a system of truck routes for the unincorporated area. However, trucks are prohibited from using specific bridges and roadways.

4.7.4 IMPACTS AND MITIGATION MEASURES

This section identifies and discusses the transportation-related environmental impacts resulting from the proposed Specific Plan, and suggests mitigation measures to reduce the level of significance of impacts. The discussion begins by describing the thresholds for determining when an impact is considered significant (standards of significance). This is followed by a description of the analysis methodology, the presentation of specific impacts and proposed mitigation measures.

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a project will have a significant effect on the environment if it will cause a substantial increase in traffic in relation to the existing traffic load and capacity of the street system. For this analysis, Levels of Service will be used as the basis for determining significant impacts.

Potential significant impacts associated with traffic have been evaluated using the following specific criteria:

- In unincorporated Placer County outside of the Specific Plan area, the Specific Plan would increase congestion on County roadway segments and/or at County intersections to the extent that one or more roadway or intersections would deteriorate from LOS "C" or better to levels below LOS "C," or from LOS "D" within one-half mile of state highways to below LOS "D", or would increase congestion by more than 5% on a roadway or at an intersection already operating at an unacceptable Level of Service.

- Within the Specific Plan area (including adjacent roadways and intersections), the Specific Plan would cause a roadway or intersection to operate at LOS "E" or "F", or would increase congestion by more than 5% on a roadway or at an intersection already operating at LOS "E" or "F".

- In Roseville, the Specific Plan would increase congestion to the extent that one or more signalized intersections previously identified in Roseville's CIP as functioning at LOS "C" or better (volume-to-capacity [V/C] ratio of 0.81 or better) would deteriorate to LOS "D" or worse (V/C ratio of 0.82 or worse); or, at a signalized intersection previously identified in Roseville's CIP as functioning at LOS "D" or "E" conditions, the increased congestion causes operations to deteriorate to a worse standard level. This criterion requires an analysis based on the City of Roseville's buildout development forecasts.

- In Roseville, the Specific Plan would increase congestion to the extent that the number of signalized intersections operating at LOS "C" or better conditions would be reduced to less than 70% of the total number of signalized intersections in the city. This criterion requires an analysis based on the City of Roseville's buildout development forecasts.

- In Sacramento County, the Specific Plan would increase congestion to the extent that one or more intersections would deteriorate from LOS "E" or better to LOS "F". For facilities that are or will be (cumulative condition) operating at unacceptable Levels of Service without the project, an impact is considered significant if increased congestion due to the Specific Plan would:

    - Increase the average delay at one or more unsignalized intersections by more than five seconds, or

- Increase the V/C ratio by 0.05 or more on a roadway or at one or more signalized intersections.

- In Sutter County, the Specific Plan would increase congestion to the extent that intersection operations would deteriorate to levels below Sutter County's LOS "D" standard.

- The Specific Plan would increase congestion to the extent that operations on a state highway would deteriorate to levels below those identified in Caltrans' Transportation Concept Report (TCR). The TCRs for Hwy 65, Hwy 70/99 and I-80 indicate that these state highways have a LOS "E" standard.

- Planned transit services do not meet the additional transit demand generated by the Specific Plan, which includes helping the County meet its Level of Service standard, transportation systems management standards and air quality goals.

- Planned bicycle facilities do not provide adequate capacity for the additional bicycle trips generated by the Specific Plan, and the policies and guidelines of Placer County's *Bikeway Master Plan*.

METHODOLOGY

OVERVIEW

Transportation system needs and impacts are based on the Placer County Travel Demand Model, which was originally developed by DKS Associates in 1993 and has since been updated and revalidated to 2004 conditions. The model translates land uses into roadway volume projections. Its inputs are estimates of development (i.e., the number of single-family and multi-family dwelling units and the amount of square footage of various categories of non-residential uses) and a detailed description of the roadway system. The model covers the portions of Placer County west of Colfax, as well as the entire Sacramento region, including Sacramento, Yolo and south Sutter counties. For areas outside Placer County, the model uses the trip generation estimates from the regional model used by the Sacramento Area Council of Governments (SACOG). The Placer County model also maintains a general consistency with the trip distribution and mode choice estimates from SACOG's regional model for the entire region.

For intersections within the Specific Plan area, this analysis assumes the intersection geometries shown in the traffic appendix to the Placer Vineyards Specific Plan and Blueprint Specific Plan.

To evaluate Specific Plan impacts, two types of roadway Level of Service analyses were conducted in the study area. A roadway segment analysis based on average daily traffic volumes and capacities was conducted following the same methodology used in the *Placer County General Plan EIR*. In addition, an intersection Level of Service analysis was performed for p.m. peak hour traffic conditions. This analysis addressed the major intersections in the vicinity of the Specific Plan area, as shown in Figures 4.7-4, 4.7-5 and 4.7-8. Placer County assesses traffic impacts based on p.m. peak hour conditions as the p.m. peak hour is typically the worst one-hour

period during that day. As individual development projects within the Specific Plan area are proposed, additional traffic analysis may reveal the need for additional improvements to provide acceptable operations for a.m. peak period operations as well.

SPECIFIC PLAN TRIP GENERATION

Table 4.7-14 summarizes the trip generation of the Specific Plan. The trip generation rates used in this analysis reflect those contained in the Placer County Travel Demand Model. These trip rates were validated by applying them in the Travel Demand Model using 2004 land use data from throughout Placer County and comparing the model's resulting traffic volumes to extensive 2004 traffic count data from throughout Placer County.

Table 4.7-14
Estimated Trip Generation – Buildout of Specific Plan

Land Use		Units[1]	Daily Trip Ends per Unit	Daily Trip Ends
Residential	Single-Family	9,198 DU	9.0	82,782
	Multi-Family	3,728 DU	6.5	24,232
	Age-restricted	945 DU	3.3	3,119
	SPA	261 DU	9.0	2,349
	Subtotal	**14,132 DU**		**112,482**
Non-residential	Retail	1,855.4 KSF	35.0	64,940
	Office	1,764.2 KSF	17.7	31,226
	Public/Quasi-Public	307.1 KSF	25.0	7,677
	Churches	801.5 KSF	9.3	7,454
	K-12 Schools	9,017 Students	1.0	9,017
	Parks	217 Acres	2.2	477
	Subtotal			**120,791**
Total Trip Ends Generated by Specific Plan				**233,273**
Percent of Trips Remaining Internal to Specific Plan Area[3]			**21 %**	
Total Trips Generated by Specific Plan[2]			**192,788**	

Notes:
[1] DU = dwelling unit and KSF = 1,000 square feet
[2] Total trips = total trip ends/1.21 (to eliminate the double counting of trips that remain with the Specific Plan area)
[3] Trip internalization generated by the traffic model.
The land use assumptions used in this traffic analysis vary slightly from those shown in Chapter Three of this Revised Draft EIR, because the traffic analysis was conducted for a prior version of the draft Specific Plan. The differences are minor, and would not affect the outcome of the analysis.
Source: DKS Associates, 2005.

Table 4.7-14 shows that buildout of the entire proposed Specific Plan would generate about 233,000 vehicle trip ends on an average weekday. However, vehicle trip ends need to be converted to vehicle trips and summing up the trip ends generated by the project's uses will double-count those trips that remain within the Specific Plan area. The Placer County Travel Demand Model avoids the double counting of these trips. The travel model estimates that an approximately 40,500 or 21% of the vehicle trip ends shown in Table 4.7-14 would remain

within the Specific Plan area (such as travel between the residential development and the retail, office and school uses). When the double-counting of these trips is eliminated, the number of trips generated by the Specific Plan is estimated at about 193,000 daily vehicle trips. Of these, about 40,500 daily vehicle trips would remain within the Specific Plan area and 152,300 daily vehicle trips would travel to/from external destinations.

PLANNED TRANSPORTATION IMPROVEMENTS

Future transportation improvements have been identified by the *Placer County General Plan* and CIP, the general plans and CIPs for the City of Roseville, Sacramento County and Sutter County, and SACOG's *Metropolitan Transportation Plan* (MTP). New roadways needed to serve proposed development areas assumed in the 2025 scenario were based on discussions with local jurisdictions. For the purposes of this traffic analysis, the following key improvements to the transportation system were assumed under existing and future conditions:

- **Existing Conditions Roadway Improvements.** The Existing No Project conditions assumed only the existing roadway network. The analysis of the Existing Plus Project conditions assumed that all the internal roadways in the proposed Specific Plan area would be fully implemented, including the widening of Baseline Road and Watt Avenue to six lanes, but no off-site improvements were assumed other than the widening of Baseline Road to east of Fiddyment Road and Watt Avenue south of the Specific Plan area. The internal roadway network of the Specific Plan is discussed later in this section.

- **Roadway Improvements under Cumulative No Project Conditions.** The analysis of the No Project Alternative under Cumulative conditions assumed roadway improvements that are planned to be constructed by 2025, including all the new roadways and roadway improvements in the *Placer County General Plan EIR*, Placer County CIP and SACOG MTP that would be implemented by 2025.

  The *Dry Creek/West Placer Community Plan* calls for the eventual closure of PFE Road west of Cook Riolo Road. However, based on discussions with Placer County, the analysis of Cumulative conditions assumed that this roadway would remain open.

  For Sacramento County, improvements contained in SACOG's MTP were assumed. This includes the widening of Elverta Road from two lanes to four lanes from Rio Linda Boulevard to Watt Avenue. This also includes the widening of Watt Avenue and Walerga Road from two lanes to four lanes from Elverta Road to the Placer County line.

  Under Cumulative No Project conditions, about half of the potential 17,500 dwelling units that could be constructed in the South Sutter County Specific Plan area under the County's recently passed Measure M were assumed. That level of development would require improvements to local roadways, including Riego Road. Under Cumulative No Project conditions, those improvements contained in SACOG's MTP were assumed, including an interchange at Riego Road and Hwy 70/99, and the widening of Riego Road from two lanes to six lanes from Hwy 70/99 to the Placer County line. Federal and State regulations require that the MTP be "financially constrained" and contain a set of transportation improvements

that have realistic funding sources. SACOG's MTP assumed that improvements to Riego Road and other roadways in south Sutter County would be funded primarily by development in that area.

As discussed later in this section, the City of Roseville has requested that traffic impacts under Cumulative conditions within the city of Roseville be evaluated using their 2020 Travel Demand Model, which was used for the development of the City's CIP. Therefore, the analysis of the Cumulative No Project scenario in the City of Roseville assumed the improvements contained in Roseville's CIP. The City of Roseville has adopted a Traffic Mitigation Fee that, in conjunction with other identified funding sources, will fully fund these improvements.

A planning level signal warrant analysis was conducted for the Cumulative (2025) No Project scenario to define the locations where traffic signals should be assumed. This analysis indicates that the following intersections should be signalized by 2025:

- Watt Avenue and PFE Road
- Baseline Road and new roadway in proposed Sierra Vista Specific Plan area (across from 9th Street in Placer Vineyards Specific Plan area)
- Baseline Road and new roadway in proposed Sierra Vista Specific Plan area (across from East Dyer Lane in Placer Vineyards Specific Plan area)
- Locust Road and Baseline Road
- Brewer Road and Baseline Road
- Palladay Road and Baseline Road
- Pleasant Grove Road (S) and Baseline/Riego Road
- Pleasant Grove Road (N) and Riego Road
- Hwy 70/99 interchange ramps and Riego Road
- Hwy 70/99 interchange ramps and Elverta Road
- 16th Street and Elverta Road

FINANCING OF TRAFFIC IMPROVEMENTS AND MITIGATION

The Specific Plan applicants are developing a Public Facilities Financing Plan that will outline the funding and timing of transportation infrastructure within the Specific Plan area boundaries as well as off-site improvements required to support the planned development.

The Financing Plan will identify the major backbone infrastructure to be constructed prior to any development within the Specific Plan area, as well as infrastructure to be constructed prior to any development occurring within each specific project within the Specific Plan area. Where applicable, the Financing Plan will identify development thresholds or other triggers that will require specific improvements to be constructed or fair share funding provided. The Financing Plan will contain a detailed description of traffic mitigation fee programs, bond financing, community facilities districts (CFDs), and/or other financing methods/mechanisms intended to be implemented for specific transportation improvements. The Financing Plan will also identify and provide changes to the County's CIP for applicable improvements needed to support development of the Specific Plan area.

It is anticipated that the Financing Plan will be approved concurrently with approval of the Specific Plan by the Board of Supervisors.

FUTURE DEVELOPMENT ASSUMPTIONS

Future development assumptions were prepared through discussions with the staffs of Placer County and the cities of Roseville, Rocklin and Lincoln. Cumulative conditions were based on estimates of 2025 development levels in Placer County and the remainder of the region. Table 4.7-15 shows the assumptions for the Cumulative No Project scenario.

Table 4.7-15
Development Assumptions in Key Areas – 2025 No Project Alternative

Area		Dwelling Units	Floor Area (1,000 square feet)			College Enrollment
			Retail	Office	Industrial	
Placer Vineyards Specific Plan Area		261[1]	0	0	0	0
Roseville	General Plan Area	60,002	14,400	15,319	17,401	
	MOU Remainder Area	12,600	780	1,020	0	
Rocklin	General Plan Area	28,606	4,586	2,848	6,494	23,000
Lincoln	General Plan Area	22,123	2,948	3,622	8,161	5,000
	SOI Expansion Area	15,000	1,875	4,000	0	
Placer Ranch		7,200	900	2,213	1,387	25,000
Remainder Sunset Industrial Area		0	357	912	7,851	
Regional University		4,387	215	75	0	6,000
Riolo Vineyards		828	88	0	0	
South Sutter Specific Plan Area		8,750	1,094	750	1,500	
Total		**159,757**	**27,243**	**30,759**	**42,794**	**59,000**

Notes:
[1]The No Project land use assumptions used in this traffic analysis vary slightly from those shown in Chapter Three of this Revised Draft EIR because the traffic analysis was conducted for a prior version of the draft Specific Plan. The differences would not affect the outcome of the analysis.
Source: DKS Associates, 2005

CONSTRUCTION IMPACTS

4.7-1 Construction of the proposed Specific Plan's on-site infrastructure and buildings would increase traffic volumes in the vicinity of the Specific Plan area.

The on-site construction within the Specific Plan area is expected to last for approximately 20 to 25 years, subject to economic conditions. The maximum number of construction workers in the Specific Plan area on any given day is estimated to be 500. During this peak construction period, there would be about 1,500 daily vehicle trips generated by construction workers, plus about 50 vehicles (mostly trucks) per day delivering materials to the Specific Plan area. Site access during construction could be from a variety of locations, including Watt Avenue and Baseline Road. In some cases, the concentration of construction traffic could cause temporary delays in traffic flow. This is considered a ***potentially significant impact***.

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a *less than significant level*:

4.7-1 *Prepare and implement construction traffic management plans for on-site and off-site construction activities for all development projects, including coordination with appropriate agencies, and implement a community relations program during construction period. The purpose of the construction traffic management plan is to minimize adverse Level of Service or neighborhood traffic impacts during the various phases of construction.*

EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project analysis represents an unlikely condition, given the magnitude of planned development in the vicinity of the Specific Plan area. In reality, the Specific Plan area will develop over a period of years (as dictated by market absorption rates), thus other development outside the Specific Plan area would also occur in this same time frame. The Existing Plus Project analysis reports a worst-case condition to evaluate project-specific impacts for CEQA purposes.

The Placer County Travel Demand Model was used to estimate and distribute project-related trips. The estimated trip generation for this condition is outlined in Table 4.7-11. To provide the best estimate of the Specific Plan's impact on traffic volumes, the model's estimated traffic volume under Existing No Project conditions was subtracted from the model's traffic volume estimate under the Existing Plus Project conditions for each roadway segment and each intersection turning movement. These differences were then added to existing traffic count data to provide a refined estimate of traffic volumes under the Existing Plus Project conditions.

The analysis of the Existing Plus Project conditions assumed that the only improvements to the existing roadway network would be the internal roadways to the Specific Plan area. Figure 4.7-9 shows the roadway network and lanes in the vicinity of the Specific Plan area that were assumed in the traffic analysis.

The four jurisdictions in the study area (Placer County, City of Roseville, Sacramento County and Sutter County) have different Level of Service policies. Therefore, the traffic impacts of the project are discussed separately for each jurisdiction.

4.7-2 The proposed Specific Plan would increase daily traffic volumes on study area roadways in unincorporated Placer County.

As discussed earlier in this section, the analysis of Existing Plus Project conditions assumed that all the internal roadways to the proposed Specific Plan area would be fully implemented, including the widening of Baseline Road and Watt Avenue to six lanes. No other off-site improvements were assumed.

Figure 4.7-10 shows the average daily traffic volumes on unincorporated Placer County roadways within the study area under Existing Plus Project conditions.

It should be noted that the new roadways in the Specific Plan area would provide new travel routes for existing traffic and change some travel patterns. For example, the extension of Dyer Lane from Watt Avenue to the northeast to connect to Baseline Road would divert some existing traffic from Watt Avenue north of Dyer Lane and from Baseline Road east of Watt Avenue. The new roadways in the Specific Plan would also divert some existing traffic from portions of PFE Road and Walerga Road. These traffic diversions would offset some of the increase in traffic from the proposed Specific Plan.

It should also be noted that the traffic volume forecasts are not based on a simple layering or adding of assumed project-generated traffic volumes onto existing traffic counts. Rather, the County's Travel Demand Model is used to predict how travel patterns would change if the Specific Plan land uses are added to existing land uses. The model redistributes trips and can cause traffic to decrease at some locations fairly distant from the Specific Plan area. The travel model also accounts for traffic congestion and can divert some trips to less congested roadways based on travel times between origins and destinations.

A roadway segment Level of Service analysis for the unincorporated Placer County roadways is presented in Table 4.7-16. This analysis indicates that full development of the Specific Plan under existing conditions would cause impacts on the following Placer County roadway segment:

a. Level of Service on the segment of Walerga Road from Baseline Road to PFE Road would remain LOS "D" but the proposed project would increase the traffic volume and volume-to-capacity ratio on this segment.

This is considered a ***significant impact.***

Table 4.7-16
Roadway Segment Levels of Service – Unincorporated Placer County
Existing Plus Project Conditions

Roadway	Segment	Existing Conditions			Existing Plus Project Conditions		
		Lanes	ADT	LOS	Lanes	ADT	LOS
Baseline Road	East of County Line	2	10,100	A	6	14,400	A
Baseline Road	East of Locust Road	2	10,100	A	6	14,500	A
Baseline Road	East of Brewer Road	2	10,100	A	6	16,200	A
Baseline Road	East of Palladay Road	2	10,100	A	6	21,500	A
Baseline Road	East of 16th Street	2	10,400	B	6	22,400	A
Baseline Road	East of 12th Street	2	10,400	B	6	26,800	A
Baseline Road	East of Watt Avenue	2	12,600	B	6	29,900	A
Baseline Road	East of Dyer Lane	2	12,600	B	6	31,600	A
Walerga Road	South of Baseline Road	2	14,900	D	2	**15,600**	**D**

Table 4.7-16 Roadway Segment Levels of Service – Unincorporated Placer County Existing Plus Project Conditions							
Roadway	Segment	Existing Conditions			Existing Plus Project Conditions		
		Lanes	ADT	LOS	Lanes	ADT	LOS
Walerga Road	North of PFE Road	2	14,900	D	2	**15,100**	**D**
Watt Avenue	South of Baseline Road	2	7,100	A	6	11,000	A
Watt Avenue	South of Dyer Lane	2	7,100	A	6	38,300	C
PFE Road	East of Watt Avenue	2	4,700	A	2	8,200	A
PFE Road	East of Walerga Road	2	7,200	A	2	9,100	A
Dyer Lane (W)	South of Baseline Rd				4	7,900	A
Dyer Lane	South of Town Center Dr				4	4,300	A
Dyer Lane	West of 16th Street				4	9,900	A
Dyer Lane	West of Tanwood Avenue				4	4,100	A
Dyer Lane	West of Watt Avenue				4	8,100	A
Dyer Lane (E)	South of Baseline Road				4	3,200	A
Palladay Road	South of Baseline Road				2	6,700	A
Palladay Road	North of Dyer Lane				2	1,200	A
16th Street	South of Baseline Road				4	5,500	A
16th Street	South of Dyer Lane				4	11,500	A
14th Street	South of Baseline Road				2	4,300	A
12th Street	South of Baseline Road				4	6,100	A
A Street	East of Dyer Lane				2	2,600	A
A Street	West of 16th Street				2	4,600	A
A Street	West of Tanwood Avenue				2	4,200	A
A Street	West of Watt Avenue				4	14,000	A
A Street	West of Dyer Lane				2	4,300	A
Town Center Dr	East of Dyer (W) Street				2	2,400	A
Town Center Dr	West of 16th Street				2	4,600	A
Town Center Dr	West of Tanwood Avenue				2	9,300	A
Town Center Dr	West of Watt Avenue				2	9,800	A
Town Center Dr	West of Dyer Lane (E)				2	1,600	A
Town Center Dr	West of Walerga Road				2	3,700	A

Notes: ADT = average daily traffic. Significant impacts are highlighted in bold letters
"Blank" = Roadway does not exist under this scenario.
Source: DKS Associates, 2005.

Mitigation Measures

Implementation of the following mitigation measures would reduce these impacts to a *less than significant level:*

4.7-2a *Developers of property within the Placer Vineyards Specific Plan area shall be responsible for the project's fair share of all feasible physical improvements necessary and available to reduce the severity of the project's significant transportation-related impacts, as identified in this traffic analysis, consistent with*

the policies and exceptions set forth in the Transportation and Circulation Element of the 1994 Placer County General Plan as amended. The project's contribution toward such improvements, which the County recognizes will not be sufficient to mitigate all transportation-related impacts to less than significant levels, may take any, or some combination, of the following forms:

1. *Construction of roads and related facilities within and adjacent to the boundaries of the Specific Plan area, which may be subject to fee credits and/or reimbursement, coordinated by the County, from other fee-paying development projects with respect to roads or other facilities that would also serve fee-paying development projects other than Placer Vineyards;*

2. *Construction of roads and/or road improvements or other transportation facilities outside the boundaries of the Specific Plan area but within unincorporated Placer County, subject in some instances to future reimbursement, coordinated by the County, from other fee-paying development projects where the roads or improvements at issue would also serve fee-paying development projects other than Placer Vineyards;*

3. *The payment of impact fees to Placer County in amounts that constitute the Specific Plan's fair share contributions to the construction of transportation facilities to be built or improved within unincorporated Placer County, consistent with the County's CIP;*

4. *The payment of impact fees to the South Placer Regional Transportation Authority (SPRTA) in amounts that constitute the Project's fair share contribution to the construction of transportation facilities funded through fees collected by the SPRTA for Tier 1 and/or Tier 2 projects;*

5. *The payment of other adopted regional impact fees that would provide improvements to roadways, intersections and/or interchanges that are affected by multiple jurisdictions (e.g., Walerga/Fiddyment/Baseline);*

6. *The payment of impact fees to Placer County in amounts that constitute the Specific Plan's fair share contributions to the construction of transportation facilities and/or improvements within the city of Roseville, Sacramento County and/or Sutter County needed in whole or in part because of the Specific Plan, to be made available to the City of Roseville, Sacramento County, and/or Sutter County, if and when those jurisdictions and Placer County enter into an enforceable agreement consistent with Placer County General Plan Policy 3.A.15(c). At the time of issuance of building permits for individual development projects within the Specific Plan area, the County shall collect fair share fee payments for improvements or facilities addressed by its CIP as it exists at that time;*

7. *Developers of property within the Placer Vineyards Specific Plan area shall pay impact fees to Placer County in amounts that constitute the Specific Plan's fair share contributions to the construction of transportation facilities and/or improvements on federal or state highways or freeways needed in part because of the Specific Plan, to be made available to Caltrans if and when Caltrans and Placer County enter into an enforceable agreement consistent with State law and Placer County General Plan Policy 3.A.15; and*

8. *In pursuing a single agreement or multiple agreements with the City of Roseville, Sacramento County, Sutter County, and Caltrans, Placer County shall negotiate in good faith with these other jurisdictions to enter into fair and reasonable arrangements with the intention of achieving, within a reasonable time period after approval of the Placer Vineyards Specific Plan, commitments for the provision of adequate fair share mitigation payments from the Specific Plan for its out-of-jurisdiction traffic impacts and its impacts on federal and state freeways and highways.*

4.7-2b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the widening of Walerga Road to four lanes from Baseline Road to PFE Road to provide LOS "A" (V/C 0.43).*

As shown in Table 4.7-16, Walerga Road from Baseline Road to PFE Road currently operates at LOS "D", which does not meet the County's Level of Service standard. The proposed Specific Plan would exacerbate this condition. The widening of Walerga Road to four lanes would improve its capacity to acceptable levels under existing conditions. The County plans to construct this improvement in order to meet increased future traffic levels, and collects fees to fund this and other improvements identified in the County's CIP, regardless of whether the project is constructed. Because this improvement is needed to address existing and future traffic conditions, regardless of whether the proposed project is developed, the project would be required to fund only its fair share of the improvement, either through the fee programs described above, or by constructing the improvement and being reimbursed for the portion that exceeds the project's fair share.

4.7-3 Buildout of the Specific Plan area would increase peak hour traffic volumes on study area intersections in unincorporated Placer County.

The proposed Specific Plan provides typical cross-sections for the roadways within the Specific Plan area. Additional right-of-way is typically provided near major intersections on arterial and collector roadways to accommodate additional turn lanes.

A planning level signal warrant analysis was conducted for the conditions under Existing Plus Project conditions to define the locations where traffic signals should be assumed. This analysis indicates that the following intersections within the Specific Plan area should be signalized:

- Locust Road and Baseline Road
- Brewer Road and Baseline Road

- Palladay Road and Baseline Road
- 16th Street and Baseline Road
- 14th Street and Baseline Road
- 12th Street and Baseline Road
- 11th Street and Baseline Road
- Dyer Lane and Baseline Road
- Watt Avenue and A Street
- Watt Avenue and Town Center Drive
- Watt Avenue and Oak Street
- 16th Street and Dyer Lane
- Watt Avenue and Dyer Lane
- Watt Avenue and PFE Road

In addition to the above intersections, which would meet traffic signal warrants, the following intersections are proposed to be signalized in the Specific Plan:

- Dyer Lane and A Street (east and west)
- Dyer Lane and Palladay Road
- Dyer Lane and 11th Street
- Palladay Road and A Street
- 16th Street and A Street
- 14th Street and A Street
- 12th Street and A Street
- Dyer Lane and West Town Center Drive
- Dyer Lane and East Town Center Drive
- 18th Street and Dyer Lane
- Tanwood Avenue and Dyer Lane

These intersections were analyzed as stop-sign controlled intersections even though the Specific Plan calls for traffic signals, because traffic signals were not warranted under Existing Plus Project conditions.

Figure 4.7-4 shows the key study area intersections in unincorporated Placer County. Table 4.7-17 presents the intersection Level of Service analysis at these intersections for the p.m. peak hour under Existing Plus Project conditions. The traffic volumes and existing lane geometry at each intersection in Table 4.7-17 are shown in Appendix I. This analysis indicates that development of the Specific Plan under existing conditions would cause impacts at the following intersections:

a. Level of Service at the intersection of Baseline Road and Fiddyment Road/Walerga Road would degrade from LOS "D" (observed LOS "F") to LOS "F".

b. Level of Service at the intersection of Walerga Road and PFE Road would degrade from LOS "E" to LOS "F".

This is considered ***a significant impact.***

Table 4.7-17
P.M. Peak Hour Levels of Service at Study Intersections – Unincorporated Placer County
Existing Plus Project Conditions

Intersection			Existing Conditions			Existing Plus Project Conditions		
			Level of Service	LOS Criteria		Level of Service	LOS Criteria	
	North-South Roadway	East-West Roadway		Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]		Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]
1	Locust Road	Baseline Road	E		46.8	A	0.40	
2	Brewer Road	Baseline Road	A		0.6	A	0.42	
3	Watt Avenue	Baseline Road	E	0.94		B	0.61	
4	Fiddyment Rd	Baseline Road	D (F)[2]	0.87 (>1)[2]		**F**	**1.29**	
5	Watt Avenue	PFE Road	C		16.3	C	0.71	
6	Walerga Road	PFE Road	E	0.93		**F**	**1.16**	
7	Cook Riolo Rd	PFE Road	B		10.2	B		12.0
8	Palladay Road	Baseline Road				A	0.53	
9	16th Street	Baseline Road				A	0.56	
10	14th Street	Baseline Road				A	0.53	
11	12th Street	Baseline Road				A	0.54	
12	11th Street	Baseline Road				C	0.72	
13	Dyer Lane (E)	Baseline Road				A	0.54	
14	9th Street	Baseline Road				A		1.0
15	Watt Avenue	A Street				C	0.70	
16	Dyer Lane	A Street				A		5.2
17	Palladay Road	A Street				A		8.5
18	16th Street	A Street				A		9.5
19	14th Street	A Street				A		10.0
20	12th Street	A Street				A		2.7
21	W Dyer Lane	Town Center				A		4.4
22	Watt Ave	Town Center				B	0.60	
23	E Dyer Lane	Town Center				B		6.8
24	Walerga Road	Town Center				A		2.4
25	Watt Avenue	Oak Street				B	0.61	
26	18th Street	Dyer Lane				A		4.9
27	16th Street	Dyer Lane				A	0.40	
28	Tanwood Ave	Dyer Lane				A		4.5
29	Watt Avenue	Dyer Lane				B	0.68	

Notes: "Blank" = Intersection does not exist under this scenario. Intersection numbers refer to Figure 4.7-4. Significant impacts are highlighted in bold letters.
[1] Average delay for all movements at intersection, including uncontrolled movements. Delay on some stop-signed controlled left-turn movements may be substantial, but typically impacts a limited number of vehicles.
[2] Observed long queues indicate intersection operates at LOS F.
Source: DKS Associates, 2005.

Mitigation Measure

Implementation of the following mitigation measures would reduce these impacts to a *less than significant level*:

4.7-3a *Implement Mitigation Measure 4.7-2a.*

4.7-3b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following improvements:*

i. Construct a second through lane on the southbound approach, a right turn lane to the eastbound approach and construct a second left turn lane on both the eastbound and westbound approaches to improve the intersection of Fiddyment Road and Baseline Road to LOS "C" (V/C 0.80).

ii. Construct a second through lane on both the northbound and southbound approaches, to improve the intersection of Walerga Road and PFE Road to LOS "D" (V/C 0.80).

As shown in Table 4.7-17, the above intersections operate at unacceptable Levels of Service under existing conditions, and the proposed project would increase congestion at these intersections. The improvements described above are identified in the County's CIP, so they are planned to be constructed in the future, whether or not the project is developed. Therefore, the proposed project would be required to contribute its fair share to the above improvements, or to construct the improvements and be reimbursed for the costs beyond the project's fair share.

4.7-4 Buildout of the Specific Plan area would increase peak hour traffic volumes on study area intersections in the City of Roseville.

Under Existing Plus Project conditions, no improvements to the City of Roseville intersections were assumed beyond existing conditions. Figure 4.7-11 shows the daily traffic volumes on study area roadways in the city of Roseville under Existing Plus Project conditions. Figure 4.7-5 shows the fourteen key study area intersections in the city of Roseville. Table 4.7-18 presents the intersection Level of Service analysis at these intersections for the p.m. peak hour under the Existing Plus Project scenario. The traffic volumes and existing lane geometry at each intersection in Table 4.7-18 are shown in Appendix I. This analysis indicates that development of the Specific Plan under existing conditions would cause impacts on the following Roseville intersections within the study area:

a. Level of Service at the intersection of Woodcreek Oaks Boulevard and Baseline Road would degrade from LOS "B" to LOS "D."

b. Level of Service at the intersection of Foothills Boulevard and Baseline Road would degrade from LOS "D" to LOS "E."

c. Level of Service at the intersection of Woodcreek Oaks Boulevard and Pleasant Grove Boulevard would degrade from LOS "C" to LOS "D."

d. Level of Service at the intersection of Foothills Boulevard and Cirby Way would degrade from LOS "E" to LOS "F."

e. Level of Service at the intersection of Fiddyment Road and Baseline Road would degrade from LOS "C" to LOS "F."

This is considered a ***significant impact.***

Mitigation Measure

Implementation of the following mitigation measures would reduce this impact to a *less than significant level.* While implementation of these mitigation measures would reduce this impact to a less than significant level, these improvements lie outside the jurisdiction of Placer County. The City of Roseville can and should implement the suggested or similar mitigation measures but may choose not to. If the identified improvements are not made, the roadway segments would continue to operate at an unacceptable level. Therefore, this impact is considered *significant and unavoidable.*

Table 4.7-I8
P.M. Peak Hour Levels of Service at Study Intersections – City of Roseville
Existing Plus Project Conditions

Intersection		Existing Conditions			Existing Plus Project Conditions		
			LOS Criteria			LOS Criteria	
North-South Roadway	East-West Roadway	Level of Service	Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)	Level of Service	Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)
1 Fiddyment Rd	Blue Oaks	C		14.3	C		17.1
2 Fiddyment Rd	Pleasant Grove	B	0.62		C	0.73	
3 Junction Blvd	Baseline Rd	A	0.48		C	0.71	
4 Woodcreek Oaks	Blue Oaks	B	0.65		B	0.64	
5 Woodcreek Oaks	Pleasant Grove	C	0.75		**D**	**0.88**	
6 Woodcreek Oaks	Baseline Rd	B	0.64		**D**	**0.88**	
7 Foothills Blvd	Blue Oaks	D	0.89		A	0.47	
8 Foothills Blvd	Pleasant Grove	C	0.73		C	0.79	
9 Foothills Blvd	Junction	F	1.03		F	1.09	
10 Foothills Blvd	Baseline Rd	D	0.81		**E**	**0.98**	
11 Foothills Blvd	Cirby Way	E	0.99		**F**	**1.04**	
12 Riverside Ave	Cirby Way	F	1.08		F	1.09	
13 Washington	Pleasant Grove	C	0.76		C	0.80	
14 Fiddyment Rd[1]	Baseline Rd	C(F)	0.76		**F**	**1.16**	

Note: Intersection numbers refer to Figure 4.7-5.Significant impacts are highlighted in bold letters
[1] This intersection is also analyzed under the Placer County (see Table 4.7-6). The volume-to-capacity ratio and level of service standards differ due to different lane capacity assumptions.
Source: DKS Associates, 2005.

4.7-4a *Implement Mitigation Measure 4.7-2a.*

4.7-4b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute fees toward the following improvements, which are part of the City of Roseville's 2020 CIP:*

- *A second through lane on the eastbound approach, to improve the intersection of Woodcreek Oaks Boulevard and Baseline Road to LOS "A" (V/C 0.57).*

- *A second left turn lane on both the northbound, southbound and westbound approaches, a third through lane to the northbound approach and fourth through lane to the southbound approach to improve the intersection of Foothills Boulevard and Baseline Road to LOS "C" (V/C 0.71).*

- *A second left turn lane on all of the approaches, a second through lane on both the northbound and southbound approaches, and a third through lane on the eastbound and westbound approaches to improve the intersection of Woodcreek Oaks Boulevard and Pleasant Grove Boulevard to LOS "A" (V/C 0.50).*

- *A second left turn lane on the westbound approach, a third left turn lane on the southbound approach, and second through lane on both the northbound and southbound approaches, to improve the intersection of Foothills Boulevard and Cirby Way to LOS "B" (V/C 0.70).*

- *Implement Mitigation Measure 4.7-3(b)(ii), which would result in LOS "C" (V/C 0.78) at the intersection of Fiddyment Road and Baseline Road using the Roseville methodology.*

These mitigation measures reflect the ultimate improvement at each intersection that is included in the Roseville's CIP and the City of Roseville has a funding mechanism to fully fund these improvements. At one or more of these intersections, the impact of the Existing Plus Project scenario might be mitigated by an improvement that is a portion of the ultimate improvement.

4.7-5 Buildout of the Specific Plan area would increase daily traffic volumes on study area roadways in Sacramento County.

Figure 4.7-12 shows the average daily traffic volumes on Sacramento County roadways within the study area under Existing Plus Project conditions. A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-19. This analysis indicates that development of the proposed Specific Plan under existing conditions would cause impacts on the following Sacramento County roadway segments:

a. Level of Service on the two- to four-lane segment of Watt Avenue from the Placer County line to Elverta Road would degrade from LOS "A" to LOS "F."

b. Level of Service on the segment of Watt Avenue from Elverta Road to Antelope Road would degrade from LOS "D" to LOS "F."

c. Level of Service on the segment of Watt Avenue from Antelope Road to Elkhorn Boulevard would continue to operate at LOS "F" conditions and the volume-to-capacity ratio would increase by more than 0.05.

d. Level of Service on the segment of Watt Avenue from Elkhorn Boulevard to Don Julio Boulevard would continue to operate at LOS "F" conditions and the volume-to-capacity ratio would increase by more than 0.05.

This is considered a ***significant impact.***

The project proposes to widen Watt Avenue from the Placer County line to Elverta Road to six lanes but this improvement is outside the jurisdiction of Placer County. Therefore this roadway was analyzed with the existing (two-lane) conditions.

Mitigation Measure

Implementation of the following mitigation measures would reduce this impact to a *less than significant level.* While implementation of these mitigation measures would reduce this impact to a less than significant level, these improvements lie outside the jurisdiction of Placer County. Sacramento County can and should implement the suggested or similar mitigation measures but may choose not to. If the identified improvements are not made, the roadway segments would continue to operate at an unacceptable level. Therefore, this impact is considered *significant and unavoidable.*

4.7-5a *Implement Mitigation Measure 4.7-2a.*

4.7-5b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following improvements in Sacramento County:*

1. *Widen Watt Avenue to six lanes from the Placer County line to Elverta Road to provide LOS "D" (0.87).*

2. *Widen Watt Avenue to six lanes from Elverta Road to Antelope Road to provide LOS "C" (0.71).*

3. *Widen Watt Avenue to six lanes from Antelope Road to Elkhorn Boulevard to provide LOS "D" (0.90).*

4. *Widen Watt Avenue to six lanes from Elkhorn Boulevard to Don Julio Boulevard to provide LOS "D" (0.87).*

Under existing conditions, the proposed project would cause several segments of Watt Avenue in Sacramento County to operate at LOS "F" and increase congestion at other segments that operate at LOS "F" (see Table 4.7-19). Under cumulative conditions, these segments would all operate at LOS "F" with or without project traffic (see Table 4.7-35). Therefore, the proposed project would be responsible for only a portion of the improvements necessary to achieve acceptable service levels on these segments if and when an appropriate fee mechanism is adopted. The widening of Watt Avenue to six lanes between Don Julio Boulevard and Antelope Road is included in SACOG's MTP.

Table 4.7-19
Roadway Segment Levels of Service – Sacramento County
Existing Plus Project Conditions

Roadway	Segment	Existing Conditions			Existing Plus Project Conditions		
		Lanes	ADT	LOS	Lanes	ADT	LOS
Elverta Road	East of Hwy 70/99	2	5,000	A	2	9,700	A
Elverta Road	East of Rio Linda Boulevard	2	8,000	A	2	14,900	D
Elverta Road	East of 16th Street	2	10,400	A	2	16,600	E
Elverta Road	West of Watt Avenue	2	19,000	F	2	18,800	F
Watt Avenue	North of Elverta Road	4	19,400	A	4[1]	**47,000**	**F**
Watt Avenue	North of Antelope Road	4	28,900	D	4	**38,200**	**F**
Watt Avenue	North of Elkhorn Boulevard	4	37,900	F	4	**48,400**	**F**
Watt Avenue	North of Don Julio Boulevard	4	40,300	F	4	**47,100**	**F**
Watt Avenue	North of Air Base Drive	6	46,700	D	6	49,500	E
Walerga Road	North of Elverta Road	4	24,700	B	4	21,800	B
Walerga Road	North of Antelope Road	4	40,300	F	4	41,100	F
Walerga Road	North of Elkhorn Blvd	4	31,100	D	4	32,900	E
16th Street	North of Elverta Road	2	400	A	2	12,000	B

Notes: ADT = average daily traffic. Significant impacts are highlighted in bold letters
[1] Watt Avenue has two lanes from Placer County line to Tourmilane Way, four lanes from Silver Fern Drive to just north of Elverta Road, and six lanes through the its intersection with Elverta Road. The capacity of this segment of Watt Avenue is primarily dictated by its capacity through the Elverta Road intersection.
Source: DKS Associates, 2005.

4.7-6 Buildout of the Specific Plan area would increase peak hour traffic volumes on study area intersections in Sacramento County.

A planning level signal warrant analysis was conducted for the conditions under Existing Plus Project conditions to define the locations where traffic signals should be assumed. This analysis indicates that the following intersections within the Sacramento County should be signalized:

- 16th Street and Elverta Road

Under Existing Plus Project conditions, no improvements were assumed for Sacramento County intersections in the study area beyond existing conditions. Figure 4.7-8 shows the key study area intersections in Sacramento County. Tables 4.7-21 and 4.7-22 present the intersection Level of Service analysis at these intersections for the a.m. and p.m. peak hour under Existing Plus

Project conditions. The traffic volumes and existing lane geometry at each intersection in Table 4.7-20 and 4.7-21 are shown in Appendix I. This analysis indicates that development of the proposed Specific Plan under existing conditions would cause impacts at the following intersection:

a. **Level of Service at the intersection of Watt Avenue and Antelope Road would degrade from LOS "C" to LOS "F" during the p.m. peak hour.**

b. **Level of Service at the intersection of Walerga Road and Elkhorn Boulevard would degrade from LOS "D" to LOS "F" during the p.m. peak hour.**

c. **Level of Service at the intersection of Watt Avenue and Don Julio Boulevard would degrade from LOS "C" to LOS "F" during the p.m. peak hour.**

d. **Level of Service at the intersection of Watt Avenue and Air Base Drive would degrade from LOS "B" to LOS "F" during the a.m. peak hour, and from LOS "E" to LOS "F" during the p.m. peak hour.**

e. **Level of Service at the intersection of Watt Avenue and Roseville Road would degrade from LOS "E" to LOS "F" during the p.m. peak hour.**

This is considered ***a significant impact.***

Table 4.7-20
A.M. Peak Hour Levels of Service at Study Intersections – Sacramento County
Existing Plus Project Conditions

Intersection		Existing Conditions			Existing Plus Project Conditions		
		Level of Service	LOS Criteria		Level of Service	LOS Criteria	
North-South Roadway	East-West Roadway		Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]		Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]
1 Hwy-99	Elverta Road	A		8.4	D		35.9
2 16th Street	Elverta Road	A		1.6	E	0.90	
3 Watt Ave	Elverta Road	A	0.56		D	0.82	
4 Walerga Rd	Elverta Road	D	0.86		D	0.89	
5 Watt Ave	Antelope Road	C	0.73		D	0.87	
6 Walerga Rd	Antelope Road	C	0.73		D	0.85	
7 Watt Ave	Elkhorn Blvd	C	0.76		C	0.83	
8 Walerga Rd	Elkhorn Blvd	B	0.68		B	0.69	
9 Watt Ave	Don Julio Blvd	A	0.51		B	0.65	
10 Watt Ave	Air Base Drive	B	0.63		**F**	**1.01**	
11 Watt Ave	Roseville Rd	D	0.88		E	0.92	
12 Watt Ave	I-80 WB	B		16.6	B		14.7

Notes: Intersection numbers refer to Figure 4.7-8. Significant impacts are highlighted in bold letters
[1] Average delay for all movements at intersection, including uncontrolled movements. Delay on some stop-signed controlled left-turn movements may be substantial, but typically impacts a limited number of vehicles.
Source: DKS Associates, 2005.

Table 4.7-2l
P.M. Peak Hour Levels of Service at Study Intersections – Sacramento County
Existing Plus Project Conditions

Intersection		Existing Conditions			Existing Plus Project Conditions		
		Level of Service	LOS Criteria		Level of Service	LOS Criteria	
North-South Roadway	East-West Roadway		Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]		Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]
1 Hwy-99	Elverta Road	A		8.3	B		17.6
2 16th Street	Elverta Road	A		2.3	D	0.87	
3 Watt Avenue	Elverta Road	A	0.60		B	0.69	
4 Walerga Rd	Elverta Road	C	0.76		D	0.86	
5 Watt Avenue	Antelope Rd	C	0.77		**F**	**1.09**	
6 Walerga Rd	Antelope Rd	D	0.89		E	0.91	
7 Watt Avenue	Elkhorn Blvd	B	0.70		D	0.83	
8 Walerga Rd	Elkhorn Blvd	D	0.89		**F**	**1.02**	
9 Watt Avenue	Don Julio Blvd	C	0.74		**F**	**1.13**	
10 Watt Avenue	Air Base Drive	E	1.00		**F**	**1.30**	
11 Watt Avenue	Roseville Rd	E	0.97		**F**	**1.04**	
12 Watt Avenue	I-80 WB	B		14.1	B		13.5

Notes: Intersection numbers refer to Figure 4.7-8. Significant impacts are highlighted in bold letters.
[1] Average delay for all movements at intersection, including uncontrolled movements. Delay on some stop-signed controlled left-turn movements may be substantial, but typically impacts a limited number of vehicles.
Source: DKS Associates, 2005.

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a *less than significant level.* While implementation of this mitigation measure would reduce this impact to a less than significant level, the improvements lie outside the jurisdiction of Placer County. The County of Sacramento can and should implement the suggested or similar mitigation measures but may choose not to. If the identified improvements are not made, the intersections would continue to operate at an unacceptable level. Therefore, this impact is considered *significant and unavoidable.*

4.7-6a *Implement Mitigation Measure 4.7-2a.*

4.7-6b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following intersection improvements in Sacramento County:*

1. *Construct a second exclusive left turn lane on the southbound approach to improve the intersection of Watt Avenue and Antelope Road to LOS "E" (V/C 0.93).*

2. *Construct a second exclusive right turn lane on the westbound approach to improve the intersection of Walerga Road and Elkhorn Boulevard to LOS "D" (V/C 0.87).*

3. *Construct a third northbound through lane to improve the intersection of Watt Avenue and Don Julio Boulevard to LOS "D" (V/C 0.87).*

4. *Construct a third northbound through lane to improve the intersection of Watt Avenue and Air Base Drive to LOS "D" (V/C 0.86).*

5. *Construct a second westbound left turn lane to improve the intersection of Watt Avenue and Roseville Road to LOS "E" (V/C 0.92).*

4.7-7 Buildout of the Specific Plan area would increase daily traffic volumes on study area roadways in Sutter County.

Figure 4.7-12 shows the average daily traffic volumes on Sutter County roadways within the study area under Existing Plus Project conditions. A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-22. This analysis indicates that development of the proposed Specific Plan under existing conditions would not cause impacts on any Sutter County roadway segments.

Table 4.7-22
Roadway Segment Levels of Service – Sutter County
Existing Plus Project Conditions

Roadway	Segment	Existing Conditions			Existing Plus Project Conditions		
		Lanes	ADT	LOS	Lanes	ADT	LOS
Riego Road	East of Hwy 70/99	2	9,900	A	2	14,000	C

Note: ADT = average daily traffic
Source: DKS Associates, 2005.

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

Mitigation Measures

No mitigation measures are required.

4.7-8 Buildout of the Specific Plan area would increase peak hour traffic volumes on study area intersections in Sutter County.

Under Existing Plus Project conditions, no improvements were assumed for Sutter County intersections in the study area beyond existing conditions. Figure 4.7-8 shows the key study area intersections in Sutter County. Table 4.7-23 presents the intersection Level of Service analysis at these intersections for the p.m. peak hour under Existing Plus Project conditions. The traffic volumes and existing lane geometry at each intersection in Table 4.7-23 are shown in Appendix I. This analysis indicates that development of the Specific Plan under existing conditions would cause impacts at the following intersections:

a. Level of Service at the intersection of Riego Road and Natomas Road would degrade from LOS "C" to LOS "F."

b. Level of Service at the intersection of Pleasant Grove Boulevard (North) and Riego Road would degrade from LOS "C" to LOS "F."

c. Level of Service at the intersection of Pleasant Grove Boulevard (North) and Riego Road would degrade from LOS "D" to LOS "F."

This is considered a ***significant impact.***

Table 4.7-23
P.M. Peak Hour Levels of Service at Study Intersections – Sutter County
Existing Plus Project Conditions

Intersection		Existing Conditions			Existing Plus Project Conditions		
		Level of Service	LOS Criteria		Level of Service	LOS Criteria	
North-South Roadway	East-West Roadway		Signalized Intersection (Delay)	Unsignalized Intersection (Delay)		Signalized Intersection (Delay)	Unsignalized Intersection (Delay)
1 Hwy 70/99	Riego Road	B	18.9		D	47.8	
2 Natomas Road	Riego Road	C (F)[1]		16.3 (>50)[1]	**F**		**76.4**
3 Pleasant Grove Rd. (North)	Riego Road	C (F)[1]		20.9 (>50)[1]	**F**		**96.7**
4 Pleasant Grove Rd. (South)	Riego Road	D (F)[1]		29.8 (>50)[1]	**F**		**115.2**

Note: Intersection number refers to Figure 4.7-8.
[1] Observed delay greater than calculated delay.
Source: DKS Associates, 2005.

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a *less than significant level*. While implementation of this mitigation measure would reduce this impact to a less than significant level, the improvements lie outside the jurisdiction of Placer County. Sutter County can and should implement the suggested or similar mitigation measure but may choose not to. If the identified improvements are not made, the intersections would continue to operate at an unacceptable level. Therefore, this impact is considered *significant and unavoidable*

4.7-8a *Implement Mitigation Measure 4.7-2a.*

4.7-8b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following improvements in Sutter County:*

1. *Install a signal at the intersection of Riego Road and Natomas Road to provide LOS "B" (V/C 0.62).*

2. *Install a signal at the intersection of Riego Road and Pleasant Grove Road (North) to provide LOS "B" (V/C 0.64).*

3. *Install a signal at the intersection of Riego Road and Pleasant Grove Road (South) to provide LOS "C" (V/C 0.74).*

4.7-9 Buildout of the Specific Plan would increase peak hour traffic volumes on study area roadways and intersections that are part of the state highway system.

Figure 4.7-12 shows the average daily traffic volumes on state highways within the study area under Existing Plus Project conditions. A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-24. This analysis indicates that full development of the Specific Plan under Existing Plus Project conditions would cause impacts on the following state highway segments:

Table 4.7-24
Freeway Segment Levels of Service – State Highway
Existing Plus Project Conditions

Roadway	Segment	Existing Conditions			Existing Plus Project Conditions		
		Lanes[1]	ADT[2]	LOS	Lanes[1]	ADT[2]	LOS
Hwy 70/99 [3]	North of Riego Rd	4	29,000	C	4	29,000	C
Hwy 70/99 [3]	South of Riego Rd	4	32,000	C	4	35,300	C
Hwy 70/99	South of Elverta Rd	4	40,500	B	4	49,300	C
Hwy 65	North of Pleasant Grove	4	76,000	F	4	**81,300**	**F**
Hwy 65	South of Pleasant Grove	4	83,400	F	4	**85,100**	**F**
I-80	West of Watt Ave	10	145,000	D	10	155,400	D
I-80	East of Auburn Blvd	12	240,000	F	12	250,100	**F**
I-80	West of Riverside Ave	8	184,200	F	8	**185,500**	**F**
I-80	East of Riverside Ave	6	165,000	F	6	**165,300**	**F**
Business 80	West of Watt Ave	6	133,000	F	6	**133,300**	**F**

Note 1: Excluding carpool lanes.
Note 2: ADT = average daily traffic, excluding HOV traffic
Note 3: Evaluated as expressway, not as a freeway
Source: DKS Associates, 2005.

a. Level of Service on the four-lane segment of Hwy 65 from Blue Oaks Boulevard to Galleria Boulevard would continue to operate at LOS "F" conditions and the volume would increase.

b. Level of Service on the eight-lane segment of Interstate 80 from Antelope Road to Riverside Avenue would continue to operate at LOS "F" conditions and the volume would increase.

c. **Level of Service on the six-lane segment of Interstate 80 from Riverside Avenue to Douglas Boulevard would continue to operate at LOS "F" conditions and the volume would increase.**

d. **Level of Service on the six-lane segment of Business 80 from Fulton Avenue to Watt Avenue would continue to operate at LOS "F" conditions and the volume would increase.**

e. **Level of Service on the twelve-lane segment of Interstate 80 from Auburn Boulevard to Madison Avenue would continue to operate at LOS "F" conditions and the volume would increase.**

The increase in congestion on freeway segments operating at LOS "F" is considered a ***significant impact***.

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a *less than significant level*. While implementation of this mitigation measure would reduce this impact to a less than significant level, the improvements lie outside the jurisdiction of Placer County. Caltrans can and should implement the suggested or similar mitigation measure but may choose not to. If the identified improvements are not made, this impact would remain *significant and unavoidable.*

4.7-9a *Implement Mitigation Measure 4.7-2a.*

4.7-9b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following improvements:*

1. *Widen Hwy 65 to six lanes from Blue Oak Boulevard to Galleria Boulevard.*
2. *Widen Interstate 80 to ten lanes from Antelope Road to Riverside Avenue.*
3. *Widen Interstate 80 to eight lanes from Riverside Avenue to Douglas Boulevard.*
4. *Widen Business 80 to eight lanes from Fulton Avenue to Watt Avenue.*
5. *Consider construction of additional lanes on Interstate 80 from Auburn Boulevard to Madison Avenue, or other improvements.*

As shown in Table 4.7-24, the above highway segments operate at unacceptable service levels under existing conditions, and the proposed project would increase congestion on these segments. Therefore, the proposed project would be responsible for only a portion of the improvements necessary to achieve acceptable service levels on these segments, if and when an appropriate fee mechanism has been adopted. Further, the segment of Interstate 80 from Auburn

Boulevard to Madison Avenue already has twelve lanes, and it may not be feasible to add more lanes.

Volumes are provided for several interchange ramps in Table 4.7-25. Level of service calculations for ramp merge, diverge and weaving sections were not preformed.

Table 4.7-25
Interchange Ramp Segment Volumes – State Highway
Existing Plus Project Conditions

Interchange	Ramp	Existing Conditions	Existing Plus Project Conditions		
		ADT	ADT	Change	%
Hwy 65 - Pleasant	NB Off Ramp	7,400	7,900	**500**	**7%**
Hwy 65 - Pleasant	NB On Ramp	1,400	1,500	**100**	**7%**
Hwy 65 - Pleasant	SB Off Ramp	2,200	2,100	**(100)**	**-5%**
Hwy 65 - Pleasant	SB On Ramp	7,600	8,300	**700**	**9%**
I-80 – Watt Ave	EB Off Ramp	700	1,100	**400**	**57%**
I-80 – Watt Ave	WB Off Ramp	200	600	**400**	**200%**
I-80 – Watt Ave	WB On Ramp from NB	300	800	**500**	**167%**
I-80 – Watt Ave	WB On Ramp from SB	1,300	1,300	**-**	**0%**
I-80 – Riverside Ave	EB On Ramp	8,300	8,300	**0**	**-**
I-80 – Riverside Ave	EB off Ramp from SB	5,900	5,900	**0**	**-**
I-80 – Riverside Ave	EB off Ramp from NB	10,900	11,200	**300**	**3%**
I-80 – Riverside Ave	WB On Ramp	8,800	8,500	**(300)**	**-3%**
I-80 – Riverside Ave	WB off Ramp from SB	1,400	1,400	**0**	**-**
I-80 – Riverside Ave	WB off Ramp from NB	11,600	11,900	**300**	**3%**
Bus-80 – Watt Ave	EB On Ramp from NB	4,600	4,300	**(300)**	**-7%**
Bus-80 – Watt Ave	EB On Ramp from SB	1,000	1,000	**0**	**-**
Bus-80 – Watt Ave	EB Off Ramp	11,600	11,600	**-**	**-**
Bus-80 – Watt Ave	WB On Ramp	7,900	8,000	**100**	**1%**
Bus-80 – Watt Ave	WB Off Ramp	5,000	4,800	**(200)**	**-4%**

Source: DKS Associates, 2005.

Table 4.7-26 presents the intersection Level of Service analysis at the key study area intersections under Caltrans's jurisdiction for the p.m. peak hour under Existing Plus Project conditions. As shown in Table 4.7-26, the proposed project would not cause any ramp intersections to operate at unacceptable levels of service.

Table 4.7-26 P.M. Peak Hour Levels of Service at Study Intersections – State Highway Existing Plus Project Conditions					
Intersection		Existing Conditions		Existing Plus Project Conditions	
Freeway	Roadway	Level of Service	Signalized Intersection LOS (Delay)	Level of Service	Signalized Intersection LOS (Delay)
1 Hwy 70/99	Riego Rd	B	13.6	C	34.2
2 Hwy 70/99	Elverta Rd	A	8.3	B	17.6
3A Hwy 65 SB	Pleasant Grove	C	20.8	B	16.3
3B Hwy 65 NB	Pleasant Grove	C	30.7	C	21.8
4A I-80 WB	Riverside Avenue	C	21.7	C	22.3
4B I-80 EB	Riverside Avenue	C	26.3	C	25.2
5 I-80 WB	Watt Avenue	B	14.1	B	13.5
Note: Significant impacts are highlighted in bold letters Source: DKS Associates, 2005					

4.7-10 Buildout of the Specific Plan area would generate a demand for transit services and may result in unmet transit needs.

A variety of transit services are currently provided in Placer County. The proposed Specific Plan area is not currently served by transit because there is very little population, employment or retail activity in the area. The timing of the Specific Plan is outside the scope of the 5-Year Short Range Transit Plan. The closest transit services to the Plan area are Roseville Transit and Sacramento Regional Transit (RT).

The 14,132 residential units and a substantial amount of non-residential uses in the Specific Plan area would generate a significant demand for new transit services. If significant transit services are not provided to the Specific Plan area, an unmet transit need would likely be identified prior to buildout of the Specific Plan. Such unmet transit needs are defined by Placer County Transportation Planning Agency (PCTPA) and are reviewed on a regular basis.

The proposed Specific Plan states that "the Plan Area will include systems and facilities to promote public transit use" and might include the following:

- Bus rapid transit lanes will be dedicated on Watt Avenue from Baseline Road to the project's southern limits and a transit center at Watt Avenue and Town Center Drive.

- Dedication of rights-of-way for a future streetcar system will be provided along the northern side of Town Center Drive, extending from the transit center on Watt Avenue to the Town Center, ending at 16th Street.

- An internal transit system will be planned and implemented as the project is constructed that connects the Village Centers with the Town Center and other areas as deemed appropriate.

- An ADA dial-a-ride service will be provided.

- Commuter service will be provided to downtown Sacramento.

- Placer Vineyards will participate in regional service with connection to light rail transit on Watt Avenue in Sacramento County, Regional University, Galleria Mall and other Regional Centers.

- Park and ride lots will be constructed with a total of 193 parking spaces.

The ongoing operating cost for such a transit system would be substantial and the amount of funding that would be available for transit operations with the proposed Specific Plan is uncertain. To meet a potential unmet transit need, Placer County would need to provide a reasonable amount of transit service to the Specific Plan area, comparable to transit service provided in nearby communities in Roseville and Sacramento County. Based on input from Placer County, these transit services and facilities should include the following:

- Two internal bus routes that would originate at the transit center on Town Center Drive, circulate through the Specific Plan area with frequent headways and connect to other commercial centers

- A fixed bus route connecting the Specific Plan area to the City of Roseville. This would consist of regular route service all day, running at least hourly and connecting to the transit center at the Galleria Mall.

- A fixed bus route connecting the Specific Plan area to the Watt/I-80 Light Rail station. This would consist of regular route service all day, running at least hourly. The route would probably originate near Watt/Dyer Lane, with timed transfers with the Roseville route and direct service to the Watt/I-80 Light Rail station. This route could be established by contracting with Sacramento RT to extend their route from Watt/Elverta 1.5 miles north to connect to Watt/Dyer Lane.

- Commuter express bus service to downtown Sacramento. This service would originate at East Dyer Lane and Baseline Road and use Baseline Road and Riego Road to travel to downtown Sacramento via Hwy 70/99. The City of Roseville has future plans to operate a commuter bus route on Baseline Road. The most efficient option would be to contract with the City of Roseville to share this route.

- A general public dial-a-ride (demand-response) service within the Specific Plan area with potential service to important services outside the Specific Plan area (hospitals, etc.). This would serve as a feeder into the fixed routes.

- Bus stops/park and ride lots. It would be reasonable to plan for sheltered bus stops at one-half-mile intervals along the fixed routes. This would require approximately ten pairs of passenger shelters (twenty total). Park and ride lots should be provided at the commercial

centers and at the Town Center, which should have the largest lot with a pull-through bus stop for quick access/egress for the commuter bus route.

- Bus storage/fueling. Transit service provided to the Specific Plan area could be contracted to other transit service providers (City of Roseville, Sacramento RT) or directly provided by Placer County. The City of Roseville corporation yard, which serves as their transit operation base, is located four miles from the Specific Plan area. At the outset of development, the County could explore basing transit services from this location. However, City services are expanding and will likely use all of the space at the corporation yard. Buses could also ultimately be stored and operated out of the Placer County corporation yard to be located in the Specific Plan area.

Such services would be relatively costly due to the trip lengths involved. Placer County would receive some additional funding for transit services through its key existing funding source, Transportation Development Act (TDA) funds due to buildout of the Specific Plan area since these funds will be generated by sales tax revenue and returned to the County based on population. However, the additional TDA funds would only allow limited transit service to the Specific Plan area.

As noted above, it is possible that economies of scale could be achieved by contracting with other providers for transit services. For example, Sacramento RT could be approached to extend either Route 19 or Route 84 1.5 miles north to the Specific Plan area. These routes currently provide a connection to the Watt/I-80 Light Rail station.

In the General Plan, the County has designated some transit corridors where high capacity transit service may be possible. The designation of these transit corridors is intended to promote transit use through land use and design standards that enhance transit accessibility. In the vicinity of the proposed Specific Plan area, the County has designated Watt Avenue as an arterial transit corridor. Ongoing planning for Bus Rapid Transit (BRT) in West Placer County envisions a BRT route that continues north of Baseline Road. In Sacramento County, Watt Avenue has been designated as a BRT corridor in SACOG's MTP. Due to these designations, adequate right-of-way should be provided along Watt Avenue through the Specific Plan area for a potential exclusive BRT facility. The Specific Plan provides right-of-way for exclusive 10- to 12-foot BRT lanes in each direction on Watt Avenue from Baseline Road to the Dyer Lane intersection just north of Dry Creek.

The potential for inadequate funding for unmet transit needs is considered a ***potentially significant impact.***

<u>Mitigation Measure</u>

Implementation of the following measures would reduce these impacts to a *less than significant level*:

4.7-10a *A Community Service Area (CSA) shall be established to fund the cost of transit services listed in this section, and any related capital costs for buses, passenger amenities, and facilities.*

4.7-10b *Bus shelters shall be placed along major roadways at one-half-mile intervals serving Medium-Density, High-Density, Commercial and Office land use designations.*

4.7-II Buildout of the Specific Plan area would increase the demand for recreational and transportation related bicycle trips.

The proposed Specific Plan, with its 14,132 residential units, would generate a substantial demand for safe and convenient bicycle facilities, especially for recreational experiences. The Specific Plan provides approximately 48 miles of Class I off-street bike trails located within open space and landscape corridors along thoroughfares and arterial streets. Class II on-street bike lanes are proposed within the right-of-way of arterial and collector roadways. There will be a need to connect these bike trails and lanes within the Specific Plan area to the bikeway systems in adjacent jurisdictions. This includes provision of bike lanes on Baseline Road between the Specific Plan area and the city of Roseville (at Fiddyment Road) and on Watt Avenue into Sacramento County.

The proposed bikeway system in the Specific Plan area appears to meet the intent of the General Plan policies. This impact would be ***less than significant.***

Mitigation Measures

No mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

CUMULATIVE PLUS PROJECT CONDITIONS

Cumulative conditions were based on the best estimates of 2025 market levels of development throughout the region. The 2025 No Project Alternative assumes 2025 development levels, but only includes the very limited amount of existing development on the project site. The 2025 development assumptions and how they were estimated are described under the Methodology discussion earlier in this section. The regional roadway improvements assumed under 2025 conditions are described earlier in this section, and are depicted in Figure 4.7-13.

The traffic impacts of fully developing the proposed Specific Plan under Cumulative conditions were determined by comparing its traffic operations to the Cumulative No Project Alternative described previously under Methodology. Figures 4.7-14 through 4.7-16 show the average daily traffic volumes on study area roadways under the Cumulative No Project Alternative.

The Placer County Travel Demand Model was used to estimate and distribute project-related trips. The estimated trip generation of these conditions is outlined in Table 4.7-14. To provide the best estimate of the project's impact on traffic volumes, the model's estimated traffic volume under Existing No Project conditions was subtracted from the model's traffic volume estimate under the Cumulative Plus Project conditions for each roadway segment and each intersection turning movement. These differences were then added to existing traffic count data to provide a refined estimate of traffic volumes under Cumulative Plus Project conditions.

The analysis of Cumulative Plus Project conditions assumed that the only improvements to the Cumulative No Project roadway network (described earlier in this section) would be the internal roadways to the Specific Plan area, including the widening of Baseline Road and Watt Avenue to six lanes. Figure 4.7-17 shows the roadway network and lanes in the vicinity of the Specific Plan area that were assumed in the traffic analysis.

It should be noted that the traffic volume forecasts are not based on a simple layering/adding of assumed project-generated traffic volumes onto existing traffic counts. Rather, the County's Travel Demand Model is used to predict how travel patterns would change if the Specific Plan land uses are added to existing or buildout land uses. The model redistributes trips and can cause traffic on some roadways to decrease and cause changes in critical traffic movements at intersections, sometimes at intersections some distance from the Specific Plan area.

The four jurisdictions in the study area (Placer County, City of Roseville, Sacramento County and Sutter County) have different Level of Service policies. Therefore, the traffic impacts of development of the Specific Plan area are discussed separately for each jurisdiction.

4.7-I2 Buildout of the Specific Plan under Cumulative Plus Project conditions would increase daily traffic volumes on roadways in unincorporated Placer County.

Figure 4.7-18 shows the average daily traffic volumes on unincorporated Placer County roadways within the study area under Cumulative Plus Project conditions.

It should be noted that the new roadways in the Specific Plan area would provide new travel routes for existing traffic and change some travel patterns. For example, the extension of Dyer Lane from Watt Avenue to the northeast to connect to Baseline Road would divert some existing traffic from Watt Avenue north of Dyer Lane and from Baseline Road east of Watt Avenue. The new roadways in the Specific Plan area would also divert some existing traffic from portions of PFE Road and Walerga Road. These traffic diversions would offset some of the increase in traffic from the proposed Specific Plan.

A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-27. Under the Cumulative No Project Alternative, the four-lane segment of Baseline Road from the Sutter County line to Watt Avenue is predicted to operate at LOS "D" or "E" conditions. Under Cumulative Plus Project conditions, this segment of Baseline Road would be widened to six lanes and would operate at LOS "D". Because this segment is adjacent to the Specific Plan area, LOS "D" is considered acceptable. Further, the operations would be better or equal to the Cumulative No Project Alternative.

This analysis indicates that full development of the Specific Plan area under Cumulative Plus Project conditions would increase congestion at a number of locations throughout the study area. The following segments are projected to degrade from acceptable to unacceptable levels with the project and/or are new segments that would operate at unacceptable levels.

a. Level of Service on the segment of Baseline Road from East Dyer Lane to Fiddyment Road would degrade from LOS "C" to LOS "E."

b. Level of Service on the new segment of Dyer Lane from Tanwood Avenue to Watt Avenue would operate at LOS "E."

c. Level of Service on the new segment of Dyer Lane (East) from Baseline Road to A Street would operate at LOS "E."

Because one or more segments would degrade from acceptable to unacceptable levels, the increase in traffic congestion is considered a ***significant impact.***

Table 4.7-27
Roadway Segment Levels of Service – Unincorporated Placer County
Cumulative Plus Project Conditions

Roadway	Segment	Cumulative No Project Alternative			Cumulative Plus Project Conditions		
		Lanes	ADT	LOS	Lanes	ADT	LOS
Baseline Rd	East of County Line	4	40,600	F	6	46,900	C
Baseline Rd	East of Locust Rd	4	37,400	E	6	47,200	C
Baseline Rd	East of Brewer Rd	4	39,100	E	6	47,100	C
Baseline Rd	East of Palladay Rd	4	43,100	F	6	51,200	D
Baseline Rd	East of 16th Street	4	42,900	F	6	50,800	D
Baseline Rd	East of 12th Street	4	42,900	F	6	55,100	E
Baseline Rd	East of Watt Ave	6	52,800	E	6	50,500	E
Baseline Rd	East of Dyer Lane	6	42,700	C	6	**54,000**	**E**
Walerga Rd	South of Baseline Rd	4	42,300	F	4	39,400	F
Walerga Rd	North of PFE Rd	4	42,000	F	4	43,600	F
Watt Ave	South of Baseline Rd	4	61,100	F	6	43,500	D
Watt Ave	South of Dyer Lane	4	61,200	F	6	64,300	F
PFE Rd	East of Watt Avenue	2	9,300	A	2	13,800	C
PFE Rd	East of Walerga Rd	2	17,200	E	2	16,600	E
Dyer Lane (West)	South of Baseline Rd				4	18,900	A
Dyer Lane	South of Town Center Drive				4	8,400	A
Dyer Lane	West of 16th Street				4	20,200	A
Dyer Lane	West of Tanwood Ave				4	30,300	D
Dyer Lane	West of Watt Ave				4	**33,100**	**E**
Dyer Lane (East)	South of Baseline Rd				4	**33,100**	**E**
Palladay Rd	South of Baseline Rd				2	7,700	A
Palladay Rd	North of Dyer Lane				2	3,600	A
16th Street	South of Baseline Rd				4	5,900	A
16th Street	South of Dyer Lane				4	22,300	B
14th Street	South of Baseline Rd				2	4,700	A

Table 4.7-27 Roadway Segment Levels of Service – Unincorporated Placer County Cumulative Plus Project Conditions							
Roadway	Segment	Cumulative No Project Alternative			Cumulative Plus Project Conditions		
		Lanes	ADT	LOS	Lanes	ADT	LOS
12th Street	South of Baseline Rd				4	4,400	A
A Street	East of Dyer Lane				2	3,900	A
A Street	West of 16th Street				2	5,600	A
A Street	West of Tanwood Ave				2	4,800	A
A Street	West of Watt Ave				4	26,100	C
A Street	West of Dyer Lane				2	4,900	A
Town Center Drive	East of Dyer Lane (W)				2	4,400	A
Town Center Drive	West of 16th Street				2	4,400	A
Town Center Drive	West of Tanwood Ave				2	11,600	B
Town Center Drive	West of Watt Ave				2	12,800	C
Town Center Drive	West of Dyer Lane (E)				2	3,000	A
Town Center Drive	West of Walerga Rd				2	10,300	A

Note: ADT = average daily traffic. Significant impacts are highlighted in bold letters. "Blank" = Roadway does not exist under this scenario.
Source: DKS Associates, 2005.

Mitigation Measures

Implementation of the following measure would reduce the project contribution to cumulative traffic congestion by providing funding for improvements to the County transportation network. A combination of improvements would be needed to mitigate cumulative traffic impacts, and not all of these improvements are within the jurisdiction of Placer County (e.g., Placer Parkway). In addition, the best combination of improvements depends on the size, nature and timing of development and transportation improvements in Placer County, City of Roseville, Sacramento County and other jurisdictions. The County will continue to coordinate with these jurisdictions, but the specific set of improvements that will ultimately be constructed cannot be identified at this time. For these reasons, this impact would remain ***significant and unavoidable.***

4.7-12: *Implement Mitigation Measure 4.7-2a.*

A number of transportation improvements have been identified that, in various combinations, could reduce anticipated congestion levels on major roadways within or near the Specific Plan area. Mitigation Measure 4.7-2a would provide the proposed project's fair share contribution toward the combination of improvements ultimately selected by the County and other affected jurisdictions as best able to provide a County roadway network that serves existing and new development at Levels of Service consistent with the County's General Plan. In order to determine the extent to which a set of identified improvements could reduce cumulative traffic congestion, a Mitigated Transportation Network was modeled. This Mitigated Transportation Network is just one of a number of possible roadway improvements that could be implemented. General evaluation of these improvements was conducted to determine their acceptability and feasibility and whether they should be included in a Mitigated Transportation Network. The

roadway lanes in the Mitigated Transportation Network are shown in Figure 4.7-19. These potential improvements are summarized below:

1. Widening Baseline Road to eight lanes from Brewer Road to Fiddyment Road.

   This widening would improve the Level of Service along this section of Baseline Road. The widening could also have some undesirable effects including:

   - Such a widening may not promote pedestrian and bicycle circulation since wide roadways can be barriers for walking and cycling. The widening could discourage walking near Baseline Road by lengthening the distance for pedestrians and bicycle to cross Baseline Road to an unacceptable level.

   - Such a widening would not be consistent with the County's General Plan roadway standards that call for a maximum of six lanes on arterials and thoroughfares.

   - The widening would further increase traffic volumes on roadways in western Roseville, some of which are projected to operate at LOS "D", "E" or "F" conditions under Cumulative Plus Project conditions and cannot be further mitigated.

   - There may be concerns about visual aesthetics of an eight-lane roadway and its impact on community character.

For these reasons, and because Placer Parkway (discussed below) would also provide substantial east-west traffic capacity, the widening of Baseline Road to eight lanes was not included in the Mitigated Transportation Network.

2. Constructing Placer Parkway.

   The Concept Report for Placer Parkway calls for a new controlled-access highway that would connect Hwy 65 to Hwy 70/99. This new facility would decrease traffic volumes on a number of existing and planned roadways in western Placer County, including Baseline Road, and numerous roadways in the city of Roseville. This regional facility would help mitigate traffic impacts of not only the proposed Placer Vineyards project but the traffic impacts from other proposed developments in western Placer County as well, and thus was considered a key improvement in the Mitigated Transportation Network.

3. Extending Watt Avenue from the proposed Regional University development north to Blue Oaks Boulevard.

   This extension would divert some traffic from Fiddyment Road and Baseline Road east of Watt Avenue and was considered a key improvement in the Mitigated Transportation Network.

4. Widening the Watt Avenue Extension from Baseline Road to Pleasant Grove Boulevard to six lanes.

This extension was assumed to have four lanes in the Cumulative No Project scenario but would need six lanes to have an acceptable Level of Service. Therefore, six lanes were assumed in the Mitigated Transportation Network.

5. Constructing a new north-south roadway from the proposed Regional University to Baseline Road at 12th Street.

   This improvement would run parallel to, and west of, the Watt Avenue Extension and connect to Baseline Road at 12th Street, which is a new roadway in the proposed Placer Vineyards Specific Plan. Coupled with a new east-west roadway (discussed in #6 below) and the extension of Watt Avenue to Blue Oaks Boulevard, this new roadway would allow some traffic to divert around the intersection of Watt Avenue and Baseline Road. However, it would extend into vacant land north of Blue Oaks Boulevard and west of Watt Avenue that was not considered developed under Cumulative (2025) conditions and thus it was not included in the Mitigated Transportation Network.

6. Constructing a new east-west arterial roadway north of Baseline Road from Watt Avenue to the new north-south roadway described in #4 above. Coupled with that new north-south roadway and the extension of Watt Avenue to Blue Oaks Boulevard, this new roadway would allow some traffic to divert around the intersection of Watt Avenue and Baseline Road. However, it would extend into vacant land north of Blue Oaks Boulevard west of Watt Avenue that was not considered developed under Cumulative (2025) conditions and thus was not included in the Mitigated Transportation Network.

7. Widening PFE Road to four lanes between Watt Avenue and Walerga Road.

   This widening would help divert traffic from Baseline Road between Watt Avenue and Walerga Road and was considered a key improvement in the Mitigated Transportation Network.

8. Widening Walerga Road to six lanes from south of Baseline Road to the Sacramento County line.

   This widening would increase the capacity of this segment of Walerga Road but it would also increase traffic volumes on this segment, as well as on portions of Walerga Road in Sacramento County. Since widening Walerga Road in Sacramento County to six lanes may not be feasible, the widening of Walerga Road to six lanes in Placer County was not included in the Mitigated Transportation Network except near its intersections with Baseline Road and PFE Road.

9. Widening Dyer Lane to six lanes from 16th Street east to Baseline Road.

   While the segment-based Level of Service analysis indicates that widening this entire segment may be needed, the analysis of peak hour operations at intersections along Dyer Lane indicates that six through lanes are only required near its intersection with Watt Avenue

and its eastern intersection with Baseline Road. The widening to six lanes near these intersections was included as part of proposed Specific Plan.

10. Construct triple lefts and/or fourth through lanes

The project includes extensive improvements to intersections. At some locations, these improvements include what is termed maximum conventional intersections. This term is defined as an intersection consisting of three through lanes, double left turn lanes, and free right turn lanes on all approaches. An example of this type of intersection is the one located in Roseville near the Galleria Mall at Galleria Boulevard and Roseville Parkway. The resulting roadway includes 10 lanes, and with shoulders is 140 feet wide.

Despite utilizing the maximum conventional intersection configuration, several intersections are projected to operate at LOS "F". These intersections include 1) Baseline Road and Watt Avenue, 2) Baseline Road and Fiddyment/Walerga Road, 3) Cook Riolo Road and PFE Road, and 4) Watt Avenue and Dyer Lane. One alternative would be to add additional lanes such as triple left turn lanes or four through lanes. The addition of triple left turn lanes and/or four through lanes (in various combinations) at these intersections could improve to LOS E". These additional lanes, while technically improving the level of service at an intersection tend to create other problems including:

- Such roadways can become barriers to pedestrians and bicyclists, who may be discouraged from trying to cross such facilities. For some pedestrians, it is difficult to cross such a wide street.

- The long time devoted to pedestrian crossing movements can also adversely affect traffic signal coordination efforts, frustrating efforts to facilitate the smooth flow of traffic.

- The additional capacity added with each new lane is reduced due to inefficiencies in lane utilization. As an example, triple left turn lanes do not provide 50% more capacity as compared to double left turn lanes.

- There are traffic safety implications to such a wide facility. Motorists may have difficulty staying within lanes with a triple left turn configuration. In the case of four through lanes it can be difficult to cross so many lanes to reach the left turn lanes.

- Very large intersections tend to divide neighborhoods, so that communities on one side of such intersections feel little or any connection to the neighborhoods on the other side. By discouraging pedestrians and bikes it contributes to more vehicle trips and poor air quality. This result is at cross purposes to the goals of the Specific Plan to encourage walkable communities.

- Before such large intersections are considered, other mitigations should be explored including interchanges, reduced land use near the intersections and parallel roadways. In addition, the overall corridor Level of Service should be evaluated. Under this procedure

a series of intersections are examined; in some cases one intersection has high delay but the delay in the overall corridor is acceptable.

- The Level of Service at intersections is based upon traffic during the peak hour. The additional lanes would be unnecessary and underutilized the remainder of the day with all the negatives described above.

Periods of LOS "F" at a few intersections during peak hour tends to encourage alternate forms of transportation, ride-sharing and transit usage. In addition residents are encouraged to work and shop closer to home with resulting benefits to air quality. For the above reasons, County staff believes that this mitigation measure, at these three intersections, is not feasible and is at odds with the goals of the Specific Plan. Overall, the negatives, in staff's judgment, outweigh the benefits of a small reduction in travel delay. Some of the negative effects on pedestrian and bicycle circulation could be addressed by construction of connecting facilities, such as grade separated crossings for bicycle and pedestrian paths.

11. A substantial increase in the transit system serving the project site.

A robust transit service plan for the Specific Plan could help reduce traffic volumes on the roadway system serving the project site. The proposed Specific Plan states that "the Plan Area will include systems and facilities to promote public transit use" and would include the following:

- Bus rapid transit lanes will be dedicated on Watt Avenue from Baseline Road to the Specific Plan's southern limits and a transit center at Watt Avenue and Town Center Drive.

- Rights-of-way for a future streetcar system will be provided along the northern side of Town Center Drive, extending from the transit center on Watt Avenue to the Town Center, ending at 16th Street.

- An internal transit system will be planned and implemented as the project is constructed that connects the Village Centers with the Town Center and other areas as deemed appropriate.

- An ADA dial-a-ride service will be provided.

- Commuter service will be provided to downtown Sacramento.

- Placer Vineyards will participate in regional service with connection to light rail transit on Watt Avenue in Sacramento County, Regional University, Galleria Mall and other Regional Centers.

A detailed discussion of these services occurs under Impact 4.7-10. The ongoing operating cost for such a transit system would be substantial and the amount of funding that would be available

for transit operations is uncertain. Placer County would receive some additional funding for transit services through its key existing funding source, Transportation Development Act (TDA), due to buildout of the Specific Plan area since these funds are based on population. However, additional TDA funds would only allow limited transit service to the Specific Plan area.

Due the uncertainty about transit operating fund, the Cumulative Plus Project scenario assumed that the Specific Plan area would have limited transit services. Additional transit services are identified under Impact 4.7-9. Those additional transit services are considered part of the Mitigated Transportation Network.

Based on the evaluation summarized above, a Cumulative Plus Project with Mitigated Transportation Network scenario was defined to include the following:

- Construction of Placer Parkway
- Extending Watt Avenue from the proposed Regional University development north to Blue Oaks Boulevard
- Widening of the Watt Avenue Extension to six lanes from Baseline Road to Pleasant Grove Boulevard
- Widening PFE Road to four lanes between Watt Avenue and Walerga Road
- Widening Dyer Lane to six lanes near its intersection with Watt Avenue and its eastern intersection with Baseline Road
- Additional transit services serving the project site, as discussed under Impact 4.7-9

A Project Study Report (PSR) for Placer Parkway was adopted by SACOG and the Placer County Transportation Planning Agency (PCTPA) in 2001. An ongoing environmental review process (NEPA/CEQA) will evaluate a range of alternative alignments and will select a corridor so that right-of-way can be preserved. In the 8- to 10-mile area between Fiddyment Road and Pleasant Grove Road, the adopted Conceptual Plan for the Placer Parkway calls for no access to this facility except for a possible interchange at an extension of Watt Avenue. The Cumulative Plus Project with Mitigated Transportation Network scenario assumes that (1) Placer Parkway would be implemented along the general alignment recommended in its adopted PSR and (2) there is an interchange on Placer Parkway near the intersection of the Watt Avenue Extension and Blue Oaks Boulevard.

The Placer County Travel Demand Model was used to estimate and distribute traffic volumes under the Cumulative Plus Project with Mitigated Transportation Network scenario. Figure 4.7-20 shows the average daily traffic volumes on unincorporated Placer County roadways within the study area under this scenario.

A roadway segment Level of Service analysis based on these daily traffic volumes is presented in Table 4.7-28. The new and improved roadways parallel to Baseline Road, particularly Placer Parkway, would decrease the traffic volume on Baseline Road from the Sutter County line to Fiddyment Road. The Mitigated Transportation Network would improve the Level of Service on all segments of Baseline Road under the Cumulative Plus Project conditions. With the Mitigated Transportation Network, only the following two segments of Baseline Road would operate at

LOS "D" conditions and thus would not meet the County's General Plan standard but do meet the Specific Plan standards and are therefore considered acceptable:

- Baseline Road between 12th Street and Watt Avenue
- Baseline Road between Dyer Lane East and Walerga Road

The Mitigated Transportation Network would decrease volumes on Walerga Road between Baseline Road and PFE Road, but this segment would continue to operate at LOS "F" conditions. The Mitigated Transportation Network would increase volumes on Watt Avenue between Baseline Road and PFE Road and continue to operate at LOS "F" conditions south of Dyer Lane.

This analysis indicates that the improvements included in the Mitigated Transportation Network would reduce traffic congestion on Placer County roadway segments under the Cumulative Plus Project scenario to the extent that roadway segments would operate at an acceptable level, and/or better than under Cumulative No Project conditions. As shown in Table 4.7-28, the number of segments that would operate at LOS "D" or worse under the Mitigated Transportation Network would be substantially fewer than would occur under the No Project condition. Another combination of improvements that provided similar increases in east-west capacity (e.g., combinations that include widening Baseline Road to eight lanes) would have similar effects, although increases and decreases on specific segments would differ.

Table 4.7-28
Roadway Segment Levels of Service – Unincorporated Placer County
Cumulative Plus Project With Mitigated Transportation Network Scenario

Roadway	Segment	Cumulative No Project			Cumulative Plus Project			Cumulative Plus Project With Mitigated Transportation Network		
		Lanes	ADT	LOS	Lanes	ADT	LOS	Lanes	ADT	LOS
Baseline Rd	East of County Line	4	40,600	F	6	46,900	C	6	37,300	B
Baseline Rd	East of Locust Rd	4	37,400	E	6	47,200	C	6	34,200	A
Baseline Rd	East of Brewer Rd	4	39,100	E	6	47,100	C	6	32,700	A
Baseline Rd	East of Palladay Rd	4	43,100	F	6	51,200	D	6	40,500	B
Baseline Rd	East of 16th Street	4	42,900	F	6	50,800	D	6	42,700	C
Baseline Rd	East of 12th Street	4	42,900	F	6	55,100	E	6	49,400	D
Baseline Rd	East of Watt Ave	6	52,800	E	6	50,500	E	6	38,700	C
Baseline Rd	East of Dyer Lane	6	42,700	C	6	54,000	E	6	45,600	D
Walerga Rd	South of Baseline Rd	4	42,300	F	4	39,400	F	4	36,400	F
Walerga Rd	North of PFE Rd	4	42,000	F	4	43,600	F	4	42,000	F
Watt Ave	South of Baseline Rd	4	61,100	F	6	43,500	D	6	45,900	D
Watt Ave	South of Dyer Lane	4	61,200	F	6	64,300	F	6	66,400	F
PFE Rd	East of Watt Avenue	2	9,300	A	2	13,800	C	4	17,300	A
PFE Rd	East of Walerga Rd	2	17,200	E	2	16,600	E	2	14,300	C
Dyer Lane (West)	South of Baseline Rd				4	18,900	A	4	18,100	A
Dyer Lane	South of Town Center				4	8,400	A	4	8,900	A
Dyer Lane	West of 16th Street				4	20,200	A	4	19,900	A
Dyer Lane	West of Tanwood Ave				4	30,300	D	4	27,400	C
Dyer Lane	West of Watt Ave				4	33,100	E	4	31,300	D
Dyer Lane (East)	South of Baseline Rd				4	**33,100**	**E**	4	26,200	C
Palladay Rd	South of Baseline Rd				2	7,700	A	2	10,500	A
Palladay Rd	North of Dyer Lane				2	3,600	A	2	5,400	A

Table 4.7-28
Roadway Segment Levels of Service – Unincorporated Placer County
Cumulative Plus Project With Mitigated Transportation Network Scenario

Roadway	Segment	Cumulative No Project			Cumulative Plus Project			Cumulative Plus Project With Mitigated Transportation Network		
		Lanes	ADT	LOS	Lanes	ADT	LOS	Lanes	ADT	LOS
16th Street	South of Baseline Rd				4	5,900	A	4	7,800	A
16th Street	South of Dyer Lane				4	22,300	B	4	22,400	B
14th Street	South of Baseline Rd				2	4,700	A	2	5,500	A
12th Street	South of Baseline Rd				4	4,400	A	4	5,100	A
A Street	East of Dyer Lane				2	3,900	A	2	2,800	A
A Street	West of 16th Street				2	5,600	A	2	4,700	A
A Street	West of Tanwood Ave				2	4,800	A	2	3,900	A
A Street	West of Watt Ave				4	26,100	C	4	20,300	A
A Street	West of Dyer Lane				2	4,900	A	2	3,600	A
Town Center Drive	East of Dyer Lane (W)				2	4,400	A	2	3,800	A
Town Center Drive	West of 16th Street				2	4,400	A	2	3,200	A
Town Center Drive	West of Tanwood Ave				2	11,600	B	2	9,900	A
Town Center Drive	West of Watt Ave				2	12,800	C	2	10,900	B
Town Center Drive	West of Dyer Lane (E)				2	3,000	A	2	2,000	A
Town Center Drive	West of Walerga Rd				2	10,300	A	2	7,700	A

Notes: ADT = average daily traffic. Significant impacts are highlighted in bold letters.
Source: DKS Associates, 2005.

4.7-I3 Buildout of the Specific Plan under Cumulative Plus Project conditions would increase peak hour traffic volumes on study area intersections in unincorporated Placer County.

The proposed Specific Plan provides typical cross-sections for the roadways within the Specific Plan area. Additional right-of-way is typically provided near major intersections on arterial and collector roadways to accommodate additional turn lanes.

A planning level signal warrant analysis was conducted under the Cumulative Plus Project conditions to define the locations where traffic signals should be assumed. This analysis indicates the following intersections should be signalized by 2025:

- Locust Road and Baseline Road
- Brewer Road and Baseline Road
- Palladay Road and Baseline Road
- 16th Street and Baseline Road
- 14th Street and Baseline Road
- 12th Street and Baseline Road
- 11th Street and Baseline Road
- Dyer Lane and Baseline Road
- 9th Street and Baseline Road
- West Dyer Lane and A Street
- 12th Street and A Street
- Watt Avenue and A Street
- West Dyer Lane and Town Center Drive
- Watt Avenue and Town Center Drive
- East Dyer Lane and Town Center Drive
- Walerga Road and Town Center Drive
- Watt Avenue and Oak Street
- 18th Street and Dyer Lane
- 16th Street and Dyer Lane
- Tanwood Avenue and Dyer Lane
- Watt Avenue and Dyer Lane

The intersections of Palladay Road with A Street, 16th Street with A Street, and 14th Street with A Street are analyzed as stop-sign controlled intersections even though the Specific Plan calls for traffic signals because traffic signals were not warranted under Cumulative Plus Project conditions.

Figure 4.7-4 shows the key study area intersections in unincorporated Placer County. Table 4.7-29 presents the intersection Level of Service analysis at these intersections for the p.m. peak hour under Cumulative Plus Project conditions. The traffic volumes and lane geometry at each intersection in Table 4.7-29 are shown in Appendix I. This analysis indicates that development of the Specific Plan under Cumulative Plus Project conditions would increase congestion at a number of locations throughout the study area. The following segments are projected to degrade

from acceptable to unacceptable levels with the project and/or are new segments that would operate at unacceptable levels.

a. Level of Service at the intersection of Walerga Road and PFE Road would degrade from LOS "F" (V/C 1.44) to LOS "F" (V/C 1.68).

b. Level of Service at the intersection of Cook Riolo Road and PFE Road would degrade from LOS "F" (Delay 303) to LOS "F" (Delay 319).

c. Level of Service at the intersection of Dyer Lane and Baseline Road would degrade from LOS "D" to LOS "F" under the assumed geometry.

d. Level of Service at the intersection of 9th Street and Baseline Road would degrade from LOS "D" to LOS "F" under the assumed geometry.

e. The new intersection of Watt Avenue and Dyer Lane would operate at LOS "F" conditions under the assumed geometry.

f. The new intersection of Walerga Road and East Town Center Drive would operate at LOS "F" conditions under the assumed geometry.

Because one or more intersections would degrade from acceptable to unacceptable levels, the increase in traffic congestion is considered ***a significant impact.***

Table 4.7-29
P.M. Peak Hour Levels of Service at Study Intersections – Unincorporated Placer County
Cumulative Plus Project Conditions

Intersection			Cumulative No Project Alternative			Cumulative Plus Project Conditions		
North-South Roadway		East-West Roadway	Level of Service	LOS Criteria: Signalized Intersection (V/C Ratio)	LOS Criteria: Unsignalized Intersection (Delay)[1]	Level of Service	LOS Criteria: Signalized Intersection (V/C Ratio)	LOS Criteria: Unsignalized Intersection (Delay)[1]
1	Locust Road	Baseline Road	F	1.04		E	0.91	
2	Brewer Road	Baseline Road	F	1.02		D	0.90	
3	Watt Avenue	Baseline Road	F	1.53		F	1.12	
4	Fiddyment Road	Baseline Road	F	1.16		F	1.20	
5	Watt Avenue	PFE Road	E	0.92		C	0.74	
6	Walerga Road	PFE Road	F	1.44		**F**	**1.68**	
7	Cook Riolo Road	PFE Road	F		303.2	**F**		**319.4**
8	Palladay Road	Baseline Road				C	0.77	
9	16th Street	Baseline Road				C	0.78	
10	14th Street	Baseline Road				D	0.86	
11	12th Street	Baseline Road				D	0.87	
12	11th Street	Baseline Road				D	0.89	
13	East Dyer Lane	Baseline Road	D	0.89		**F**	**1.06**	
14	9th Street	Baseline Road	D	0.86		**F**	**1.07**	
15	West Dyer Lane	A Street				A	0.47	
16	Palladay Road	A Street				B		11.6

Table 4.7-29
P.M. Peak Hour Levels of Service at Study Intersections – Unincorporated Placer County
Cumulative Plus Project Conditions

Intersection			Cumulative No Project Alternative			Cumulative Plus Project Conditions		
	North-South Roadway	East-West Roadway	Level of Service	LOS Criteria		Level of Service	LOS Criteria	
				Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]		Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]
17	16th Street	A Street				B		13.0
18	14th Street	A Street				B		14.3
19	12th Street	A Street				B	0.61	
20	Watt Avenue	A Street				D	0.81	
21	West Dyer Lane	Town Center				B	0.63	
22	Watt Avenue	Town Center				B	0.66	
23	East Dyer Lane	Town Center				C	0.71	
24	Walerga Road	Town Center				**F**	**1.09**	
25	Watt Avenue	Oak Street				B	0.68	
26	18th Street	Dyer Lane				A	0.47	
27	16th Street	Dyer Lane				**D**	0.83	
28	Tanwood Avenue	Dyer Lane				B	0.61	
29	Watt Avenue	Dyer Lane				**F**	**1.06**	
30	Watt Avenue	West Side Dr	F	1.17		F	1.17	

Notes: "Blank" = Intersection does not exist under this scenario. Significant impacts are highlighted in bold letters. Intersection numbers refer to Figure 4.7-4.
[1] Average delay for all movements at intersection, including uncontrolled movements. Delay on some stop-signed controlled left-turn movements may be substantial, but typically impacts a limited number of vehicles.
Source: DKS Associates, 2005

Mitigation Measures

Implementation of the following measure would reduce the project contribution to cumulative traffic congestion by providing funding for improvements to the County transportation network. A combination of improvements would be needed to mitigate cumulative traffic impacts, and not all of these improvements are within the jurisdiction of Placer County (e.g., Placer Parkway). Furthermore, there may not be feasible improvements for some intersections. In addition, the best combination of improvements depends on the size, nature and timing of development and transportation improvements in Placer County, City of Roseville, Sacramento County and other jurisdiction. The County will continue to coordinate with these jurisdictions, but the specific set of improvements that will ultimately be constructed cannot be identified at this time. For these reasons, this impact would remain ***significant and unavoidable.***

4.7-13a *Implement Mitigation Measure 4.7-2a.*

4.7-13b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following improvements:*

i. A third northbound and southbound through lane, a second eastbound and westbound through lane, a second northbound, an eastbound and westbound left

turn lane and a free eastbound right turn lane to improve the intersection of Walerga Road and PFE Road to LOS "E" (V/C 0.97).

ii. *A third northbound and southbound through lane to improve the intersection of Walerga Road and Town Center Drive to LOS "F" (V/C 1.29).*

iii. *Make the eastbound right turn lane a free right turn to improve the intersection of Watt Avenue and Dyer Lane to LOS "F" (V/C 1.05).*

Mitigation Measure 4.7-2a requires that the proposed project contribute its fair share toward roadway improvements in Placer County by constructing the improvements (and being reimbursed for costs beyond the project share) or paying fees collected for improvements in Placer County. In order to evaluate the potential for such improvements to reduce traffic congestion in the study area, a Mitigated Transportation Network (shown in Figure 4.7-19) was identified and modeled. The Mitigated Transportation Network includes construction of Placer Parkway, widening of some existing or planned roadways and intersections and improvements to transit service. As Table 4.7-30 shows, the Mitigated Transportation Network would reduce the number of intersections that would operate at unacceptable levels, and would reduce the severity of the impacts at other locations. In some cases, congestion at an intersection would increase.

As indicated below, two intersections would continue to operate at unacceptable levels under the Cumulative Plus Project with Mitigated Transportation Network scenario. However, with the exception of the intersection of Walerga Road and East Town Center Drive, operations would improve as a result of the enhanced roadway network.

a. The new intersection of Walerga Road and Town Center Drive would operate at LOS "F" conditions under the assumed geometry.

b. The new intersection of Watt Avenue and Dyer Lane would operate at LOS "F" conditions under the assumed geometry.

Implementation of the improvements identified in Mitigation Measure 4.7-13b would improve operations at three of these intersections. These improvements would likely be necessary regardless of which combination of improvements is funded and/or constructed by the proposed project.

As discussed under Mitigation Measure 4.7-12, additional improvements, such as third left turn lanes and four through lanes, could be constructed at intersections that would operate at LOS "F" even with the Mitigated Transportation Network. In some cases this could improve LOS to "E". County staff does not recommend that these extraordinary improvements be included in the package of feasible mitigations, for the reasons discussed under Mitigation Measure 4.7-12.

An alternative would be to retain the flexibility to consider such super-intersections in the future. A condition could be set requiring the project to reserve future rights-of-way for the additional width that would be needed to accommodate additional lanes. Such right-of-way could be used for landscaping until such time, if ever, it is needed for pavement.

4.7-I4 Buildout of the Specific Plan under Cumulative Plus Project conditions would increase peak hour traffic volumes on study area intersections in the City of Roseville.

The City of Roseville has requested that the analysis of the traffic impacts related to the proposed Specific Plan on Roseville's roadway system be based on the same assumptions used by the City of Roseville for their CIP. Like the cumulative analysis of the project-related traffic impacts in Placer, Sutter and Sacramento counties, Roseville's CIP analysis is based on the Placer County Travel Demand Model, but its land use assumptions differ as follows:

- The Roseville CIP assumes the same level of development within the City of Roseville as the cumulative analysis of the impacts of the proposed Specific Plan; that is, buildout of all entitled land under its General Plan while on roadways in Placer, Sutter and Sacramento counties assumes an estimated of 2025 market level development in Roseville.

- For areas of Placer County outside of Roseville, the Roseville CIP assumes 2020 development levels, but only for entitled land uses under current General Plans. The cumulative impact analysis of the proposed Specific Plan assumes 2025 market levels of development in Placer County and includes proposed development projects in Placer, south Sutter and northern Sacramento counties.

- The Roseville CIP assumes about 18,500 industrial jobs in south Sutter County. The cumulative impact analysis of the proposed Specific Plan on roadways in Placer, Sutter and Sacramento counties assumes 8,750 dwelling units in the South Sutter County Specific Plan area plus retail, office and industrial uses.

- The Roseville CIP assumes SACOG's 2020 development estimates for Sacramento County. The cumulative impact analysis of the proposed Specific Plan on roadways in Placer, Sutter and Sacramento counties assumes SACOG's 2025 development estimates for Sacramento County except in Elverta, where it assumes full buildout of the proposed *Elverta Specific Plan*.

- The Roseville CIP assumes approximately 7,800 dwelling units and some non-residential development in the Specific Plan.

The scenarios used to evaluate the impacts of the proposed Specific Plan on the City of Roseville's roadway system under cumulative conditions are as follows:

- Cumulative No Project (based on City of Roseville's 2020 development assumptions)
- Cumulative Plus Project (2020 development plus buildout of *Placer Vineyards Specific Plan*)

Table 4.7-30
P.M. Peak Hour Levels of Service at Study Intersections – Unincorporated Placer County
Cumulative Plus Project with Mitigated Transportation Network Scenario

Intersection		Cumulative No Project Alternative			Cumulative Plus Project			Cumulative Plus Project with Mitigated Transportation Network		
			LOS Criteria			LOS Criteria			LOS Criteria	
North-South Roadway	East-West Roadway	Level of Service	Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]	Level of Service	Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]	Level of Service	Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]
1 Locust Road	Baseline Road	F	1.04		E	0.91		C	0.77	
2 Brewer Road	Baseline Road	F	1.02		D	0.9		C	0.72	
3 Watt Avenue	Baseline Road	F	1.53		F	1.12		F	1.16	
4 Fiddyment Road	Baseline Road	F	1.16		F	1.2		F	1.1	
5 Watt Avenue	PFE Road	E	0.92		C	0.74		D	0.8	
6 Walerga Road	PFE Road	F	1.44		**F**	**1.68**		**F**	**1.7**	
7 Cook Riolo Road	PFE Road	F		303.2	**F**		**319.4**	F		284.5
8 Palladay Road	Baseline Road				C	0.77		C	0.74	
9 16th Street	Baseline Road				C	0.78		C	0.7	
10 14th Street	Baseline Road				D	0.86		C	0.78	
11 12th Street	Baseline Road				D	0.87		D	0.84	
12 11th Street	Baseline Road				D	0.89		D	0.81	
13 East Dyer Lane	Baseline Road	D	0.89		**F**	**1.06**		D	0.85	
14 9th Street	Baseline Road	D	0.86		**F**	**1.07**		D	0.9	
15 West Dyer Lane	A Street				A	0.47		A	0.45	
16 Palladay Road	A Street				B		11.6	B		11.9
17 16th Street	A Street				B		13	B		12.4
18 14th Street	A Street				B		14.3	B		10.3
19 12th Street	A Street				B	0.61		A	0.44	
20 Watt Avenue	A Street				D	0.81		C	0.79	
21 West Dyer Lane	Town Center Dr				B	0.63		B	0.67	
22 Watt Avenue	Town Center				B	0.66		B	0.7	
23 East Dyer Lane	Town Center				C	0.71		A	0.47	
24 Walerga Rd	Town Center				**F**	**1.09**		**F**	**1.01**	

Table 4.7-30
P.M. Peak Hour Levels of Service at Study Intersections – Unincorporated Placer County
Cumulative Plus Project with Mitigated Transportation Network Scenario

Intersection		Cumulative No Project Alternative			Cumulative Plus Project			Cumulative Plus Project with Mitigated Transportation Network		
			LOS Criteria			LOS Criteria			LOS Criteria	
North-South Roadway	East-West Roadway	Level of Service	Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]	Level of Service	Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]	Level of Service	Signalized Intersection (V/C Ratio)	Unsignalized Intersection (Delay)[1]
25 Watt Avenue	Oak Street				B	0.68	-	B	0.62	-
26 18th Street	Dyer Lane				A	0.47		A	0.36	
27 16th Street	Dyer Lane				D	0.83		C	0.78	
28 Tanwood Avenue	Dyer Lane				B	0.61		A	0.59	
29 Watt Avenue	Dyer Lane				**F**	**1.06**		**F**	**1.1**	
29 Watt Avenue	West Side Dr	F	1.17		F	1.17		F	1.19	

Notes: "Blank" = Intersection does not exist under this scenario. Significant impacts are highlighted in bold letters. Intersection numbers refer to Figure 4.7-4.
[1] Average delay for all movements at intersection, including uncontrolled movements. Delay on some stop-signed controlled left-turn movements may be substantial, but typically impacts a limited number of vehicles.
Source: DKS Associates, 2005

Roseville's Travel Demand Model was used to estimate future traffic volumes with and without the proposed Specific Plan. The City of Roseville Level of Service policy calls for maintenance of a LOS "C" standard at 70% of all signalized intersections in the city during the p.m. peak hour. For this Revised Draft EIR, Levels of Service were evaluated at all of the 159 existing and planned signalized intersections throughout the city of Roseville. The addition of the Specific Plan was not assumed to add any signals to the city of Roseville.

Figure 4.7-21 shows the daily traffic volumes on study area roadways in the city of Roseville under the Cumulative Plus Project conditions. It should be noted that the traffic volume forecasts are not based on a simple layering/adding of assumed project-generated traffic volumes onto cumulative conditions without the proposed project. Rather, the City's Travel Demand Model is used to predict how travel patterns would change if the project land uses are added to cumulative land uses. The model redistributes trips and can cause traffic on some roadways to decrease and cause changes in critical traffic movements at intersections, sometimes at intersections some distance from the proposed project.

Table 4.7-31 shows the seven intersections that would experience a significant Level of Service impact with the addition of the proposed Specific Plan. Four intersections that would operate at LOS "C" or better would degrade to LOS "D" or worse with the addition of the proposed project. Three of these intersections would degrade from LOS "C" to LOS "D" and one would degrade from LOS "C" to LOS "E." Three intersections that would already operate at LOS "D" or worse under Cumulative No Project conditions would degrade to a worse Level of Service with the addition of the proposed project. Two of these would degrade from LOS "D" to LOS "E," one would degrade from LOS "E" to LOS "F."

This is considered a ***significant impact.***

It should be noted that the City of Roseville's CIP assumes development of about 7,800 dwelling units in the proposed Specific Plan. Therefore, at some intersections, the LOS "D," "E" and "F" conditions under the Cumulative Plus Project conditions are the same conditions as the City of Roseville's CIP.

Table 4.7-32 shows the number and percentage of intersections that would operate at LOS "C" or better under both Cumulative No Project and Cumulative Plus Project conditions, assuming no additional roadway improvements beyond the current City of Roseville CIP. Under No Project conditions, 120 of the 159 total intersections would operate at LOS "C" or better. This represents 75.5% of the total signalized intersections city-wide. Addition of the Specific Plan would result in 116 (or 73.4%) of the total signalized intersections operating at LOS "C" or better. Therefore, the City's policy of maintaining a LOS "C" standard at 70% of all signalized intersections would be met even with full development of Specific Plan area.

Table 4.7-3l Intersections with Significant Level of Service Impacts – City of Roseville Cumulative Plus Project Conditions					
Intersection		Cumulative No Project		Cumulative Plus Proposed Project	
North-south Roadway	East-west Roadway	LOS	V/C	LOS	V/C
Fiddyment Rd[1]	Baseline Rd	C	0.78	E	0.99
Foothills Blvd	Junction Blvd	C	0.81	D	0.87
Harding Blvd	Estates Rd	D	0.88	E	0.93
Harding Blvd	Wills Rd	D	0.87	E	0.92
Stanford Ranch Rd	Five Star Blvd	C	0.80	D	0.82
Grant Street	Vernon Street	E	0.96	F	1.02
Washington Blvd	Junction Blvd	C	0.76	D	0.85

Notes:
[1] This intersection is also analyzed under the Placer County (see Table 4.7-6). The volume-to-capacity ratio and Level of Service standards differ due to different lane capacity assumptions.
Source: DKS Associates, 2005.

Table 4.7-32 Number of Intersections Operating at LOS "C" or Better – City of Roseville Cumulative Plus Project Conditions				
Level of Service	Cumulative No Project		Cumulative Plus Proposed Project	
LOS "A"-"C"	120	75.5%	117	73.6%
LOS "D"	20	12.6%	21	13.2%
LOS "E"	14	8.8%	15	9.4%
LOS "F"	5	3.1%	6	3.8%
Total Intersections	159	100%	159	100%

Note: Table 4.7-35 shows four intersections going from LOS "C" to "D" or "E", but this table only shows a net decrease of three LOS "C" intersections because one other intersection improves from LOS "D" to LOS "C". Similarly one other intersection goes from LOS "E" to LOS "D".
Source: DKS Associates, 2005.

Mitigation Measure

Implementation of the following measure would reduce the project contribution to cumulative traffic congestion by providing funding for improvements at the intersection of Fiddyment Road and Baseline Road. The individual legs of this intersection are in the city of Roseville and Placer County. The County can collect the fees identified in Mitigation Measure 4.7-14, but cannot compel the City of Roseville to collect funds for and/or construct the improvement identified in their jurisdiction, including the improvements identified below. Furthermore, no improvements were identified for the remaining six intersections. Therefore, this impact would remain *significant and unavoidable.*

4.7-14a *Implement Mitigation Measure 4.7-2a.*

4.7-14b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward construction of a third southbound and northbound through lanes*

to the intersection of Fiddyment Road and Baseline Road to improve operations from LOS "E" to LOS "D."

4.7-14c *Consistent with Mitigation Measure 4.7-2a, participate in the City of Roseville ITS/TDM program on a fair share basis as determined by the County in consultation with the City of Roseville.*

The City of Roseville is developing a management and technology plan to address traffic congestion and mobility within the City of Roseville. The plan includes Intelligent Transportation System (ITS) components as well as Transportation Demand Management (TDM). The City is proposing that the new western Placer County land development projects participate in this effort, including a contribution to the financing of the program. While this approach will not fully mitigate all traffic impacts from the project, it will reduce congestion and overall delay to the traveling public.

Table 4.7-33
Recommended Mitigations for Intersections – City of Roseville
Cumulative Plus Project Conditions

Intersection		Recommended Mitigation	Level of Service	
North-south	East-west		Before Mitigation	After Mitigation
Fiddyment Rd	Baseline Rd	Add Third northbound through lane and Third southbound through lane	E	D
Foothills Blvd	Junction Blvd	No feasible improvement identified	D	D
Harding Blvd	Estates Rd	No feasible improvement identified	E	E
Harding Blvd	Wills Rd	No feasible improvement identified	E	E
Stanford Ranch	Five Star Blvd	No feasible improvement identified	D	D
Grant Street	Vernon Street	No feasible improvement identified	F	F
Washington Blvd	Junction Blvd	No feasible improvement identified	D	D
Percentage of Intersections Citywide Operating at LOS "C" or Better			**73.4%**	**73.4%**

Source: DKS Associates, 2005.

4.7-I5 Buildout of the Specific Plan under Cumulative Plus Project conditions would increase daily traffic volumes on study area roadways in Sacramento County.

Figure 4.7-22 shows the average daily traffic volumes on Sacramento County roadways within the study area under Cumulative Plus Project conditions. A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-34. This analysis indicates that full development of the Specific Plan area under Cumulative Plus Project conditions would increase congestion on the following Sacramento County roadway segments that would already operate at LOS "F" and/or cause the segment to operate at LOS "F":

a. Level of Service on the four-lane segment of Watt Avenue from the Placer County line to Antelope Road would continue to operate at LOS "F" conditions and the volume-to-capacity ratio would increase by more than 0.05.

b. Level of Service on the four-lane segment of Walerga Road from the Placer County line to Antelope Road would continue to operate at LOS "F" conditions and the volume-to-capacity ratio would increase by more than 0.05.

c. Level of Service on the two-lane segment of 16th Street from the Placer County line to Elverta Road would degrade from LOS "E" to LOS "F."

This is considered a ***significant impact.***

Table 4.7-34
Roadway Segment Levels of Service – Sacramento County
Cumulative Plus Project Conditions

Roadway	Segment	Cumulative No Project Alternative			Cumulative Plus Project Conditions		
		Lanes	ADT	LOS	Lanes	ADT	LOS
Elverta Rd	East of Hwy 70/99	4	24,300	B	4	26,200	C
Elverta Rd	East of Rio Linda Blvd	4	34,100	E	4	32,200	D
Elverta Rd	East of 16th Street	4	26,700	C	4	28,400	C
Elverta Rd	West of Watt Ave	4	34,200	E	4	34,900	E
Watt Ave	North of Elverta Rd	4	58,700	F	4	**64,500**	**F**
Watt Ave	North of Antelope Rd	4	44,100	F	4	**46,300**	**F**
Watt Ave	North of Elkhorn Blvd	6	67,900	F	6	70,100	F
Watt Ave	North of Don Julio Blvd	6	62,200	F	6	64,300	F
Watt Ave	North of Airbase Dr	6	65,200	F	6	67,000	F
Walerga Rd	North of Elverta Rd	4	44,700	F	4	**47,300**	**F**
Walerga Rd	North of Antelope Rd	4	44,700	F	4	**46,500**	**F**
Walerga Rd	North of Elkhorn Blvd	4	34,800	E	4	35,300	E
16th Street	North of Elverta Rd	2	17,100	E	2	**22,400**	**F**

Note: ADT = average daily traffic. Significant impacts are highlighted in bold letters.
Source: DKS Associates, 2005.

Mitigation Measure

Implementation of the following mitigation measures would reduce the project contribution to cumulative traffic in Sacramento County to a *less than significant level* by providing funding for improvements on the identified segments. Placer County can collect the fees identified in Mitigation Measure 4.7-15, but cannot compel Sacramento County to collect funds and/or construct the improvements identified in its jurisdiction. If the identified improvements are not made, this impact would remain *significant and unavoidable.*

4.7-15a *Implement Mitigation Measure 4.7-2a.*

4.7-15b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following improvements in Sacramento County:*

1. *Widen Watt Avenue to six lanes from the Placer County line to Antelope Road, to reduce the V/C from 1.79 to 1.19 (LOS "F").*

2. *Widen 16th Street to four lanes from the Placer County line to Elverta Road, to provide LOS "B" (V/C 0.62).*

Sacramento County has recognized that traffic congestion will increase on Watt Avenue and it was one the corridors they evaluated in the *Mobility Strategies for County Corridors* (September, 2004). A number of possible strategies were considered for Watt Avenue south of Antelope Road, including widening Watt Avenue to eight lanes (three SOV and one HOV/BRT lanes in each direction) or creation of a one-way couplet. There is insufficient right-of-way along Walerga Road south of the Sacramento County line to widen it to six lanes, so no mitigation is proposed for that segment.

4.7-I6 Buildout of the Specific Plan under Cumulative Plus Project conditions would increase peak hour traffic volumes on study area intersections in Sacramento County.

Figure 4.7-8 shows the key study area intersections in Sacramento County. Tables 4.7-35 and 4.7-36 present the intersection Level of Service analysis at these intersections for the a.m. and p.m. peak hours under Cumulative Plus Project conditions. The traffic volumes and lane geometry at each intersection in Tables 4.7-35 and 4.7-36 are shown in Appendix I. This analysis indicates that development of the Specific Plan under Cumulative Plus Project conditions would increase congestion at the study area intersections in Sacramento County to the extent that the following intersections would operate at an unacceptable Level of Service and/or already operate at an unacceptable level and would become more congested.

a. Level of Service at the intersection of 16th Street and Elverta Road would degrade from LOS "D" to LOS "F" during the a.m. peak hour.

b. Level of Service at the intersection of Watt Avenue and Elverta Road would degrade from LOS "F" (V/C 1.15) to LOS "F" (V/C 1.22) during the a.m. peak hour and from LOS "F" (V/C 1.12) to LOS "F" (V/C 1.30) during the p.m. peak hour, which increases the volume-to-capacity ratio by more than 0.05.

c. Level of Service at the intersection of Walerga Road and Elverta Road would degrade from LOS "F" (V/C 1.31) to LOS "F" (V/C 1.36) during the p.m. peak hour, which increases the volume-to-capacity ratio by more than 0.05.

d. Level of Service at the intersection of Watt Avenue and Antelope Road would degrade from LOS "F" (V/C 1.11) to LOS "F" (V/C 1.22) during the a.m. peak hour and from LOS "E" to LOS "F" during the p.m. peak hour, which increases the volume-to-capacity ratio by more than 0.05.

e. Level of Service at the intersection of Walerga Road and Antelope Road would degrade from LOS "F" (V/C 1.03) to LOS "F" (V/C 1.09) during the p.m. peak hour, which increases the volume-to-capacity ratio by more than 0.05.

f. Level of Service at the intersection of Watt Avenue and Elkhorn Boulevard would degrade from LOS "F" (V/C 1.26) to LOS "F" (V/C 1.34) during the p.m. peak hour, which increases the volume-to-capacity ratio by more than 0.05.

g. Level of Service at the intersection of Watt Avenue and Air Base Drive would degrade from LOS "F" (V/C 1.41) to LOS "F" (V/C 1.47) during the p.m. peak hour, which increases the volume-to-capacity ratio by more than 0.05.

h. Level of Service at the intersection of Watt Avenue and Roseville Road would degrade from LOS "F" (V/C 1.32) to LOS "F" (V/C 1.52) during the p.m. peak hour, which increases the volume-to-capacity ratio by more than 0.05.

This is considered a ***significant impact.***

Table 4.7-35
A.M. Peak Hour Levels of Service at Study Intersections – Sacramento County
Cumulative Plus Project Conditions

Intersection		Cumulative No Project Alternative			Cumulative Plus Project Conditions		
		Level of Service	LOS Criteria		Level of Service	LOS Criteria	
North-South Roadway	East-West Roadway		Signalized Intersection (V/C Ratio)	Signalized Intersection (Delay)		Signalized Intersection (V/C Ratio)	Signalized Intersection (Delay)
1A Hwy 70/99 SB	Elverta Rd	C		20.9	C		22.4
1B Hwy 70/99 NB	Elverta Rd	A		1.5	B		17.6
2 16th Street	Elverta Rd	D	0.89		**F**	**1.11**	
3 Watt Ave [1]	Elverta Rd	F	1.15		**F**	**1.22**	
4 Walerga Rd	Elverta Rd	F	1.38		F	1.42	
5 Watt Ave	Antelope Rd	F	1.11		**F**	**1.22**	
6 Walerga Rd	Antelope Rd	D	0.89		E	0.93	
7 Watt Ave	Elkhorn Blvd	F	1.08		F	1.12	
8 Walerga Rd	Elkhorn Blvd	D	0.83		D	0.88	
9 Watt Ave	Don Julio Blvd	B	0.62		B	0.64	
10 Watt Ave	Air Base Dr	C	0.79		C	0.80	
11 Watt Ave	Roseville Rd	F	1.26		F	1.22	
12 Watt Ave	I-80 WB	B		18.2	B		18.8

Notes: "Blank" = Intersection does not exist under this scenario. Significant impacts are highlighted in bold letters. Intersection numbers refer to Figure 4.7-8.
Note 1: Watt Avenue widens to six lanes at the Elverta Road intersection.
Source: DKS Associates, 2005

Table 4.7-36 P.M. Peak Hour Levels of Service at Study Intersections – Sacramento County Cumulative Plus Project Conditions							
Intersection		Cumulative No Project Alternative			Cumulative Plus Project Conditions		
		Level of Service	LOS Criteria		Level of Service	LOS Criteria	
North-South Roadway	East-West Roadway		Signalized Intersection (V/C Ratio)	Signalized Intersection (Delay)		Signalized Intersection (V/C Ratio)	Signalized Intersection (Delay)
1A Hwy 70/99 SB	Elverta Rd	C		22.8	C		26.2
1B Hwy 70/99 NB	Elverta Rd	B		11.2	C		28.7
2 16th Street	Elverta Rd	F	1.06		F	1.05	
3 Watt Ave	Elverta Rd [1]	F	1.12		**F**	**1.30**	
4 Walerga Rd	Elverta Rd	F	1.31		**F**	**1.36**	
5 Watt Ave	Antelope Rd	E	0.98		**F**	**1.03**	
6 Walerga Rd	Antelope Rd	F	1.03		**F**	**1.09**	
7 Watt Ave	Elkhorn Blvd	F	1.26		**F**	**1.34**	
8 Walerga Rd	Elkhorn Blvd	E	0.96		E	0.98	
9 Watt Ave	Don Julio Blvd	D	0.80		D	0.83	
10 Watt Ave	Air Base Dr	F	1.41		**F**	**1.47**	
11 Watt Ave	Roseville Rd	F	1.32		**F**	**1.52**	
12 Watt Ave	I-80 WB	B		18.8	C		23.8

Notes: "Blank" = Intersection does not exist under this scenario. Significant impacts are highlighted in bold letters. Intersection numbers refer to Figure 4.7-8.
[1]Watt Avenue widens to six lanes at the Elverta Road intersection.
Source: DKS Associates, 2005

Mitigation Measure

Implementation of the following mitigation measures would reduce the project contribution to cumulative traffic at Sacramento County intersections to a *less than significant level*. Placer County can collect the fees identified in Mitigation Measure 4.7-16, but cannot compel the Sacramento County to collect funds and/or construct the improvements identified in this measure. If the identified improvements are not made, the intersections would continue to operate at an unacceptable level. Therefore, this impact is considered *significant and unavoidable.*

4.7-16a *Implement Mitigation Measure 4.7-2a.*

4.7-16b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following improvements in Sacramento County:*

1. *Construct a second through lane on the northbound and southbound approaches, and a right turn lane on the eastbound and westbound approaches to improve the intersection of 16th Street and Elverta Road to LOS "D" conditions (V/C 0.85) during the a.m. peak hour and to LOS "D" conditions (V/C 0.81) during the p.m. peak hour.*

2. *Construct a third through lane on the eastbound and westbound approaches at the Watt Avenue and Elverta Road intersection to provide LOS "F" conditions (V/C 1.14) during the p.m. peak hour.*

3. *Construct a third through lane on the northbound and southbound approaches at the Walerga Road and Elverta Road intersection to provide LOS "F" conditions (V/C 1.07) during the p.m. peak hour.*

4. *Construct a third through lane on the northbound and southbound approaches, and second left turn lane on the westbound approach at the Watt Avenue and Antelope Road intersection to provide LOS "C" conditions during the p.m. peak hour.*

5. *Construct a third through lane on the northbound and southbound approaches at the Walerga Road and Antelope Road intersection to provide LOS "E" conditions during the p.m. peak hour.*

6. *Construct a fourth through lane on the northbound and southbound approaches at the Watt Avenue and Elkhorn Boulevard intersection to provide LOS "F" conditions (V/C 1.19) during the p.m. peak hour.*

7. *Construct a third through lane on the northbound approach and a second westbound right turn lane at the Watt Avenue and Air Base Drive intersection to provide LOS "E" conditions (V/C 0.96) during the p.m. peak hour.*

8. *Construct a second left turn lane on the westbound approach at the Watt Avenue and Roseville Road intersection to provide LOS "F" conditions (V/C 1.22) during the p.m. peak hour.*

4.7-I7 Buildout of the Specific Plan under Cumulative Plus Project conditions would increase peak hour traffic volumes on study area roadways in Sutter County.

Under Cumulative No Project conditions, about half of the potential 17,500 dwelling units that could be constructed in the South Sutter County Specific Plan area under the County's recently passed Measure M were assumed. That level of development would require improvements to local roadways, including Riego Road. Under Cumulative No Project conditions, those improvements contained in SACOG's MTP were assumed, including an interchange at Riego Road and Hwy 70/99, and the widening of Riego Road from two lanes to six lanes from Hwy 70/99 to the Placer County line. Federal and State regulations require that the MTP be financially constrained and contain a set of transportation improvements that have realistic funding sources. The MTP assumed that improvements to Riego Road and other roadways in south Sutter County would be funded primarily by development in that area.

Figure 4.7-22 shows the average daily traffic volumes on Sutter County roadways within the study area under Cumulative Plus Project conditions. A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-37.

This analysis indicates that full development of the Specific Plan under Cumulative Plus Project conditions would increase congestion at the roadway segment in Sutter County shown in Table 4.7-37, which already operates at an unacceptable level. Because the study intersection would operate at an acceptable LOS "D", this impact is considered ***less than significant***.

Table 4.7-37
Roadway Segment Levels of Service – Sutter County
Cumulative Plus Project Conditions

Roadway	Segment	Cumulative No Project Alternative			Cumulative Plus Project Conditions		
		Lanes	ADT	LOS	Lanes	ADT	LOS
Riego Rd	East of Hwy 70/99	6	36,500	B	6	44,800	D

Note: ADT = average daily traffic
Source: DKS Associates, 2005.

Mitigation Measures

No mitigation measures are required.

4.7-I8 Buildout of the Specific Plan under Cumulative Plus Project conditions would increase peak hour traffic volumes on study area intersections in Sutter County.

Figure 4.7-8 shows the key study area intersections in Sutter County. Table 4.7-38 presents the intersection Level of Service analysis at these intersections for the p.m. peak hour under Cumulative Plus Project conditions.

There will be several new signals along Riego Road between Hwy 70/99 and Pleasant Grove Road (North) as part of the *South Sutter Specific Plan*. However, there are no details on how many signalized intersections there will be or the proposed lane geometry. Therefore a detailed intersection analysis was not conducted for intersections in that segment of Riego Road.

The traffic volumes and existing lane geometry at each intersection in Table 4.7-38 are shown in Appendix I. This analysis indicates that development of the Specific Plan under Cumulative Plus Project conditions would increase congestion at the following study area intersections that already operate at unacceptable levels:

a. Level of Service at the intersection of Pleasant Grove Road (North) and Riego Road would degrade from LOS "E" to LOS "F".

b. Level of Service at the intersection of Pleasant Grove Road (South) and Riego Road would degrade from LOS "E" to LOS "F".

This is considered a ***significant impact.***

Table 4.7-38 P.M. Peak Hour Levels of Service at Study Intersections – Sutter County Cumulative Plus Project Conditions							
Intersection		Cumulative No Project Alternative			Cumulative Plus Project Conditions		
		Level of Service	LOS Criteria		Level of Service	LOS Criteria	
North-South Roadway	East-West Roadway		Signalized Intersection (V/C Ratio)	Signalized Intersection (Delay)		Signalized Intersection (V/C Ratio)	Signalized Intersection (Delay)
1A Hwy 70/99 SB	Riego Rd	A		2.1	A		2.3
1B Hwy 70/99 NB	Riego Rd	A		2.0	A		2.5
3 Pleasant Grove Rd (North)	Riego Rd	E	0.94		**F**	**1.12**	
4 Pleasant Grove Rd (South)	Riego Rd	E	0.92		**F**	**1.01**	
Note: Intersection numbers refer to Figure 4.7-8. Significant impacts are highlighted in bold letters Source: DKS Associates, 2005							

Mitigation Measure

Implementation of the following mitigation measure would reduce project contribution to increased congestion at Sutter County intersections to a *less than significant level*. Placer County can collect fees toward the improvements identified below, but cannot compel Sutter County to construct the improvements. If the identified improvements are not made, the intersection would continue to operate at an unacceptable level. Therefore, this impact is considered *significant and unavoidable.*

4.7-18a *Implement Mitigation Measure 4.7-2a.*

4.7-18b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following improvements in Sutter County:*

i. Construct a second left turn lane on the southbound approach, to improve the intersection of Pleasant Grove Road (North) and Riego Road to LOS "D" conditions (V/C 0.87).

ii. Construct a second left turn lane on the northbound and westbound approaches, to improve the intersection of Pleasant Grove Road (South) and Riego Road to LOS "D" conditions (V/C 0.87).

4.7-I9 Buildout of the Specific Plan under Cumulative Plus Project conditions would increase peak hour traffic volumes on study area roadways that are part of the state highway system.

Figure 4.7-22 shows the average daily traffic volumes on Caltrans freeways within the study area under Cumulative Plus Project conditions. A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-39. This analysis indicates that full development of the Specific Plan under Cumulative Plus Project conditions

would increase congestion on the following state highway segments that would operate at LOS "F" without the project:

Table 4.7-39
Freeway Segment Levels of Service – State Highways
Cumulative Plus Project Conditions

Roadway	Segment	Cumulative No Project Alternative			Cumulative Plus Project Conditions		
		Lanes[1]	ADT[2]	LOS	Lanes[1]	ADT[2]	LOS
Hwy 70/99	North of Riego Rd	4	67,500	F	4	**68,000**	**F**
Hwy 70/99	South of Riego Rd	4	95,600	F	4	**98,500**	**F**
Hwy 70/99	South of Elverta Rd	4	98,400	F	4	**100,500**	**F**
Hwy 65	North of Pleasant Grove	4	128,500	F	4	**129,000**	**F**
Hwy 65	South of Pleasant Grove	4	127,400	F	4	**128,600**	**F**
I-80	West of Watt Ave	10	196,400	F	10	**198,300**	**F**
I-80	East of Auburn Blvd	12	311,200	F	12	**312,000**	**F**
I-80	West of Riverside Ave	8	244,500	F	8	**248,300**	**F**
I-80	East of Riverside Ave	8	249,800	F	8	**252,500**	**F**
Business 80	West of Watt Ave	6	156,600	F	6	156,000	F

Note 1: Excluding carpool lanes.
Note 2: ADT = average daily traffic, excluding HOV traffic
Source: DKS Associates, 2005.

a. **Level of Service on the four-lane segment of Hwy 70/99 from Sankey Road to Elkhorn Boulevard would continue to operate at LOS "F" conditions and the volume would increase.**

b. **Level of Service on the four-lane segment of Hwy 65 from Blue Oaks Boulevard to Galleria Boulevard would continue to operate at LOS "F" conditions and the volume would increase.**

c. **Level of Service on the ten-lane segment of Interstate 80 from Longview Drive to Watt Avenue would continue to operate at LOS "F" conditions and the volume would increase.**

d. **Level of Service on the eight-lane segment of Interstate 80 from Antelope Road to Douglas Boulevard would continue to operate at LOS "F" conditions and the volume would increase.**

e. **Level of Service on the twelve-lane segment of Interstate 80 from Auburn Boulevard to Madison Avenue would continue to operate at LOS "F" conditions and the volume would increase.**

Because the proposed project would increase congestion on freeways already operating at LOS "F", this is considered a ***significant impact.***

Mitigation Measure

Implementation of the following mitigation measures would reduce the project contribution to traffic congestion on the state highway system to a *less than significant level*. Placer County can collect fees for the improvements below, but cannot compel Caltrans to construct the improvements. If the identified improvements are not made, this impact would remain *significant and unavoidable.*

4.7-19a *Implement Mitigation Measure 4.7-2a.*

4.7-19b *Consistent with Mitigation Measure 4.7-2a, the proposed project shall contribute its fair share toward the following improvements on state highway.*

1. *Widen Hwy 70/99 to six lanes from Sankey Road to Elkhorn Boulevard.*
2. *Widen Hwy 65 to six lanes from Blue Oak Boulevard to Galleria Boulevard.*
3. *Widen Interstate 80 to twelve lanes from Longview Drive to Watt Avenue.*
4. *Widen Interstate 80 to ten lanes from Antelope Road to Douglas Boulevard.*
5. *Consider construction of additional lanes on Interstate 80 from Auburn Boulevard to Madison Avenue, or other improvements.*

Volumes are provided for several interchange ramps in Table 4.7-40. Level of service calculations for ramp merge, diverge and weaving sections were not performed.

Table 4.7-40
Interchange Ramp Segment Volumes – State Highway
Cumulative Plus Project Conditions

		Cumulative No Project Alternative	Cumulative Plus Project Conditions		
Interchange	**Ramp**	**ADT**	**ADT**	**Change**	**%**
Hwy 70/99 - Riego	NB Off Ramp	13,900	14,800	**900**	**6%**
Hwy 70/99 - Riego	NB On Ramp from WB	600	200	**(400)**	**-67%**
Hwy 70/99 - Riego	NB On Ramp from EB	100	100	**0**	**0%**
Hwy 70/99 - Riego	SB Off Ramp	300	700	**400**	**133%**
Hwy 70/99 - Riego	SB On Ramp from WB	15,300	17,100	**1,800**	**12%**
Hwy 70/99 - Riego	SB On Ramp from EB	2,100	1,900	**(200)**	**-10%**
Hwy 70/99 - Elverta	NB Off Ramp	8,800	8,900	**100**	**1%**
Hwy 70/99 - Elverta	NB On Ramp	7,500	8,300	**800**	**11%**
Hwy 70/99 - Elverta	SB Off Ramp	6,000	7,500	**1,500**	**25%**
Hwy 70/99 - Elverta	SB On Ramp	4,600	6,000	**1,400**	**30%**
Hwy 65 - Pleasant	NB Off Ramp	10,800	10,800	**0**	**0%**
Hwy 65 - Pleasant	NB On Ramp from EB	4,700	4,500	**(200)**	**-4%**
Hwy 65 - Pleasant	NB On Ramp from WB	2,000	1,700	**(300)**	**-15%**
Hwy 65 - Pleasant	SB Off Ramp	10,400	10,900	**500**	**5%**

Table 4.7-40 Interchange Ramp Segment Volumes – State Highway Cumulative Plus Project Conditions					
Hwy 65 - Pleasant	SB On Ramp from EB	8,000	8,700	**700**	**9%**
Hwy 65 - Pleasant	SB On Ramp from WB	6,100	6,200	**100**	**2%**
I-80 – Watt Ave	EB Off Ramp	3,200	3,200	**0**	**0%**
I-80 – Watt Ave	WB Off Ramp	2,700	2600	**(100)**	**-4%**
I-80 – Watt Ave	WB On Ramp from NB	1,000	800	**(200)**	**-20%**
I-80 – Watt Ave	WB On Ramp from SB	2,200	2,000	**(200)**	**-9%**
I-80 – Riverside Ave	EB On Ramp	18,900	17,200	**(1,700)**	**-9%**
I-80 – Riverside Ave	EB off Ramp from SB	22,300	21,000	**(1,300)**	**-6%**
I-80 – Riverside Ave	EB off Ramp from NB	15,600	16,100	**500**	**3%**
I-80 – Riverside Ave	WB On Ramp	12,600	12,500	**(100)**	**-1%**
I-80 – Riverside Ave	WB off Ramp from SB	7,400	7,800	**400**	**5%**
I-80 – Riverside Ave	WB off Ramp from NB	16,200	16,500	**300**	**2%**
Bus-80 – Watt Ave	EB On Ramp from NB	11,700	11,700	**0**	**0%**
Bus-80 – Watt Ave	EB On Ramp from SB	500	400	**(100)**	**-20%**
Bus-80 – Watt Ave	EB Off Ramp	14,000	14,300	**300**	**2%**
Bus-80 – Watt Ave	WB On Ramp	12,100	11,600	**(500)**	**-4%**
Bus-80 – Watt Ave	WB Off Ramp	7,800	8,100	**300**	**4%**
Source: DKS Associates, 2005.					

4.7-20 Buildout of the Specific Plan under Cumulative Plus Project conditions would increase peak hour traffic volumes on study area intersections that are part of the state highway system.

Table 4.7-41 presents the intersection Level of Service analysis at the key study area intersections under Caltrans jurisdiction for the p.m. peak hour under Cumulative Plus Project conditions. The proposed project would reduce delay at the only intersection that would operate at unacceptable levels. Therefore, this impact is considered ***less than significant***.

Mitigation Measures

No mitigation measures are required.

Table 4.7-4I P.M. Peak Hour Levels of Service at Study Intersections – State Highway Cumulative Plus Project Conditions					
Intersection		Cumulative No Project Alternative		Cumulative Plus Project Conditions	
Freeway	Roadway	Level of Service	Signalized Intersection LOS (Delay)	Level of Service	Signalized Intersection LOS (Delay)
1A Hwy 70/99 SB	Riego Rd	A	1.2	A	2.3
1B Hwy 70/99 NB	Riego Rd	A	2.0	A	2.5
2A Hwy 70/99 SB	Elverta Rd	C	22.8	C	26.2
2B Hwy 70/99 NB	Elverta Rd	B	11.2	C	28.7
3A Hwy 65 SB	Pleasant Grove	C	25.3	C	24.8
3B Hwy 65 NB	Pleasant Grove	C	33.0	C	32.8
4A I-80 WB	Riverside Avenue	B	17.7	C	20.6
4B I-80 EB	Riverside Avenue	F	275.0	F	259.6
5 I-80 WB	Watt Avenue	B	18.8	C	23.8
Note: Significant impacts are highlighted in bold letters Source: DKS Associates, 2005					

SUPER-CUMULATIVE PLUS PROJECT SCENARIO

This section addresses roadway conditions that could occur beyond 2025 given development of proposed and anticipated development in west Placer County. This analysis is necessarily speculative, because there are no adopted or proposed land use plans or roadway networks for some of this development, such as Curry Creek. Nonetheless, the analysis provides an indication of the magnitude of traffic congestion if all anticipated growth areas develop.

This discussion provides daily volume forecasts and a roadway segment Level of Service analysis for roadways near the Specific Plan area under this scenario.

The Super-Cumulative Development Scenario was defined as follows:

- Full buildout of all planned and proposed residential land in Placer County west of Sierra College Boulevard including current general plan areas, the MOU Remainder Area of Roseville, the proposed Sphere of Influence expansion areas of Lincoln and the following major developments in western Placer County:

  - Placer Vineyards Specific Plan
  - Regional University and Community
  - Placer Ranch
  - Curry Creek Community Plan

- Growth in retail employment in Placer County that matches SACOG's countywide estimate of 0.31 employees per dwelling unit (DU) from their 2025 forecasts. On a sub-area level retail employment of 0.25 employees per DU was used to generally balance it with residential development. However, the existing high levels of retail employees per dwelling unit levels that exist today in Roseville and the Auburn area was maintained.

- Growth in non-retail employment levels in Placer County matches SACOG's 1.0 employee per dwelling unit level from their 2025 forecasts.

- Full buildout of the residential development in the proposed *South Sutter Specific Plan* was assumed along with a non-residential development level that "balances" the residential development in that area.

- East of Sierra College, residential and non-residential development levels that reflect development potential under the various general plans were provided by Placer County.

- SACOG's 2027 development levels in areas outside Placer County and south Sutter County.

Future development assumptions were prepared through discussions with the staffs of Placer County and the cities of Roseville, Rocklin and Lincoln. Table 4.7-42 shows the development assumptions for key areas of Placer County and south Sutter County for the Super-Cumulative scenario.

Figure 4.7-23 shows the assumed roadway network for the Super-Cumulative scenario. This network includes all of the new and improved roadways under the Cumulative Plus Project scenario plus some key roadway improvements that were identified by local jurisdictions to accommodate growth beyond 2025, including the following:

- An assumed internal roadway system for the Curry Creek area north of the Placer Vineyards Specific Plan area as well as assumed connections between the Curry Creek development area and the Regional University and the Sierra Vista developments. These roadway assumptions were provided by Placer County.

Table 4.7-42
Super-Cumulative Land Use Projections

Jurisdiction	New Development Area Or Project	Residential Dwelling Units	Employment (1,000 Sq. Ft.)			College Enrollment
			Retail	Office	Industrial	
Placer Co.	- Placer Vineyards	14,132	1,855.4	1,764.2	0	0
	- Placer Ranch	6,758	1,046	5,242	4,186	25,000
	- Sunset Industrial Area[1]	0	357	912	7,851	0
	- Riolo Vineyards	828	88	0	0	0
	- Curry Creek	16,200	2,025	2,124	0	0
	- Regional University	4,387	215	27	0	6,000
Roseville	- General Plan Area	60,002	14,400	15,319	17,401	0
	- MOU Remainder Area	12,600	780	1,020	0	0
Rocklin	- General Plan Area	28,606	4,586	2,848	6,494	23,000
Lincoln	- General Plan Area	22,123	2,948	3,622	8,161	5,000
	- SOI Expansion Area	31,551	5,824	5,663	2,068	0
Sutter Co.	- South Sutter Specific Plan	17,500	2,188	750	1,500	0

Table 4.7-42 Super-Cumulative Land Use Projections						
Jurisdiction	New Development Area Or Project	Residential Dwelling Units	Employment (1,000 Sq. Ft.)			College Enrollment
			Retail	Office	Industrial	
	Totals	214,678	36,312.4	39,291.2	47,661	59,000

Notes: (1) This is the remainder area not included in the Placer Ranch Specific Plan.
SOI = Sphere of Influence
Source: DKS Associates, 2005 and Fehr & Peers, 2005

- The further extension of Watt Avenue from the Regional University to Blue Oaks Boulevard.
- The Placer Parkway with an assumed northern alignment.
- Widening of Hwy 70/99 to six lanes from Placer Parkway to I-5.
- Widening of I-80 to provide HOV lanes from the Sacramento County line to Hwy 65.
- The widening of roadways in the city of Lincoln to reflect their initial roadway needs analysis for the expansion of their Sphere of Influence.
- Widening of Fiddyment Road to six lanes from Pleasant Grove to the Roseville north city limits.
- Widening of Watt Avenue to six lanes from the Placer County line to Antelope Road.
- Widening of Walerga Road to six lanes from the Placer County line to Elkhorn Boulevard.
- Widening of 16th Street to four lanes form the Placer County line to Elverta Road.

Because the Super-Cumulative scenario is not based on an approved and/or proposed roadway network, there are other possible networks. The County has evaluated six other possible networks, and provided the results of that analysis in Appendix I.

Placer County

Figure 4.7-24 shows the average daily traffic volumes on unincorporated Placer County roadways within the study area under the Super-Cumulative Plus Project scenario.

A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-43. This analysis indicates that some segments in Placer County would operate at a worse Level of Service under the Super-Cumulative Plus Project scenario than under Cumulative Plus Project conditions and/or the Cumulative Plus Project with Mitigated Transportation Network scenario.

The addition of the development projects included in the Super-Cumulative scenario would cause several roadways to deteriorate, including portions of Baseline Road, Walerga Road, Watt Avenue, PFE Road and 16th Street, unless additional mitigation is constructed. Mitigation could include regional and local roadway and transit projects as well as changes in land uses.

Intersection Level of Service calculations were not preformed for the analysis of the Super-Cumulative scenario; however, the roadway volumes indicate that when the intersections on Baseline Road including 16th, 14th, 12th and 11th Streets have a new north leg under the Super-Cumulative scenario, then operations will degrade unless additional northbound approach lanes

are added. Generally, the northbound approaches will need to expand from three lanes (two lefts and one right) to five lanes (two lefts, two through and one right). Right-of-way should be preserved for this ultimate configuration.

With traffic volumes under the Super-Cumulative scenario, traffic signals would be warranted on 16th Street where it intersects with A Street, Town Center Drive and South Town Center Drive.

City of Roseville

The cumulative analysis for City of Roseville roadways differs from the analysis for Placer County because the City uses different growth and roadway improvement assumptions (see Impact 4.7-14). The Roseville Super-Cumulative analysis assumes the same level of development as the Super-Cumulative analysis for Placer County, including build-out of all approved projects in the City of Roseville plus buildout of pending development projects anticipated in unincorporated Placer County, unincorporated Sutter County, and the city of Lincoln (see Table 4.7-42 for list of development projects and land use assumptions). Two roadway scenarios are then evaluated.

For the first Roseville Super-Cumulative analysis, the City's CIP roadway network is assumed in place plus additional roadway improvements that either have full funding identified or that would be constructed as conditions of the future development projects included in this scenario. Thus, this scenario does not include the following regional roadway improvements that were assumed in the County's Super-Cumulative analysis:

- Construction of Placer Parkway between Hwy 65 and Hwy 70/99
- Widening of Hwy 65 to six lanes from I-80 to Lincoln
- Widening I-80 to add HOV lanes from Sacramento County line to Hwy 65
- Widening of Hwy 70/99 to six lanes from I-5 to Placer Parkway

Table 4.7-44 shows 37 intersections that would experience a significant change in Level of Service from the City's CIP scenario to the first scenario. It shows that some intersections would degrade from acceptable levels (LOS C or better) under the CIP to LOS "D" or worse conditions under the Super-Cumulative scenario. It shows that other intersections that would operate at LOS "D" or worse conditions under the CIP scenario would degrade by one or more LOS levels under the Super-Cumulative scenario. As a result, the number of intersections operating at LOS "D" or worse conditions would increase from 41 under the CIP scenario to 62 under the City's Super-Cumulative scenario.

The Roseville Super-Cumulative scenario includes development in the remainder of the City's Sphere of Influence expansion area (the proposed Sierra Vista and Creekview Specific Plan areas). However, the traffic analysis did not include new signalized intersections in those future Roseville specific plans. Therefore it is not known whether one of the City's Level of Service policy conditions would be satisfied for the Super-Cumulative scenario (e.g., that 70% of the City's signalized intersections would operate at LOS "C" or better). Table 4-7-45 shows that without new signalized intersections in the two new plan areas, only 61% of the City's signalized intersections would operate at LOS "C" or better.

Table 4.7-43
Roadway Segment Levels of Service – Unincorporated Placer County
Super-Cumulative Plus Project Scenario

Roadway	Segment	Cumulative Plus Project			Cumulative Plus Project With Mitigated Transportation Network			Super-Cumulative Plus Project Scenario		
		Lanes	ADT	LOS	Lanes	ADT	LOS	Lanes	ADT	LOS
Baseline Rd	East of County Line	6	46,900	C	6	37,300	B	6	44,900	C
Baseline Rd	East of Locust Rd	6	47,200	C	6	34,200	A	6	43,900	C
Baseline Rd	East of Brewer Rd	6	47,100	C	6	32,700	A	6	46,900	C
Baseline Rd	East of Palladay Rd	6	51,200	D	6	40,500	B	6	54,700	E
Baseline Rd	East of 16th Street	6	50,800	D	6	42,700	C	6	44,300	C
Baseline Rd	East of 12th Street	6	55,100	E	6	49,400	D	6	45,500	C
Baseline Rd	East of Watt Ave	6	50,500	E	6	38,700	C	6	34,800	B
Baseline Rd	East of Dyer Lane	6	54,000	E	6	45,600	D	6	42,300	C
Walerga Rd	South of Baseline Rd	4	39,400	F	4	36,400	F	6	45,800	F
Walerga Rd	North of PFE Rd	4	43,600	F	4	42,000	F	6	58,400	F
Watt Ave	South of Baseline Rd	6	43,500	D	6	45,900	D	6	48,400	D
Watt Ave	South of Dyer Lane	6	64,300	F	6	66,400	F	6	76,500	F
PFE Rd	East of Watt Avenue	2	13,800	C	4	17,300	A	4	6,300	A
PFE Rd	East of Walerga Rd	2	16,600	E	2	14,300	C	2	16,900	E
Dyer Lane (West)	South of Baseline Rd	4	18,900	A	4	18,100	A	4	22,700	B
Dyer Lane	South of Town Center	4	8,400	A	4	8,900	A	4	8,600	A
Dyer Lane	West of 16th Street	4	20,200	A	4	19,900	A	4	16,800	A
Dyer Lane	West of Tanwood Ave	4	30,300	D	4	27,400	C	4	25,800	C
Dyer Lane	West of Watt Ave	4	33,100	E	4	31,300	D	4	29,800	D
Dyer Lane (East)	South of Baseline Rd	4	33,100		4	26,200	C	4	29,300	D
Palladay Rd	South of Baseline Rd	2	7,700	A	2	10,500	A	2	12,800	C
Palladay Rd	North of Dyer Lane	2	3,600	A	2	5,400	A	2	6,200	A
16th Street	South of Baseline Rd	4	5,900	A	4	7,800	A	4	24,900	B
16th Street	South of Dyer Lane	4	22,300	B	4	22,400	B	4	35,900	E

Table 4.7-43
Roadway Segment Levels of Service – Unincorporated Placer County
Super-Cumulative Plus Project Scenario

Roadway	Segment	Cumulative Plus Project			Cumulative Plus Project With Mitigated Transportation Network			Super-Cumulative Plus Project Scenario		
		Lanes	ADT	LOS	Lanes	ADT	LOS	Lanes	ADT	LOS
14th Street	South of Baseline Rd	2	4,700	A	2	5,500	A	2	12,500	B
12th Street	South of Baseline Rd	4	4,400	A	4	5,100	A	4	17,400	A
A Street	East of Dyer Lane	2	3,900	A	2	2,800	A	2	3,200	A
A Street	West of 16th Street	2	5,600	A	2	4,700	A	2	7,600	A
A Street	West of Tanwood Ave	2	4,800	A	2	3,900	A	2	3,300	A
A Street	West of Watt Ave	4	26,100	C	4	20,300	A	4	12,500	A
A Street	West of Dyer Lane	2	4,900	A	2	3,600	A	2	3,400	A
Town Center Drive	East of Dyer Lane (W)	2	4,400	A	2	3,800	A	2	3,100	A
Town Center Drive	West of 16th Street	2	4,400	A	2	3,200	A	2	4,400	A
Town Center Drive	West of Tanwood Ave	2	11,600	B	2	9,900	A	2	9,500	A
Town Center Drive	West of Watt Ave	2	12,800	C	2	10,900	B	2	8,500	A
Town Center Drive	West of Dyer Lane (E)	2	3,000	A	2	2,000	A	2	4,200	A
Town Center Drive	West of Walerga Rd	2	10,300	A	2	7,700	A	2	15,100	D

Notes: ADT = average daily traffic. Significant impacts are highlighted in bold letters.
Source: DKS Associates, 2005.

The City of Roseville's CIP does not identify improvements needed beyond 2020. As in Placer County, a combination of improvements would likely be needed to mitigate Super-Cumulative impacts in the City of Roseville. Some of these improvements could be regional, such as construction of Placer Parkway or the widening of Hwy 65, while others would be under the City's jurisdiction. Therefore, a second scenario was evaluated with these improvements.

While inclusion of additional signalized intersections in the City's Sphere of Influence expansion area may push this percentage of intersections that would operate at LOS "C" or better, including the regional roadway improvements that were excluded from the first Super-Cumulative scenario, would provide a more definite increase in the percentage. This conclusion was confirmed by adding the regional I-80, Hwy 65, Hwy 70/99, and Placer Parkway projects to the modeling network and re-running the City's Super-Cumulative analysis. The results showed that 74.2% of the CIP signalized intersections would operate at LOS "C" or better in compliance with condition of the City's policy (see Table 4.7-44).

Table 4.7-44
Intersections With Significant Level of Service Impacts – City Of Roseville
Super-Cumulative Conditions

Intersection		Year 2020 CIP		Super-Cumulative CIP		Super-Cumulative w/ Regional Improvements	
North-south Roadway	East-west Roadway	LOS	V/C	LOS	V/C	LOS	V/C
Yosemite	Atlantic St	D	0.88	E	0.95	C	0.81
Baseline Rd	Junction Blvd	B	0.66	E	0.92	C	0.77
Diamond Creek	Blue Oaks Blvd	C	0.74	D	0.90	B	0.67
Fiddyment Rd	Blue Oaks Blvd	A	0.56	F	1.21	E	0.92
Vernon St	Cirby Way	E	0.99	F	1.04	E	0.96
Eureka Rd	Douglas Blvd	D	0.85	D	0.85	E	0.92
I-80 WB Off	Douglas Blvd	C	0.78	E	0.93	D	0.90
Santa Clara Dr	Douglas Blvd	D	0.82	D	0.83	D	0.86
Fiddyment Rd	Baseline Rd	E	0.91	F	1.15	E	0.98
Foothills Blvd	Albertsons	A	0.56	D	0.82	C	0.78
Foothills Blvd	Blue Oaks Blvd	C	0.79	F	1.42	F	1.15
Foothills Blvd	H.P. South	C	0.69	D	0.86	C	0.78
Foothills Blvd	Junction Blvd	D	0.83	E	0.92	D	0.84
Foothills Blvd	Mistywood/NEC	C	0.75	D	0.83	C	0/80
Foothills Blvd	Pleasant Grove	D	0.83	F	1.01	E	0.96
Foothills Blvd	Vineyard Rd	D	0.88	F	1.01	E	0.93
Galleria	Antelope Creek	C	0.80	E	0.97	D	0.83
Galleria	Berry	D	0.90	E	0.97	D	0.89
Country Club	Junction Blvd	B	0.59	D	0.83	C	0.72
Fiddyment Rd	Pleasant Grove	C	0.74	E	0.99	E	0.96
Hallisey	Pleasant Grove	B	0.61	D	0.84	C	0.70
Washington Blvd	Pleasant Grove	D	0.90	E	0.97	E	0.92
Woodcreek Oaks	Pleasant Grove	B	0.68	D	0.83	C	0.70

Table 4.7-44
Intersections With Significant Level of Service Impacts – City Of Roseville
Super-Cumulative Conditions

Intersection		Year 2020 CIP		Super-Cumulative CIP		Super-Cumulative w/ Regional Improvements	
North-south Roadway	East-west Roadway	LOS	V/C	LOS	V/C	LOS	V/C
Roseville Pkwy	Pleasant Grove	E	0.95	F	1.11	E	0.92
Roseville Pkwy	Olympus Drive	D	0.87	D	0.89	D	0.88
Galleria	Roseville Pkwy	F	1.15	F	1.14	F	1.17
Gibson	Roseville Pkwy	E	0.94	F	1.04	E	0.98
Reserve Drive	Roseville Pkwy	E	0.98	F	1.04	E	0.95
Sierra College	Roseville Pkwy	C	0.81	C	0.80	D	0.84
Taylor Rd	Roseville Pkwy	D	0.85	E	0.93	D	0.85
Washington Blvd	Roseville Pkwy	C	0.71	D	0.83	C	0.69
West Mall	Roseville Pkwy	C	0.72	D	0.83	C	0.76
Stanford Ranch	Hwy-65 NB On	B	0.66	D	0.89	C	0.69
Stanford Ranch	Hwy-65 SB On	C	0.72	E	0.95	C	0.72
Sunrise Blvd	Oak Ridge Drive	E	0.92	E	0.95	E	0.96
Sunrise Avenue	Lead Hill Blvd	D	0.88	E	0.97	D	0.85
Taylor Rd	Eureka Road	D	0.86	F	1.04	E	0.94
Washington Blvd	Junction Blvd	D	0.82	D	0.90	D	0.86
Woodcreek Oaks	Baseline Road	C	0.70	D	0.89	D	0.85
Woodcreek Oaks	Junction Blvd	C	0.71	D	0.85	C	0.71
HP Road B	Blue Oaks Blvd	C	0.70	D	0.83	B	0.63
West Side Dr	Blue Oaks Blvd	A	0.20	E	0.96	C	0.72
Hayden Pkwy	Blue Oaks Blvd	A	0.39	E	0.95	C	0.76
NS Street/ Fiddyment Rd	Blue Oaks Blvd	A	0.43	D	0.82	C	0.73

Source: Fehr & Peers, 2006.

Table 4.7-45
Number of Intersections Operating at LOS "C" or Better – City of Roseville
Super-Cumulative Conditions

Level of Service	Year 2020 CIP		Super-Cumulative CIP	
LOS "A" - "C"	118	74.2%	97	61.0%
LOS "D"	20	12.6%	27	17.0%
LOS "E"	15	9.4%	20	12.6%
LOS "F"	6	3.8%	15	9.4%
Total Intersections	159	100%	159	100%

Source: Fehr & Peers, 2006.

Sacramento County

Figure 4.7-25 shows the average daily traffic volumes on Sacramento County roadways within the study area under the Super-Cumulative Plus Project scenario. A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-46. Compared to the Cumulative Plus Project conditions, this analysis indicates that the Levels of Service on Sacramento County roadways would be similar under and the Super-Cumulative Plus Project scenario.

Table 4.7-46
Roadway Segment Levels of Service – Sacramento County
Super-Cumulative Plus Project Scenario

Roadway	Segment	Cumulative Plus Project Conditions			Super-Cumulative Plus Project Scenario		
		Lanes	ADT	LOS	Lanes	ADT	LOS
Elverta Rd	East of Hwy 70/99	4	26,200	C	4	25,200	B
Elverta Rd	East of Rio Linda Blvd	4	32,200	D	4	32,700	E
Elverta Rd	East of 16th Street	4	28,400	C	4	24,200	B
Elverta Rd	West of Watt Ave	4	34,900	E	4	34,700	E
Watt Ave	North of Elverta Rd	4	64,500	F	6	80,100	F
Watt Ave	North of Antelope Rd	4	46,300	F	6	59,600	F
Watt Ave	North of Elkhorn Blvd	6	70,100	F	6	74,200	F
Watt Ave	North of Don Julio Blvd	6	64,300	F	6	68,500	F
Watt Ave	North of Airbase Dr	6	67,000	F	6	66,600	F
Walerga Rd	North of Elverta Rd	4	47,300	F	6	57,800	F
Walerga Rd	North of Antelope Rd	4	46,500	F	6	45,100	F
Walerga Rd	North of Elkhorn Blvd	4	35,300	E	6	36,400	F
16th Street	North of Elverta Rd	2	22,400	F	4	36,200	F

Note: ADT = average daily traffic
Source: DKS Associates, 2005.

Sutter County

Figure 4.7-25 also shows the average daily traffic volumes on Sutter County roadways within the study area under the Super-Cumulative Plus Project scenario. A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-47. Compared to the Cumulative Plus Project conditions, this analysis indicates that the Levels of Service on Sutter County roadways would be somewhat worse under and the Super-Cumulative Plus Project scenario.

Table 4.7-47 Roadway Segment Levels of Service – Sutter County Super-Cumulative Plus Project Scenario							
Roadway	Segment	Cumulative Plus Project Conditions			Super-Cumulative Plus Project Scenario		
		Lanes	ADT	LOS	Lanes	ADT	LOS
Riego Rd	East of Hwy 70/99	6	44,800	D	6	46,900	D

Note: ADT = average daily traffic
Source: DKS Associates, 2005.

State Highways

Figure 4.7-25 also shows the average daily traffic volumes on state highways within the study area under the Super-Cumulative Plus Project scenario. A roadway segment Level of Service analysis for these roadways based on these daily traffic volumes is presented in Table 4.7-48. Compared to the Cumulative Plus Project conditions, this analysis indicates that the Levels of Service on state highways would be somewhat worse under the Super-Cumulative Plus Project scenario.

Table 4.7-48 Freeway Segment Levels of Service – State Highways Super-Cumulative Plus Project Scenario							
Roadway	Segment	Cumulative Plus Project Conditions			Super-Cumulative Plus Project Scenario		
		Lanes[1]	ADT[2]	LOS	Lanes[1]	ADT[2]	LOS
Hwy 70/99	North of Riego Rd	4	68,000	F	4	103,200	F
Hwy 70/99	South of Riego Rd	4	98,500	F	4	135,400	F
Hwy 70/99	South of Elverta Rd	4	100,500	F	4	144,000	F
Hwy 65	North of Pleasant Grove	4	129,000	F	4	167,500	F
Hwy 65	South of Pleasant Grove	4	128,600	F	4	170,300	F
I-80	West of Watt Ave	10	198,300	F	10	182,600	F
I-80	East of Auburn Blvd	12	208,000	E	12	197,800	D
I-80	West of Riverside Ave	8	248,300	F	8	244,200	F
I-80	East of Riverside Ave	8	252,500	F	8	222,700	F
Business 80	West of Watt Ave	6	156,000	F	6	150,800	F

Note 1: Excluding carpool lanes.
Note 2: ADT = average daily traffic, excluding HOV traffic
Source: DKS Associates, 2005.

IMPACTS OF TRAFFIC MITIGATION

4.7-21 Mitigation measures implemented to reduce traffic impacts could adversely affect traffic in other jurisdictions.

The roadway improvements identified in the mitigation measures throughout this section would improve traffic impacts by increasing roadway and intersection capacity in some locations. Such

improvements would also redistribute traffic in the Specific Plan area and throughout the region. For example, Placer Parkway, one of a number of possible improvements identified in Mitigation Measure 4.7-14 and included in the Mitigated Transportation Network, would provide additional east-west roadway capacity and thereby decrease volumes on numerous roadways in Roseville and western Placer County, but would increase traffic on portions of Hwy 70/99 in Sutter County. The widening of Baseline Road to eight lanes, another improvement identified in Mitigation Measure 4.7-14 but not included in the Mitigated Transportation Network, would improve operations on Baseline Road but would increase traffic volumes on roadways in western Roseville, some of which cannot be improved. Likewise the widening of Walerga Road, another improvement identified in Mitigation Measure 4.7-14 but not included in the Mitigated Transportation Network, would improve operations on Walerga Road but would increase traffic volumes on roadways in Sacramento County, some of which cannot be improved.

The effects of mitigation on future roadway and intersection operations will depend on which improvements are constructed, the timing of such improvements, and development patterns in the region. As the improvements are designed and funded, they will be subject to review and analysis, including traffic studies. For example, an EIS/EIR being prepared for Placer Parkway will identify the impacts of that improvement on regional roads. In some cases, segments or intersections could operate at unacceptable levels as the result of one or more mitigation measures being implemented. This is considered a ***significant impact***.

Mitigation Measure

The following mitigation measure would reduce the above impact. However, it is not known at this time if feasible improvements would be available to achieve acceptable service levels on all affected roadways. Furthermore, the mitigation measure requires action by jurisdictions other than Placer County. Therefore, this impact is considered *significant and unavoidable*.

4.7-21 *Placer County shall coordinate with the City of Roseville, Sacramento County, Sutter County and Caltrans to ensure that roadway improvements implemented in whole or in part as mitigation for the proposed project are designed to minimize impacts on existing and future roadways and intersections.*

4.7-22 Mitigation measures implemented to reduce traffic impacts could adversely affect the environment.

The roadway improvements identified in mitigation measures throughout this section would have physical effects on the environment, primarily during construction. The exact nature of such effects will not be known until the design phase of each improvement. However, impacts that are typical of roadway improvements can be identified and discussed. The nature of these effects will be refined when the various improvements are under design and environmental review.

Depending on their location, roadway widenings could require the acquisition of right-of-way, which may contain buildings, including homes. Such acquisition would be done in compliance with State law requiring that property owners be compensated for any property acquired for public works.

If roadway widening exceeds existing rights-of-way in agricultural areas, some farmland could be lost. Because the loss would be a relatively narrow strip of land, it would not typically result in the loss of entire agricultural parcels.

Roadway widenings would not substantially alter the visual character of existing roadways. However, new roads through rural areas, such as Placer Parkway, would alter views. Depending on the viewshed and surrounding uses, such changes in visual character could be significant.

Roadways and related infrastructure can increase impervious surface and/or interfere with stormwater drainage, increasing the potential for flooding.

Roadway construction could occur in areas supporting biological resources, such as wetlands, trees, riparian habitat and grasslands. Wildlife and plants using these habitats could be disturbed or destroyed by construction activities, resulting in the loss of open space; special-status plant species; habitat for special-status animals, including vernal pool crustaceans, valley elderberry longhorn beetle, western pond turtle, tricolored blackbird, California horned lizard, bats, nesting burrowing owls and other raptors; foraging habitat for raptors; and oak woodlands and heritage trees. For the most part, the loss of raptor foraging habitat would include a narrow band of land that would leave the adjacent habitat intact.

Excavation and grading for roadway improvements could damage or destroy subsurface historic or prehistoric resources.

Construction activities would generate air emissions, including particulate matter and ozone, contributing to regional air pollution. If homes or schools are located near the construction area, they could be disturbed by dust.

Construction activities would also generate substantial noise. If residents or other sensitive receptors are located near construction areas, they could be disturbed by noise. Once roadway improvements are complete, the construction noise would cease. However, traffic noise could increase, and depending on the location of the road and nearby sensitive receptors, adopted noise standards could be exceeded.

Roadways could be widened or constructed in areas that had been used for agricultural or industrial operations. In such areas, hazardous materials may be present. If undiscovered, construction workers could be exposed to contaminated soils or groundwater.

The above impacts would be considered ***significant***.

Mitigation Measures

The following measures would reduce the impacts from traffic mitigation. However, because the mitigation improvements have not been sited and/or designed, it cannot be determined at this time whether all of these impacts could be reduced to a less than significant level. Furthermore, some of the measures would be outside of Placer County's jurisdiction. The County cannot

compel other jurisdictions to implement these or equivalent measures. For these reasons, this impact is considered *significant and unavoidable.*

4.7-22 *Implement the following or similar Mitigation Measures:*

- *4.3.2-2a and b, which require site-specific drainage studies and measures to ensure that project flows can be accommodated by storm drainage infrastructure;*

- *4.3.2-3e, which requires that new development demonstrate that there will be no increase in the water surface elevation of the 100-year flood plain;*

- *4.4-15, -16, -17, -18, -20, -21, -22, -23, -24, -25, and -26, which require surveys for special status species and their habitat, habitat avoidance and compensation where needed, and protection of nesting raptors;*

- *4.6-2a-h, requiring archaeological surveys and appropriate treatment of cultural resources encountered during construction;*

- *4.9-3, which limits the hours during which noisy equipment can be used and requires effective mufflers;*

- *4.9-4, which requires site-specific acoustical analyses during roadway design and noise attenuation features as needed; and*

- *4.12-21a-f, which require Phase 1 Site Assessments to identify potential contamination, and specify how to handle potential hazards to minimize the risk of exposure.*

ENDNOTES

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4.8

Air Quality

4.8 AIR QUALITY

4.8.1 INTRODUCTION

Ambient air quality is generally determined by climatological conditions, the topography of the air basin, and the type and amounts of pollutants emitted. The Specific Plan area is subject to a combination of topographical and climatic factors, which result in high potential for regional and local pollutant accumulation. The following discussion describes relevant characteristics of the air basin, and provides an overview of physical conditions affecting pollutant accumulation and dispersion in the Specific Plan area. The Air Quality setting also describes the sources, types, and health effects of major air pollutants.

4.8.2 ENVIRONMENTAL SETTING

Placer County is located 80 miles northeast of San Francisco. The city of Auburn, the government center of Placer County, is located 31 miles northeast of Sacramento and 120 miles southwest of Reno. The County encompasses 1,506 square miles (including 82 square miles of water) or 964,140 acres (including 52,780 acres of water). Placer County is bounded by Nevada County to the north, the State of Nevada to the east, El Dorado and Sacramento counties to the south, and Sutter and Yuba counties to the west.

Placer County extends from the crest of the Sierra Nevada in the east to the Sacramento Valley in the west. The Sacramento Valley consists of the northern half of the Central Valley and approximates the drainage basin for the Sacramento River and its tributaries. The Sacramento Valley is bounded on the west by the Coast Range, on the north by the Cascade Range, on the east by the Sierra Nevada, and on the south by the San Joaquin Valley. The Sacramento Valley includes the counties of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba and portions of Placer and Solano counties.

For air quality purposes, the California Air Resources Board (CARB) has divided California into regional air basins according to topographic air drainage features. Even though portions of Placer County are within the Sacramento Valley Air Basin (SVAB), the Mountain Counties Air Basin, and the Lake Tahoe Air Basin, the Specific Plan area lies within the SVAB, which is defined by the boundaries of the Sacramento Valley. The SVAB is a natural closed basin, often with poor air circulation and high atmospheric stability. The area is subject to frequent temperature inversions preventing dispersion of pollutants.

CLIMATE

The climate of Placer County, as of all central California, is dominated by the strength and position of the semi-permanent high-pressure cell over the Pacific Ocean north of Hawaii. In summer, when the high-pressure cell is strongest and farthest north, temperatures are high and humidity is low, although the incursion of the sea breeze into the Central Valley helps moderate the summer heat. Summer temperatures average approximately 90ºF during the day and 50ºF at night.

In winter, when the high-pressure cell is weakest and farthest south, conditions are characterized by occasional rainstorms interspersed with stagnant and sometimes foggy weather. Winter daytime temperatures average in the low 50's and nighttime temperatures are mainly in the upper 30's. Rainfall, which occurs almost exclusively from late October to early May, averages 17.2 inches per year, but varies significantly from year to year.

Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing vertically and by transporting it to other locations. The prevailing wind in Placer County is southerly all year. This is due to the north-south orientation of the valley and the deflecting effects of the towering Sierra Nevada on the prevailing oceanic wind that moves through the Carquinez Strait near the Delta, at the junction of the Sacramento and San Joaquin Rivers. No other tidewater gap exists in the Coastal Mountains to admit significant marine air into the Sacramento or the San Joaquin Valleys. Occasionally, a strong north or northeasterly barometric pressure gradient develops, forcing air south or southwestward down the Siskiyou Mountains or the Sierra Nevada. This air is warmed by compression as it descends, reaching the valley floor as a hot, and dry north wind. Heat waves in the summer are produced by these winds, and are usually followed within two or three days by the normally cool southwest delta breezes, especially at night.

Temperature inversions are very important in the effects of air pollution and are known to occur frequently in the Sacramento Valley. The vertical dispersion of air pollutants in the Sacramento Valley is limited by the presence of persistent temperature inversions. Because of expansional cooling of the atmosphere, air temperature usually decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with altitude, is termed an inversion. Inversions can exist at the surface, or at any height above the ground. The height of the base of the inversion is known as the "mixing height." Pollutants can mix vertically to this level. Semi-permanent systems of high barometric pressure fronts frequently establish themselves over the Sacramento Valley, deflecting low-pressure systems that might otherwise bring cleansing rain and winds.

Air above and below the inversion base does not mix because of differences in air density. Warm air above the inversion is less dense than below the base. The inversion base represents an abrupt density change where little exchange of air occurs. This phenomenon is similar to that of the abrupt density change that separates skim and whole milk. Inversion layers are significant in determining ozone formation and particulate matter concentrations. Ozone and its precursors will mix and react to produce higher concentrations under an inversion. Since particulate matter is both created in the atmosphere as a chemical reaction and directly emitted, inversions will also trap and hold directly emitted particulate matter. Concentration levels are directly related to inversion layers due to the limitation of mixing space. There are two principal types of inversions that occur in the Sacramento Valley: a subsidence inversion and a surface or radiative inversion.

In addition to prevailing wind patterns that control the rate of dispersion of local pollutant emissions, Placer County experiences two types of inversions that affect the vertical depth of the atmosphere through which pollutants can be mixed. In summer, sinking air forms a "lid" over the

region. These subsidence inversions contribute to summer photochemical smog problems by confining pollution to a shallow layer near the ground.

Radiative inversions are formed when the ground surface becomes cooler than the air above it during the night. The earth's surface goes through a radiative process on clear nights, where heat energy is transferred from the ground to a cooler night sky. As the earth's surface cools during the evening hours, the air directly above it also cools, while air higher up remains relatively warm. The inversion is destroyed when heat from the sun warms the ground, which in turn heats the lower layers of air: this heating stimulates the ground-level air to float up through the inversion layer. Daytime temperature inversions during the summer are usually encountered 2,000 to 2,500 feet above the valley floor and in the winter, the inversion usually occurs 500 to 1,000 feet above the valley floor.

Winter inversions are usually more persistent (stable). These inversions typically occur during winter nights and can cause localized air pollution concerns near emission sources because of poor dispersion.

Although these subsidence and radiative inversions are present throughout much of the year, they are much less dominant during spring and fall, and the air quality during these seasons is generally good.

CRITERIA AIR POLLUTANTS

The following section describes the pollutants of greatest importance in the Sacramento Valley. It provides a description of the physical properties, the health and other effects of the pollutant, and the sources of the pollutant.

OZONE

Description and Physical Properties. Ozone is what is known as a photochemical pollutant. It is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between reactive organic gases (ROG), oxides of nitrogen (NOx), and sunlight. ROG and NOx are emitted from sources that are widespread throughout the Sacramento Valley. In order to reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. Ozone is a regional air pollutant. It is generated over a large area and is transported and spread by wind. The worst ozone concentrations tend to be found downwind from emission sources in Sacramento Valley metropolitan areas.

Effects. While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems such as forests and

foothill communities, and damages agricultural crops and some human-made materials, such as rubber, paint, and plastics.

Sources. Ozone is not a directly emitted pollutant. Please refer to sources of ROG and NOx for a combined "source" list for ozone.

REACTIVE ORGANIC GASES (ROG)

Description and Physical Properties. Reactive organic gases are photochemically reactive hydrocarbons that are important for ozone formation. This definition excludes methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, methylene chloride, methyl chloroform, and various chlorofluorocarbons (CFCs).

Effects. There are no health standards for ROG separately. The main concern with ROG is its role in photochemical ozone formation. In addition, some compounds that make up ROG are also toxic. An example is benzene, which is a carcinogen.

Sources. Thirty-five percent of the 26.90 tons per day of ROG emissions in the SVAB portion of Placer County in the year 2000 comes from on-road motor vehicles. Another 21% comes from off-road motor vehicles, which results in a total of 56% from mobile sources. Another 10% comes from coatings and other process solvents.

Transportation factors which contribute to an area's mobile source emissions include the population, the number of on-road vehicles in use, the average daily vehicle trips, and the average daily vehicle miles traveled. Since ROG from automobiles is a result of incomplete combustion and would therefore be higher when an engine is operating inefficiently and a result of evaporation of hydrocarbon-based fuels, a large percentage of ROG emissions occur during the first few minutes of vehicle operation, and while the vehicle engine is cooling down.

OXIDES OF NITROGEN (NO_x)

Description and Physical Properties. NOx is a family of gaseous nitrogen compounds and are precursors to ozone formation. The major component of NOx, nitrogen dioxide (NO_2), is a reddish-brown gas that is toxic at high concentrations. NOx results primarily from the combustion of fossil fuels under high temperature and pressure.

Effects. Health effects associated with NOx are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to nitrogen dioxide (NO_2) may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NOx can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates. Airborne NOx can also impair visibility. NOx is a major component of acid disposition in California.

Sources. Over 91% of the 23.57 tons per day of NOx emissions in the SVAB portion of Placer County in the year 2000 come from mobile sources. Within the mobile sources category, almost

15% of the NOx is from trains, 16% is from off-road equipment, 21% is from light-medium duty trucks, 12.5% is from heavy-duty diesel trucks, and over 16% is from light duty passenger vehicles.

CARBON MONOXIDE (CO)

Description and Physical Properties. CO is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone). Under most conditions, CO does not persist in the atmosphere and is rapidly dispersed. CO exceedances are most likely to occur in the winter, when relatively low inversion levels trap pollutants near the ground and concentrate the CO. Since CO is somewhat soluble in water; normal winter conditions of rainfall and fog can suppress CO concentrations.

Effects. Whereas carbon dioxide (CO_2) creates a weak bond with hemoglobin, the oxygen (O_2)-carrying protein in blood, and therefore gives it up easily in the CO_2/O_2 exchange that is the breathing process for the living, carbon monoxide binds strongly, not releasing easily, thus reducing the blood's capacity for carrying O_2 to the heart, brain, and other parts of the body. At high concentrations, CO can cause heart difficulties in people with chronic diseases, can impair mental abilities, and can even cause death.

Sources. The main source of CO (80% of the 179.59 tons per day) in the SVAB portion of Placer County is mobile sources. Over 67% of the 141.29 tons per day from mobile sources is from on-road vehicles. Of that total, over 38% is from light duty passenger vehicles and over 40% is from light-medium duty trucks. Almost 75% of the emissions attributed to off-road mobile vehicles are from recreational vehicles.

Transportation factors discussed in the section on ROG above are also pertinent to CO emissions. CO is also a result of incomplete combustion and would therefore be higher when an engine is operating inefficiently, therefore emitting a large percentage of emissions during the first few minutes of vehicle operation or when idling or traveling at low rates of speed. The degree of CO emissions from automobiles is directly related to the percentage of time the automobile spends in this less efficient mode during its usage. Traffic congestion is therefore considered the primary factor determining CO emissions from automobiles.

RESPIRABLE PARTICULATE MATTER (PM_{10} AND $PM_{2.5}$)

Description and Physical Properties. Suspended particulate matter (airborne dust) consists of solid and liquid particles small enough to remain suspended in the air for long periods. "Inhalable" PM consists of particles less than ten microns in diameter, and is defined as "suspended particulate matter" or PM_{10}. Particles between 2.5 and 10 microns in diameter arise primarily from natural processes, such as wind-blown dust or soil. Fine particles are less than 2.5 microns in diameter ($PM_{2.5}$). $PM_{2.5}$, by definition, is included in PM_{10}. Fine particles are produced mostly from combustion or burning activities. Fuel burned in cars and trucks, power plants, factories, fireplaces and wood stoves produces fine particles.

Particulate matter is a complex mixture that consists of dry solid fragments, solid cores with liquid coatings and small droplets of liquid. These tiny 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. Particulate matter is divided into two classes, primary and secondary. Primary particles are released directly into the atmosphere from sources of generation. Secondary particles are formed in the atmosphere as a result of reactions that involve gases.

The actual composition of particulate matter varies greatly with time and location. It depends on the sources of the material and meteorological conditions. However, particulate matter can come from such primary sources as fugitive dust (paved and unpaved roads, construction/demolition, agricultural, etc.); residential wood combustion; prescribed burning (forest and agricultural); and automotive tailpipes. Particulate matter can also come from such secondary sources as combustion products, automotive tailpipes, industrial sources, residential wood combustion, prescribed burning (forest and agricultural), and ammonia from animal waste.

Effects. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Non-health-related effects include reduced visibility and soiling of buildings.

Sources. Almost 30% of the 13.90 tons per day of PM_{10} emissions in the SVAB portion of Placer County in the year 2000 come from paved road dust. Close to 12% comes from unpaved road dust. Adding these sources to the over 6% coming directly from mobile sources indicates that almost 50% of the PM_{10} emissions are a result of mobile vehicles. In addition, close to another 20% comes from residential fuel combustion.

OTHER POLLUTANTS

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless, irritating gas with a “rotten egg” smell formed primarily by the combustion of sulfur-containing fossil fuels. In other parts of the country, SO_2 is a primary component of acid rain (precipitation). However, in Placer County and the SVAB, as in most of California, the ambient concentrations of SO_2 are not high enough to create a significant problem. SO_2 can create some localized problems by reacting with the moisture in the body’s nasal cavities, much the same way as it does with acid rain, creating acid in the nose and bronchial cavities, creating a stinging sensation. But since SO_2 disperses rapidly, the receptor would have to be in close proximity to the emission source.

Sulfates

Sulfates are particulate products of combustion of sulfur-containing fossil fuels. When sulfur oxide (SO) or SO_2 are exposed to oxygen, it precipitates out into sulfates (SO_3 or SO_4). Data would indicate this is not a pollutant of concern in Placer County or its immediate surroundings.

Visibility Reducing Particles

This standard is a measure of visibility. CARB does not yet have a measuring method with enough accuracy or precision to designate areas in the State attainment or nonattainment. The entire State of California is labeled unclassified.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important, in terms of health risk, are diesel particulate, benzene, formaldehyde, 1,3-butadiene and acetaldehyde.

Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Health effects of TACs include cancer, birth defects, neurological damage and death.

The California Air Resources Board has developed recommendations regarding the site of sensitive receptors in proximity to several common TAC sources. The recommendations identify minimum separations between sources and receptors (CARB, 2005b).

REGIONAL AIR QUALITY

Both federal and state governments have established standards for ambient pollutant concentrations. National and California standards have focused on six primary pollutants, called "criteria" air pollutants because such criteria have been set for them: ozone (O_3), carbon monoxide (CO), particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). In the Sacramento area, particulate matter and ozone are of particular concern. Table 4.8-1 shows the National and California Ambient Air Quality Standards.

Table 4.8-I
National and California Ambient Air Quality Standards

Pollutant [1]	Averaging Time	NAAQS[2]	CAAQS[3]
Ozone (O_3)	8-hour	0.08 ppm	0.07 ppm [4]
	1-hour	0.12 ppm	0.09 ppm
Carbon Monoxide (CO)	8-hour	9 ppm	9.0 ppm
	1-hour	35 ppm	20 ppm
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.053 ppm	N/A
	1-hour	N/A	0.25 ppm
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	0.030 ppm	N/A
	24-hour	0.14 ppm	0.04 ppm
	1-hour	N/A	0.25 ppm
Respirable Particulate Matter	Annual Geometric Mean	N/A	20 $\mu g/m^3$

Table 4.8-1 National and California Ambient Air Quality Standards			
Pollutant [1]	**Averaging Time**	**NAAQS[2]**	**CAAQS[3]**
(PM_{10})	24-hour	150 µg/m^3	50 µg/m^3
	Annual Arithmetic Mean	50 µg/m^3	N/A
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	15 µg/m^3	12 µg/m^3
	24-hour	65 µg/m^3	N/A
Lead (Pb)	30-Day Average	N/A	1.5 µg/m^3
	Calendar Quarter	1.5 µg/m^3	N/A
Sulfates (SO_4)	24-hour	N/A	25 µg/m^3
Visibility Reducing Particles	8-hour (10 a.m. to 6 p.m.)	N/A	[7]
Hydrogen Sulfide (H_2S)	1-hour	N/A	0.03 ppm

[1] Standards are expressed in units in which they were promulgated. (ppm = parts per million and µg/m3 = micrograms per cubic meter)
[2] National standards (other than ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once per year.
[3] California standards for ozone, CO, SO_2 (1-hour averaging period), NO_2, and PM_{10} are not to be exceeded. All others are not to be equaled or exceeded.
[4] On April 28, 2005 the California Air Resources Board established a new 8-hour standard for ozone (0.07 PPM), expected to become effective in early 2006.
Source: California Air Resources Board. Ambient Air Quality Standards (5/6/05) http://www.arb.ca.gov.aqs/aaqs2.pdf

Counties and metropolitan areas are classified as attainment or non-attainment with respect to state and federal ambient pollutant standards. An area's classification is determined by comparing actual monitored air pollutant concentrations with State and federal standards. Air pollutant monitoring stations are operated throughout the broader Sacramento area by CARB and assorted air districts. The air monitoring station currently operating closest to the proposed Specific Plan area is CARB's North Highlands-Blackfoot Way station in Sacramento County, approximately two miles southeast of the proposed Specific Plan area. This station collects both particulate and gaseous pollutant monitoring data. There are seven other monitoring stations within a 20-mile radius of the Specific Plan area: four more in Sacramento County, one in Sutter County, and two in Placer County. Table 4.8-2 and Figure 4.8-1 show the locations of these sites.

Table 4.8-2 Air Monitoring Sites within 20 Miles of Specific Plan Area					
Monitoring Stations	**City**	**County**	**Pollutants Monitored**	**Approx. Miles**	**Dir**
Rocklin-Rocklin Road	Rocklin	Placer	O_3, CO	12	NE
Roseville-N Sunrise Blvd	Roseville	Placer	O_3, CO, PM_{10}, $PM_{2.5}$,NO_2	9	E
North Highlands-Blackfoot Way	North Highlands	Sacramento	O_3, CO, NO_2, SO_2	2	SE
Folsom-Natoma Street	Folsom	Sacramento	O_3, NO_2	16	SE
Sacramento-Airport Road	Sacramento	Sacramento	O_3, CO, PM_{10}, NO_2	6	SW
Sacramento-Del Paso Manor	Sacramento	Sacramento	O_3, CO, NO_2, SO_2, $PM_{2.5}$	5	SSE
Sacramento-El Camino	Sacramento	Sacramento	CO	5	S
Pleasant Grove	Pleasant Grove	Sutter	O_3	5	NW

Source: California Air Resources Board.

OZONE

Ozone concentrations in western Placer County typically exceed State and federal standards many times during the year, as shown by monitoring data in Table 4.8-3. Because these standard violations occur throughout the broader Sacramento area, EPA has designated the Sacramento Air Quality Maintenance Area, an area spanning the broader Sacramento area including western Placer County, as non-attainment area with respect to the federal ozone standards. Placer County is also designated as a nonattainment area for the State ozone standard.

Table 4.8-3
Ozone Monitoring Data for 2002 through 2004

Monitoring Stations	Year	Ozone 1-Hour			Ozone 8-Hour	
		Max [1]	# > State	# > Fed	Max [1]	# > Fed
Rocklin-Rocklin Road (12 miles NE)	2002	0.135	21	2	0.111	15
	2003	ND	ND	ND	ND	ND
	2004	ND	ND	ND	ND	ND
Roseville-N Sunrise Blvd (9 miles E)	2002	0.131	21	2	0.105	11
	2003	0.133	13	1	0.109	5
	2004	0.106	5	0	0.085	1
North Highlands-Blackfoot Way (2 miles SE)	2002	0.123	14	0	0.101	11
	2003	0.131	6	1	0.094	4
	2004	0.103	2	0	0.088	1
Folsom-Natoma Street (16 miles SE)	2002	0.139	27	3	0.120	23
	2003	0.140	30	3	0.118	26
	2004	0.111	14	0	0.094	7
Sacramento-Airport Road (6 miles SW)	2002	0.100	4	0	0.081	0
	2003	0.097	0	0	0.085	1
	2004	0.090	0	0	0.072	0
Sacramento-Del Paso Manor (5 miles SSE)	2002	0.135	32	2	0.114	23
	2003	0.134	21	2	0.113	13
	2004	0.110	61	0	0.089	3
Pleasant Grove (5 miles NW)	2002	0.109	7	0	0.092	2
	2003	ND	ND	ND	ND	ND
	2004	ND	ND	ND	ND	ND

[1] Represented in parts per million (ppm)
ND = No Data
Source: California Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2005. (http: //www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart)

Ozone is formed in the atmosphere in the presence of sunlight by a series of chemical reactions involving NOx and ROG. Because these reactions occur on a regional scale and over a period of time, ozone is considered a regional air pollutant. A primary constituent of smog, ozone causes eye and lung irritation, visibility reduction, and crop damage. Sensitive receptors exposed to high ozone concentrations may suffer from reduced resistance to lung infection, eye irritation, and

shortness of breath. Vehicular exhaust is the major source of ozone precursors in the Sacramento area.

Table 4.8-3 shows that the State ozone standard was exceeded on 22 days between 2002 and 2004 at the North Highlands monitoring station; the federal one-hour ozone standard was violated only one time during this period. The eight-hour ozone standard of 0.08 parts per million (ppm was exceeded 16 times in the three-year period. Since the North Highlands station is closest and is generally down-wind of the Specific Plan area, data at this station are considered representative of concentrations in the Specific Plan area.

CARBON MONOXIDE

CO standards exist for both one- and eight-hour average concentrations to regulate both short-term and extended-term pollutant exposure. The SVAB portion of Placer County has been designated as attainment with respect to State CO standards and is classified as unclassified/attainment with respect to federal one- and eight-hour CO concentration standards.

CO is a local pollutant caused primarily through incomplete fuel combustion; vehicular exhaust is the major source of CO in the SVAB. However, residential wood stoves and fireplaces also contribute to CO emissions. CO concentrations are highest near heavily traveled roadways, and particularly near intersections. Vehicular CO emissions increase as ambient temperature and average vehicle speed decrease, causing worst-case CO concentrations during winter months and in areas of heavy traffic congestion. High levels of CO can impair the transport of oxygen in the bloodstream and thereby aggravate cardiovascular disease and cause fatigue, headaches, and dizziness.

CO data presented in Table 4.8-4 are for the last three complete-data years. The one-hour CO standard is not a concern in this area because the entire SVAB has not had an exceedance of the standard since 1980. Table 4.8-4 shows that no monitoring station within a 20-mile radius from the Specific Plan area violated either the State or the federal eight-hour CO standard between 2002 and 2004.

Table 4.8-4
Carbon Monoxide Monitoring Data for 2002 through 2004

Monitoring Stations	Year	CO - 8-Hour		
		Max [1]	# > State	# > Fed
Roseville-N Sunrise Blvd (9 miles E)	2002	2.81	0	0
	2003	1.59	0	0
	2004	1.93	0	0
North Highlands-Blackfoot Way (2 miles SE)	2002	3.13	0	0
	2003	2.07	0	0
	2004	4.05	0	0
Sacramento-Airport Road (6 miles SW)	2002	3.23	0	0
	2003	3.13	0	0
	2004	3.53	0	0

Table 4.8-4 Carbon Monoxide Monitoring Data for 2002 through 2004				
Monitoring Stations	Year	CO - 8-Hour		
		Max (1)	# > State	# > Fed
Sacramento-Del Paso Manor (5 miles SSE)	2002	3.50	0	0
	2003	4.27	0	0
	2004	3.15	0	0
Sacramento-El Camino (5 miles S)	2002	4.16	0	0
	2003	4.50	0	0
	2004	3.33	0	0

(1) Represented in parts per million (ppm)
Source: California Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2005. (http: //www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart)

PARTICULATE MATTER

Airborne particulate matter is generally composed of minute separate particles in the air such as dust, soot, aerosols, fumes, and mists. The particles of primary concern are inhalable particulates. The characteristics, sources, and potential health effects of larger or "coarse" particles (from 2.5 to 10 micrometers in diameter) and smaller or "fine" particles (smaller than 2.5 micrometers in diameter) are very different. Coarse particles, or PM_{10}, are generated by sources such as windblown dust, agricultural fields, construction activities, and dust from vehicular traffic on paved and unpaved roads. Fine particles, or $PM_{2.5}$, are generally emitted from combustion-related activities such as industrial combustion, vehicle exhaust, residential wood-burning stoves, and fireplaces. Fine particles are also formed in the atmosphere when gases such as sulfur dioxide, nitrogen oxides, and volatile organic compounds emitted by combustion activities are transformed by chemical reactions in the air.

PM_{10} standards exist for 24-hour average concentrations as well as for annual mean concentrations to regulate both short-term and chronic pollutant exposure. As shown in Table 4.8-5, two violations of the State 24-hour PM_{10} standard were recorded at the North Highlands monitoring station between 2002 and 2004. Exceedances of the State annual average standard were recorded during this period, but none were recorded for either federal PM_{10} standard. Placer County is considered a non-attainment area for the State PM_{10} standard, and is unclassified/attainment with respect to the less stringent federal PM_{10} standard.

Monitoring data for $PM_{2.5}$ is shown in Table 4.8-6. The federal 24-hour standard was exceeded on three days in 2002 at the Sacramento-Del Paso Manor site, but not at the Roseville-N. Sunrise Blvd. The State annual standard was exceeded at the Roseville site in 2002.

Table 4.8-5
PM_{10} Monitoring Data for 2002 through 2004

Monitoring Stations	Year	Respirable Particulate Matter (PM_{10})				
		High (1)	# > State	# > Fed	State Avg (2)	Fed Avg (3)
Roseville-N. Sunrise Blvd (9 miles E)	2002	61	1	0	25.2	24.6
	2003	59	1	0	21.3	21.0
	2004	43	0	0	22.1	21.6
North Highlands-Blackfoot Way (2 miles SE)	2002	56	1	0	ND	21.0
	2003	64	1	0	23.1	24.0
	2004	47	0	0	24.2	23.5
Sacramento-Airport Road (6 miles SW)	2002	73	4	0	26.0	25.5
	2003	123	28	0	26.0	ND
	2004	87	12	0	20.5	19.6
Sacramento-Del Paso Manor (5 miles SSE)	2002	91	5	0	25.7	24.3
	2003	55	2	0	21.8	20.6
	2004	52	1	0	22.7	22.1

(1) Represented in micrograms per cubic meter ($\mu g/m^3$)
(2) Represents the annual geometric mean of all monitored values in $\mu g/m^3$
(3) Represents the annual arithmetic mean of all monitored values in $\mu g/m^3$
Source: California Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2005.
(http: //www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart)

Table 4.8-6
$PM_{2.5}$ Monitoring Data for 2002 through 2004

Monitoring Stations	Year	Fine Particulate Matter ($PM_{2.5}$)			
		High (1)	# > Fed	State Avg (2)	Fed Avg (2)
Roseville-N Sunrise Blvd (9 miles E)	2002	53	0	13.2	13.2
	2003	30	0	9.9	9.9
	2004	32	0	9.4	9.4
Sacramento-Del Paso Manor (5 miles SSE)	2002	77	3	ND	ND
	2003	65	0	12.2	12.2
	2004	51	0	11.5	11.5

(1) Represented in micrograms per cubic meter ($\mu g/m^3$)
(2) Represents the annual arithmetic mean of all monitored values in $\mu g/m^3$
Source: California Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2005.
(http: //www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart)

NITROGEN DIOXIDE

NO_2 is an indirect product of fuel combustion in industrial sources, motor vehicles, and other mobile sources (e.g., trains, airplanes, etc.). NO_2 concentrations in Placer County are well within State and federal standards.

SULFUR DIOXIDE

The major source of SO_2 emissions is fuel-burning equipment in which fuel oil and/or coal is consumed. Typical sources of SO_2 include power plants and steam generators; high SO_2 concentrations generally occur in proximity to these sources. SO_2 concentrations in Placer County are well within State and federal standards.

LOCAL AIR QUALITY

Factors affecting the air quality at a local level are similar to factors mentioned above related to the regional air quality discussion. Due to the regional nature of ozone, the Specific Plan will be affected by the ozone created from the emissions of ozone precursors, ROG and NOx, from up-wind sources. Since ozone is a summertime pollutant and the prevailing winds in the area are from the southwest during the summer, the Specific Plan area will be a recipient of ozone pollution from the metropolitan Sacramento area. Since the Specific Plan will generate ozone precursor emissions, it will augment the ozone levels entering the Specific Plan area from the south and thereby affect receptors in upwind Placer and Sutter counties.

Particulate matter is also a regional pollutant with highest concentrations occurring in the winter months. The cooler winter temperatures tend to favor the formation of secondary particulates like ammonium nitrate, and combustion sources such as smoke from fireplaces are also more prevalent. In addition, the inversion layer is much lower in the winter months, thus providing less mixing area for the emitted pollutants. The prevailing winds are still from the south during the winter (except for the month of November, which has the prevailing direction from the north-northwest [*Climate of Sacramento, California*, December, 2000]), so the regional aspects of PM_{10} follow the same rationale as with the regional pollutant ozone. However, the low wind speed and stagnant conditions that also produce high PM_{10} concentrations will have a more localized effect to receptors in the immediate area around the Specific Plan area.

Since CO is rapidly dispersed by wind and directly emitted from predominantly mobile sources, the effects from this pollutant are extremely localized and centered on traffic conditions.

SENSITIVE RECEPTORS

The location of a development project is a major factor in determining whether it will result in localized air quality impacts. The potential for adverse air quality impacts increases as the distance between the source of emissions and members of the public decreases. Impacts on sensitive receptors are of particular concern. Sensitive receptors are facilities that house or attract children, the elderly, and people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors.

Impacts are generally not limited to sensitive receptors. All members of the population can be adversely affected by criteria pollutants, toxic air contaminants, odor, and dust, and thus any consideration of potential air quality impacts should include all members of the population. This

discussion focuses on sensitive receptors, however, because they are most vulnerable to the effects of air pollution.

Air quality problems arise when sources of air pollutants and sensitive receptors are located near one another. There are several types of land use conflicts that should be avoided:

- A development project with sensitive receptors in close proximity to a congested intersection or roadway with high levels of emissions from motor vehicles. High concentrations of carbon monoxide, fine particulate matter, or toxic air contaminants are the most common concerns.

- A development project with sensitive receptors close to an industrial source of toxic air contaminants.

- A development project with sensitive receptors close to a source of odorous emissions. Although odors generally do not pose a health risk, they can be quite unpleasant and often lead to citizen complaints to the air districts and to local governments.

- A development project with sensitive receptors close to a source of high levels of nuisance dust emissions.

When evaluating whether a development proposal has the potential to result in localized impacts, staff will consider the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography. Often, providing an adequate distance, or buffer zone, between the source of emissions and the receptor(s) will mitigate the problem.

PROPOSED AIR QUALITY-RELATED GOALS AND POLICIES

The proposed Specific Plan has several components that would reduce air emissions by making non-vehicular travel safe and convenient. First, the Specific Plan area includes three centralized mixed-use village cores that provide neighborhood commercial uses to encourage pedestrian/bicycle use between surrounding residential areas and the village core land uses.

Second, the Specific Plan improves the regional balance of housing and jobs. Housing opportunities made available closer to employment encourages fewer long-distance commutes, consistent with the regional SACOG Blueprint Plan Growth Principles (see Section 4.1.3 in this Revised Draft EIR). To this end, the Regional Planning Agency has designated the Specific Plan area as a major regional development opportunity to improve the jobs/ housing balance.

Third, the land use pattern and transportation system also facilitates the use of alternative transportation choices throughout the Specific Plan area. The plan provides for a future bus rapid transportation route and transit node within the Village Center along Watt Avenue. The Plan also utilizes an extensive bike and pedestrian system along roadways and major open space corridors, linking residences to the BRT system, the Village Centers and Town Center and public facilities. A street pattern of multiple and parallel routes between destinations minimizes traffic congestion

and facilitates residents to combine vehicle trips into one route. A reservation for future streetcars along Town Center Drive is also included.

The proposed Specific Plan also contains the following policies intended to minimize air quality impacts:

Goal 3.12 Help to achieve a balance of jobs and housing within the region that minimizes environmental impacts by reducing vehicle miles traveled by commuters and air pollution released from automobiles.

Goal 3.15 Provide schools that are within a safe, convenient walking distance of residential neighborhoods, as an element of the open space fabric in the community.

Policy 3.17 Nuisance Uses. Land uses that involve outdoor manufacturing or uses that may emit any appreciable amount of visible gases, particulates, steam, heat, odor, vibration, glare, dust, or excessive noise from the exterior of a building are not allowed in the Plan Area.

Goal 4.13 Minimize air quality impacts on the Placer Vineyards area and the region.

Policy 4.39 Local area source emissions shall be minimized through a variety of strategies:

1. Promote low-emission energy use by requiring building design features that accommodate and encourage use of alternative energy sources.

2. Promote low-emission energy use by incorporating landscaping conducive to passive solar energy uses including:

    a. Buildings are encouraged to be oriented in a south-to-southwest direction, where feasible.

    b. Deciduous trees are encouraged to be planted on the west and south sides of structures.

    c. Provide landscapes with drought-resistant species and groundcovers rather than pavement to reduce heat reflection.

    d. Require minimum parking lot shading at all commercial and office development.

Policy 4.40 Provide, on a project-specific basis, adequate buffers designed to separate emission/nuisance sources from residential uses, consistent with the Placer County General Plan.

Policy 4.41 Construction activities will comply with all requirements of grading permits and PCAPCD.

Policy 4.42 PCAPCD may replace or supplement air pollution control measures for individual projects as new technology and feasible measures become available over the course of the Plan buildout.

Goal 5.6 Promote public transit systems as an alternative means of transportation to reduce traffic congestion.

Goal 5.7 Provide a system of on- and off-street trails that connect to destinations within the Plan Area and to the regional trail network.

Policy 5.16 Bus Rapid Transit System. A public transit system and dedication of the right-of-way corridor for future bus rapid transit with feeder bus network shall be provided along Watt Avenue from Baseline Road to the Dyer Lane intersection just north of Dry Creek.

Policy 5.17 Streetcar Right-of-Way. Dedication of rights-of-way for a future streetcar system shall be provided along the north side of Town Center Drive, extending from the transit center on Watt Avenue to the Town Center, ending at 16th Street.

Policy 5.18 Multi-modal Transit Center. A transit center will be located on Town Center Drive to serve as a transfer point for regional and local transit services. The transit center site shall be of sufficient size to accommodate all future anticipated uses. It will include covered shelters, bus staging areas, park-and-ride lots, and bicycle storage facilities.

Policy 5.19 Transit Service and Facilities. Placer Vineyards shall participate in regional service with connection to light rail transit on Watt Avenue in Sacramento County, Regional University, Galleria Mall, and other regional centers. As each parcel is developed, provisions for bus stops, turnouts, shelters, park-and-ride lots, bike lockers, lighting, and other transit support facilities will be examined and constructed.

Policy 5.20 Provision of Park-and-Ride Lots. Park-and-ride lots shall be established and maintained at the Town Center and transit center at the East Village Center. The majority of the park-and-ride spaces shall be accommodated in the transit center where a majority of local and regional commute trips will be concentrated. A minimum of 50 spaces shall be provided in the Town center, established as shared parking. Other smaller park-and-ride lots are encouraged to be established as a shared parking use incorporated into the overall parking design of other commercial and office centers or adjacent to public transit.

In total, a minimum of 193 parking spaces shall be distributed between the park-and-ride lots. More park-and-ride lots should be provided, especially adjacent to neighborhood activity centers, transit routes, and major transit corridors to encourage ridesharing, promote use of public transit, and reduce air pollution.

Policy 6.24 Pedestrian Orientation. Design elements that accommodate pedestrians and cyclists shall be equally treated or take precedence over elements that primarily accommodate automobiles, especially in the Town Center, Village Centers, Neighborhood Centers and access areas leading into parks, schools and other public facilities. Retail centers and commercial areas shall be designed to provide maximum pedestrian accessibility, as described below.

1. Ground-floor commercial buildings shall be oriented to plazas, parks, and pedestrian-oriented spaces and streets rather than to interior blocks or parking lots.

2. Street-level windows and numerous building entries, including arcades, porches, bays, and balconies, are encouraged.

3. Walls of commercial establishments without an entry or a pedestrian route shall include windows and display areas, or shall be lined with retail shops to provide visual interest to pedestrians.

4. Entries to small shops and offices shall be sited to directly open onto a pedestrian-oriented street. Buildings with multiple retail tenants should have numerous street entries.

5. Parking areas shall be designed with separate vehicular and pedestrian circulation paths and include traffic claming design features. Alternative surface materials are encouraged to differentiate pedestrian circulation paths.

6. Off-street parking should be located at the rear of buildings with separated walkways leading to the street and entryways.

7. Build-to-lines and minimum height limits should be incorporated in the design of the Town Center.

Policy 6.25 New parking lots serving retail and office developments shall include tree plantings designed to result in 50% shading of parking lot surface areas within 15 years. These shading requirements shall apply to all impervious surfaces on which a vehicle can drive including parking stalls, drives, and maneuvering areas within the property. Placer County shall use the City of Sacramento Parking Lot Tree Shading Design and Maintenance Guidelines, June 17, 2003 edition to implement these requirements.

Policy 6.32 Transit Access. Village centers shall be transit-oriented activity nodes. Bus turnouts, shelters, and clear pedestrian paths from the street to the commercial centers, transit centers, parks, and other public facilities should be incorporated into the design of the village centers.

Policy 6.37 Pedestrian Access. Neighborhood commercial centers shall be designed to encourage pedestrian access along the face of commercial buildings and along public sidewalks.

1. Covered walkways and awnings should be provided along the fronts of major anchor stores and connect with other multi-tenant retail shops.

2. Bicycle and pedestrian trails should be provided to allow convenient access between neighborhood commercial centers and surrounding residential neighborhoods.

Policy 6.39 Transit Access. Bus turnouts, shelters, and clear pedestrian paths from the street to the major commercial tenants should be incorporated into the design of neighborhood centers.

Goal 6.26 Develop residential areas as open and linked neighborhoods that encourage alternative modes of transportation- walking, biking, and transit use- with a school or neighborhood park located within easy walking distance of the surrounding community as the focal point.

4.8.3 REGULATORY SETTING

FEDERAL

At the federal level, the Environmental Protection Agency (EPA) has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA). The President first signed the FCAA into law in 1970. The Act was substantially amended in 1977 and again in 1990.

The FCAA required the EPA to set National Ambient Air Quality Standards (NAAQS) for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health; and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction. Since the secondary standard differs from the primary standard only for sulfur dioxide, only the primary standards will be presented in this Revised Draft EIR.

STATE AND LOCAL

CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing its own air quality legislation called the California Clean Air Act (CCAA), adopted in 1988. CARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA.

In addition, states may establish their own standards, provided the state standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to California Health and Safety Code (CH&SC) [Section 39606(b)] and its predecessor statutes. Table 4.8-5 in Section 4.8.2 presents the federal and State air quality standards.

Air quality in the Specific Plan area is regulated by several agencies including EPA, CARB, and the Placer County Air Pollution Control District (PCAPCD). Each of these agencies develops rules and/or regulations to attain various air quality goals. Although EPA regulations may not be superseded, both State and local regulations may be more stringent than federal air quality regulations. In general, state and federal agencies are responsible for regulating emissions from on-road and off-road vehicles and establishing air quality standards. Local air districts are responsible for implementing state and federal air quality regulations, permitting stationary sources of air pollution, and developing plans aimed at attaining ambient air quality standards. Emissions from indirect sources, such as automobile traffic associated with development projects, are addressed through local air districts' air quality plans.

Air quality is sometimes regulated on a county-by-county basis and sometimes on a regional (e.g., basin-wide) basis. This distinction is particularly relevant in Placer County, which spans three air basins in California: the southwestern third of the county lies within the SVAB, the northernmost portion of Placer County is within the Lake Tahoe Air Basin, and the remainder is within the Mountain Counties Air Basin. Because portions of Placer County lie within the SVAB, the District coordinates with other SVAB air districts to resolve basin-wide air pollution problems.

Placer County is included in the Greater Sacramento Ozone non-attainment area as delineated by the U. S. Environmental Protection Agency.

The Federal Clean Air Act Amendments (FCAAA) of 1990 set deadlines for attaining the ozone standard. The Sacramento Area was classified as a "serious" non-attainment area and given a date of 1999 by which to achieve attainment. Because achieving attainment by this date was later found to be infeasible, the region was "bumped up" to "severe" classification and an attainment date of 2005 was designated. The Clean Air Act Amendments also set specific planning requirements to ensure that the attainment goal would be met. In 1994, the Air Resources Board, in cooperation with the air districts of the Sacramento non-attainment area, fulfilled one of these requirements by preparing the 1994 Sacramento Area Regional Ozone Attainment Plan. The plan identified a detailed comprehensive strategy for reducing emissions

to the level needed for attainment and showed how the region would make expeditious progress toward meeting this goal.

On April 15, 2004 the Environmental Protection Agency (EPA) designated the Greater Sacramento Ozone non-attainment area as a "serious" non-attainment area for the federal eight-hour ozone standard. The eight-hour ozone standard, 0.08 parts per million (ppm), averaged over eight hours, replaces the one-hour standard that has been in place since 1979. The region has been given an attainment date of June, 2013.

PLACER COUNTY AIR POLLUTION CONTROL DISTRICT

At a local level, air quality is managed through land use and development planning practices which are implemented by Placer County, and through permitted source controls which are implemented by the PCAPCD. The PCAPCD is also the agency responsible for enforcing many federal and State air quality requirements, and for establishing air quality rules and regulations.

The 1988 California Clean Air Act requires nonattainment areas to develop plans aimed at achieving State ambient standards. The PCAPCD has developed an *Air Quality Attainment Plan* (AQAP) outlining strategies for achieving the State ozone ambient standard. The AQAP outlines both stationary and mobile emission source control measures, and emphasizes Transportation Control Measures and Indirect Source Control Measures as means of reducing mobile source emissions in Placer County. Measures in the AQAP include:

- Area-wide carpool/vanpool matching and assistance;
- City or County trip reduction ordinances;
- In new developments, provision of bikeways and bicycling support facilities and pedestrian amenities such as sidewalks, adequate crosswalks, and building entries near sidewalks rather than behind large parking lots;
- Use of alternative motor fuels and energy sources;
- Jobs-housing balance requirement for new developments;
- Mixed land use requirement, i.e., residences, workplaces, and services located closely enough that private motorized transit between them would not be necessary;
- Transit service expansion and operational changes;
- Parking space limitations; and
- Suburban fringe area park-and-ride lots.

The PCAPCD has several rules that relate to the proposed Specific Plan, shown below:

- **RULE 205 - Nuisance:** A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause to have a natural tendency to cause injury or damage to business or property.

- **RULE 207 - Particulate Matter:** A person shall not release or discharge into the atmosphere from any source or single processing unit, exclusive of sources emitting combustion contaminants only, particulate matter emissions in excess of: 0.1 grains per cubic foot of gas at District standard conditions.

- **RULE 217 - Cutback and Emulsified Asphalt Paving Materials:** A person shall not discharge to the atmosphere volatile organic compounds (VOC) caused by the use or manufacture of Cutback or Emulsified asphalts for paving, road construction or road maintenance, unless such manufacture or use complies with the provisions of this Rule.

- **RULE 218 - Architectural Coatings:**

  - **301 - VOC Content Limit, General.** Except as provided in Section 302 and 303, no person shall, within the District; supply, sell, offer for sale, apply, or solicit the application of; or, manufacture, blend or repackage for use within the District, any Architectural Coating which, at the time of sale or manufacture contains more than 250 grams of VOC per liter of coating as applied, excluding water, exempt organic compounds and colorant added to tint bases. This VOC content is calculated in accordance with Section 223.

  - **302 - VOC Content Limit, Architectural Coatings.** No person shall, within the District, supply, sell, offer for sale, apply, or solicit the application of; or manufacture, blend or repackage for use within the District, any Architectural Coating listed in Section 304, Table of Standards which, at the time of sale or manufacture, exceeds the VOC limit in the Table, as expressed in grams of VOC per liter of coating as applied, excluding water, exempt organic compounds, and colorant added to tint bases. Any listed coating categories in the Table of Standards which show a "TBD*" VOC limit shall be subject to the VOC limit in Section 301. This VOC content is calculated in accordance with Section 223.

  - **303 - VOC Content Limit, Low Solids Stains and Wood Preservatives.** No person shall, within the District, supply, sell, offer for sale, apply, or solicit the application of; or manufacture, blend or repackage for use within the District, any Architectural Coating which is a Low Solids Stain or Low Solids Wood Preservative, and which, at the time of sale or manufacture, exceeds the VOC limit of 120 grams per liter of material, calculated in accordance with Section 224.

- **Rule 228 – Fugitive Dust:**

  - **300 Standards**

    301 Visible Emissions Not Allowed Beyond Boundary Line. A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area (including disturbance as a result of the raising and/or keeping of animals or by vehicle use), such that the presence of such dust remains visible in the atmosphere beyond the boundary line of the emission source.

    302 Visible Emissions From Active Operations: In addition to the requirements of Rule 202, Visible Emissions, a person shall not cause or allow fugitive dust generated by active operations, an open storage pile, or a disturbed surface area, such that the fugitive dust is of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke as dark or darker in shade as that designated as No. 2 on the Ringelmann Chart (i.e. 40% opacity), as published by the United States Bureau of Mines.

    303 Concentration Limit: A person shall not cause or allow PM10 levels to exceed 50 micrograms per cubic meter, 24 hour average, when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other EPA-approved equivalent method for PM10 monitoring. Sampling shall be conducted in accordance with the procedures specified in Section 500.

    304 Track-Out On To Paved Public Roadways: Visible roadway dust as a result of active operations, spillage from transport trucks, and the track-out of bulk material onto public paved roadways shall be minimized and removed.

    304.1 The track-out of bulk material onto public paved roadways as a result of operations, or erosion, shall be minimized by the use of track-out and erosion control, minimization, and preventative measures, and removed within one hour from adjacent streets such material anytime track-out extends for a cumulative distance of greater than 50 feet onto any paved public road during active operations.

    304.2 All visible roadway dust tracked-out upon public paved roadways as a result of active operations shall be removed at the conclusion of each work day when active operations cease, or every twenty-four (24) hours for continuous operations. Wet sweeping or a HEPA filter equipped vacuum device shall be used for roadway dust removal.

    304.3 Any material tracked-out, or carried by erosion, and clean-up water, shall be prevented from entering waterways or storm water inlets as required to comply water quality control requirements.

304.4 Track-out control in geographic ultramafic rock units or in identified naturally-occurring asbestos, serpentine, or ultramafic rock areas, shall comply with the requirements of the California Air Resources Board's Asbestos Airborne Toxic Control Measure or Construction, Grading, Quarrying, and Surface Mining Operations.

- **400 Administrative Requirements**

401 Minimum Dust Control Requirements: The following dust mitigation measures are to be initiated at the start and maintained throughout the duration of the construction or grading activity, including any construction or grading for road construction or maintenance.

401.1 Unpaved areas subject to vehicle traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered. In geographic ultramafic rock units, or when naturally-occurring asbestos, ultramafic rock, or serpentine is to be disturbed, the cover material shall contain less than 0.25 percent asbestos as determined using the bulk sampling method for asbestos in Section 502.

401.2 The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust exceeding Ringelmann 2 or visible emissions from crossing the project boundary line.

401.3 Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.

401.4 Prior to any ground disturbance, including grading, excavating, and land clearing, sufficient water must be applied to the area to be disturbed to prevent emitting dust exceeding Ringelmann 2 and to minimize visible emissions from crossing the boundary line.

401.5 Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt, from being released or tracked offsite.

401.6 When wind speeds are high enough to result in dust emissions crossing the boundary line, despite the application of dust mitigation measures, grading and earthmoving operations shall be suspended.

401.7 No trucks are allowed to transport excavated material off-site unless the trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments, and loads are either:

401.7.1 Covered with tarps; or

401.7.2 Wetted and loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.

401.8 In geographic ultramafic rock units, or when naturally-occurring asbestos, ultramafic rock, or serpentine is disturbed, all equipment must be washed down before moving from the property onto a paved public road.

401.9 In geographic ultramafic rock units, or when naturally-occurring asbestos, ultramafic rock, or serpentine is disturbed, upon completion of the project disturbed surfaces shall be stabilized using one or more of the following methods:

401.9.1 Establishment of a vegetative cover;

401.9.2 Placement of at least one (1.0) foot of non-asbestos-containing material;

401.9.3 Paving;

401.9.4 Any other measure deemed sufficient to prevent wind speeds of ten (10) miles per hour or greater from causing visible dust emissions.

402 Wind-Driven Fugitive Dust Control: A person shall take action(s), such as surface stabilization, establishment of a vegetative cover, or paving, to minimize wind-driven dust from inactive disturbed surface areas.

- **RULE 231 - Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters:** For units with rated heat inputs of greater than or equal to five million BTU per hour and annual heat inputs of greater than or equal to 90,000 therms per year, NOx emissions shall not exceed the following levels:

  - 30 parts per million by volume (ppmv), or 0.036 pound per million BTU of heat input when operated on gas; or

  - 40 ppmv, or 0.052 pound per million BTU of heat input, when operated on nongaseous fuel; or

  - The heat-input weighted average of the limits specified in 301.1 and 301.2, above, when operated on combinations of gas and nongaseous fuels.

  - Emissions from units subject to this section shall not exceed a carbon monoxide concentration of 400 ppmv.

Units with rated heat inputs of greater than or equal to five million BTU per hour and annual heat inputs of less than 90,000 therms per year shall be:

- Operated in a manner that maintains stack-gas oxygen concentrations at less than or equal to 3.00% by volume on a dry basis; or

- Operated with a stack-gas oxygen trim system set at 3.00% by volume oxygen. The tolerance of this setting shall be plus or minus (±) 5% (i.e. 2.85 to 3.15% by volume oxygen); or

- Tuned at least once per year by a technician that is qualified, to the satisfaction of the Air Pollution Control Officer, to perform tuning in accordance with Section 600; or

- Operated in compliance with the applicable emission levels specified in Section 301.

- **RULE 246 - Natural Gas-Fired Water Heaters:** A person shall not distribute, offer for sale, sell, or install, any natural gas-fired water heater within the District, unless it meets either of the following standards:

  - A natural gas-fired water heater that emits less than or equal to 40 nanograms of nitrogen oxides [calculated as NO_2] per joule (93 pounds per billion BTU) of heat output; and is certified in accordance with Section 402.

  - A mobile home natural gas-fired water heater that emits less than or equal to 50 nanograms of nitrogen oxides [calculated as NO_2] per joule (116 pounds per billion BTU) of heat output; and is certified in accordance with Section 402.

- **RULE 305 - No Burn Days:** No person shall knowingly permit residential burning or agricultural burning or burning of wood waste on property where grown or hazard reduction burning, or right-of-way clearing and levee-ditch and reservoir maintenance burning on days when agricultural burning is prohibited by the Air Pollution Control Officer or the Air Resources Board in the Sacramento Valley Air Basin, the Mountain Counties Air Basin, or the Lake Tahoe Air Basin.

- **RULE 318 - Land Development Open Burning:** Pursuant to Section 41802, this Rule authorizes the use of open outdoor fires for the disposal of vegetative material (woodwaste) grown on property being developed for commercial or residential purposes under the following conditions:

  1. RULE 301 through RULE 314 except RULE 307 and the following sections of this Rule shall apply.

  2. Woodwaste should be windrowed if economically and technically feasible.

  3. The Air Pollution Control Officer or staff shall review all permits prior to the burning.

4. The Air Pollution Control Board of the District finds it more desirable to burn than dispose of by other available means.

5. A minimum drying time of six weeks shall be required for trees, stumps, and large branches greater than six inches in diameter.

6. Woodwaste greater than 12 inches in diameter, with the exception of stumps, shall not be included in the burn.

7. Stumps greater than 12 inches in diameter at the cut shall not be included in the burn unless split at least in half and free of dirt.

- **RULE 905 - Airborne Toxic Control Measure – Asbestos-Containing Serpentine Rock in Surfacing Applications:** No person shall use or apply serpentine material for surfacing in California unless the material has been tested using CARB Test Method 435 and determined to have an asbestos content of 5.0% or less.

PLACER COUNTY GENERAL PLAN

The *Placer County General Plan* Air Quality Element provides countywide goals and policies aimed at improving air quality. Goals and policies in the *Air Quality Element* parallel those identified in State and federal plans applicable to Placer County. General Plan policies applicable to the proposed Specific Plan include the following:

Policies:

6.F.6: The County shall require project-level environmental review to include identification of potential air quality impacts and designation of design and other appropriate mitigation measures or offset fees to reduce impacts. The County shall dedicate staff to work with project proponents and other agencies in identifying, ensuring the implementation of, and monitoring the success of mitigation measures.

6.F.7: The County shall encourage development to be located and designed to minimize direct and indirect air pollutants.

6.F.8: The County shall submit development proposals to the PCAPCD for review and comment in compliance with CEQA prior to consideration by the appropriate decision-making body.

6.F.9: In reviewing project applications, the County shall consider alternatives or amendments that reduce emissions of air pollutants.

6.F.10: The County may require new development projects to submit an air quality analysis for review and approval. Based on this analysis, the County shall require appropriate

mitigation measures consistent with the PCAPCD's 1991 Air Quality Attainment Plan (or updated edition).

6.G.3: The County shall encourage the use of alternate forms of transportation by incorporating public transit, bicycle, and pedestrian modes in County transportation planning and by requiring new development to provide adequate pedestrian and bikeway facilities.

6.G.4: The County shall consider instituting disincentives for single-occupant vehicle trips, including limitation in parking supply in areas where alternative transportation modes are available and other measures identified by the PCAPCD and incorporated into regional plans.

6.G.5: The County shall endeavor to secure adequate funding for transit services so that transit is a viable transportation alternative. New development shall pay its fair share of the cost of transit equipment and facilities required to serve new projects.

6.G.6: The County shall require large new developments to dedicate land for and construct appropriate improvements for park-and-ride lots, if suitably located.

4.8.4 IMPACTS AND MITIGATION MEASURES

This section identifies and discusses the environmental impacts resulting from the proposed Specific Plan and suggests mitigation measures to reduce the level of impacts. The proposed Specific Plan will affect air quality during both construction and operation phases. Construction activities will result in criteria pollutant emissions through earthmoving activities, application of architectural coatings, and vehicle and equipment exhaust emissions. Proposed Specific Plan area operation would result in criteria pollutant emissions primarily from vehicular sources; however, landscape maintenance equipment, residential heating sources (natural gas heaters, fireplaces, and wood stoves), and other miscellaneous activities would also generate pollutant emissions. Emissions from proposed Specific Plan area construction and operation will contribute to both regional pollutant emissions and localized pollutant concentrations.

Development of the Specific Plan area would generate air pollutant emissions from a wide variety of stationary and mobile sources. Emissions during the construction period would be generated from stationary sources, such as generators and fugitive wind-blown dust, and mobile sources, such as heavy-duty grading equipment, construction worker vehicles, and smaller equipment such as dump trucks and forklifts. Once the proposed uses are completed and occupied, emissions would be generated by stationary sources, such as fireplaces, natural gas combustion, and consumer products, and from mobile sources, such as motor vehicles and landscape maintenance equipment. A discussion of the significance criteria is presented in the section below, while the impacts discussion includes an assessment of the construction and operational emissions as it relates to significance.

This section evaluates the proposed Specific Plan area impacts on air quality. This section will analyze the impacts from a local and regional standpoint. Comparing Specific Plan conditions to the existing conditions and relating the Specific Plan area effects to the significance criteria determine impact significance. Specific Plan area emissions that consist of mobile and stationary sources during construction and eventual operation were estimated using URBEMIS 2002 Version 8.7 (Jones and Stokes, 2005) for Windows for different phases of the Specific Plan. URBEMIS is a software program designed to estimate air emissions from land development projects. A screening form of CALINE-4 computer simulation model was applied to intersections within and near the Specific Plan area to predict worst-case concentrations of CO at buildout of the Specific Plan.

URBEMIS 2002

URBEMIS 2002 runs were generated for the full build-out of the Specific Plan by the year 2025 (Table 4.8-7). Full documentation of the URBEMIS model results is available in Appendix J. The results are presented below.

The emissions data from URBEMIS are presented in worst-case pounds per day in order to be able to evaluate the Specific Plan using the PCAPCD quantitative standards of significance. The URBEMIS 2002 program was run to calculate summertime and wintertime emissions from Specific Plan area sources and vehicles. The program also calculated the maximum daily construction-related emissions for Specific Plan land uses. Emissions for ROG and NOx, which are ozone precursors, are for the summer. Emissions shown for CO and PM_{10} are for winter.

Table 4.8-7
Placer Vineyards Project Emissions at Full Build-out (2025) (Emissions in Pounds per Day)

Construction Emissions (Maximum Day)				
	ROG	**NOx**	**CO**	**PM_{10}**
TOTAL Construction	*3,202*	*1,981*	*2,081*	*607*
PCAPCD Standards	*82*	*82*	*550*	*82*
Construction Significant?	*Y*	*Y*	*Y*	*Y*
Operational Emissions				
Area Sources	**ROG**	**NOx**	**CO**	**PM_{10}**
Natural Gas	15.7	205.4	106.8	0.4
Landscaping	60.8	2.1	---	---
Consumer Products	691.4	–-	–-	–-
Wood Burning	---	---	14,669.0	2186.9
TOTAL Area Source	*767.9*	*207.5*	*14,775.8*	*2,187.3*
Vehicular	**ROG**	**NOx**	**CO**	**PM_{10}**
Residential	361.7	338.1	3912.94	1528.0
Educational	65.3	20.4	238.5	88.5
Retail/Commercial	127.9	120.5	1438.6	504.8

Table 4.8-7 Placer Vineyards Project Emissions at Full Build-out (2025) (Emissions in Pounds per Day)				
Construction Emissions (Maximum Day)				
	ROG	**NOx**	**CO**	**PM_{10}**
Office	82.7	84.4	969.8	376.8
Other	36.2	30.3	360.1	128.0
TOTAL Vehicular	*673.88*	*593.7*	*6919.98*	*2626.1*
TOTAL Operational Emissions	*1441.7*	*801.2*	*21695.7*	*4813.4*
PCAPCD Standards	*82*	*82*	*550*	*82*
Operational Significant?	*Y*	*Y*	*Y*	*Y*

STANDARDS OF SIGNIFICANCE

Per Appendix G of the State CEQA Guidelines, Placer County has determined that a project could have a significant adverse air quality impact if project-generated pollutant emissions would:

- Cause a violation of an ambient air quality standard or worsen an existing violation.
- Contribute substantially to an existing or projected air quality violation.
- Expose sensitive receptors to substantial pollutant concentrations.
- Conflict with adopted environmental plans, policies, or regulations for air pollutants.
- Expose sensitive receptors to objectionable odors.

In practice, the PCAPCD recommends use of a combination of quantitative and qualitative criteria described below. For the purposes of this Revised Draft EIR, impacts are considered significant if the Specific Plan would:

- Cause emissions from all project-related sources (including mobile sources) to exceed the PCAPCD's New Source Review Rule, which includes the following thresholds:
  - ROG 82 lb/day
  - NOx 82 lb/day
  - CO 550 lb/day
  - PM_{10} 82 lb/day
- Cause or contribute to local CO concentrations exceeding 20 parts per million (ppm) over a one-hour averaging period or 9 ppm over an eight-hour averaging period;
- Expose sensitive receptors to toxic air contaminants that would adversely impact their health and well being; or
- Conflict with or obstruct implementation of any applicable air quality plans.

CONSTRUCTION IMPACTS

4.8-I Exhaust and fugitive dust emissions will be generated by construction activities in the Specific Plan area, such as excavation and grading, construction vehicle traffic, and wind blowing over exposed earth.

Emissions associated with proposed construction in the Specific Plan area would be generated by wind blowing over exposed earth caused by earthmoving activities, construction workers traveling to and from the construction sites, heavy-duty construction equipment operation, and application of architectural coatings.

Dust from construction activities can cause impacts both locally and regionally. The dry climate of the area during the summer months, combined with the fine, silty soils of the region, create a high potential for dust generation. Increased dustfall and locally elevated levels of PM_{10} near the construction activity are expected. Depending on the weather, soil conditions, the amount of activity taking place at any one time, and the nature of dust control efforts, these impacts could significantly affect existing land uses near the Specific Plan area.

Daily emissions generated during Specific Plan area construction would vary depending on the type and intensity of construction activity. The highest level of construction activity would occur during a combination of activities associated with mass grading, road construction, and vertical construction, including the period during which architectural coatings are applied. Emissions from construction activity are traditionally separated from the operational emissions because the activities normally occur at different times. However, with a project this large, the operational and construction activities would most likely overlap.

In 1998 the California Air Resources Board identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). Health risks from Toxic Air Contaminants are a function of both concentration and duration of exposure. Construction diesel emissions are, however, temporary, affecting an area for a period of days or perhaps weeks. Additionally, construction related sources are mobile and transient in nature, and the bulk of the emission occurs within the project site at a substantial distance from nearby receptors. Health risks from diesel emissions also require exposure over an extended period of time. Concentration and duration of exposure during construction projects, such as those proposed in the Specific Plan area, would not normally pose unacceptable health risks to nearby residents, citizens, and sensitive receptors.

The proposed Specific Plan contains Policy 4.41 requiring that construction comply with PCAPCD rules. However, the policy does not indicate what measures would be taken to reduce dust and air emissions.

Average daily construction emissions were estimated for the maximum activity phase of Specific Plan area construction. Table 4.8-7 presents estimated emissions for maximum construction

activity level in the Specific Plan area. Maximum project construction emissions would exceed the PCAPCD thresholds of significance for ROG, NO_x, CO and PM_{10}.

The direct air quality impacts of construction in the Specific Plan area are ***significant and unavoidable***.

Mitigation Measures

Implementation of the following mitigation measures will substantially reduce construction-related air quality impacts, *but not to a level that is less than significant:*

4.8-1a *Construction contractors shall be required to submit a construction emission/dust control plan for approval by the PCAPCD prior to any ground disturbance. At a minimum, this plan shall include the following measures:*

- *Water exposed earth surfaces as necessary to eliminate visible dust emissions (at least one water truck will be available for every three pieces of earthmoving equipment);*
- *Suspend grading operations when wind is sufficient to generate visible dust clouds;*
- *Pave, use gravel cover or spray a dust control agent on all haul roads;*
- *Wash down all earthmoving construction equipment daily, and wash down all haul trucks leaving the site;*
- *Cover all trucks delivering or exporting soil, sand, and other loose materials to ensure that all trucks hauling such materials maintain at least two feet of freeboard;*
- *Institute measures to reduce wind erosion when site preparation is completed;*
- *Install sandbags or other erosion control measures to prevent silt runoff onto public roadways;*
- *Provide graveled, paved or grass-covered areas for construction employee vehicle parking; and*
- *The site contractor shall retain a CARB certified individual to routinely perform Visible Emissions Evaluations (VEE) to ensure compliance with Rule 228, Fugitive Dust. Fugitive dust shall not exceed 40% opacity and shall not go beyond property boundaries at any time. The designee's duties shall include holiday and weekend periods when work may not be in progress.*

Immediately following any mass grading phase, the following dust control measures shall be implemented:

- *Apply soil stabilizers or commence reestablishing ground cover to construction areas within 96 hours of completing grading activities;*

- *Develop and implement a wind erosion monitoring program for areas which will remain inactive for extended periods; this program should at a minimum provide for weekly monitoring of inactive sites to assess the effectiveness of wind erosion controls.*

4.8-1b *Contractors shall be required to reduce NOx and ROG emissions by complying with the construction vehicle air pollutant control strategies developed by the PCAPCD. Contractors shall include in the construction contracts the following requirements or measures shown to equally effective:*

- *Construction equipment operators shall shut off equipment when not in use to avoid unnecessary idling. Generally, vehicle idling should be kept below 10 minutes.*

- *Contractor's construction equipment shall be properly maintained and in good working condition.*

- *The site contractor shall retain a CARB certified individual to routinely evaluate project related off-road and heavy duty on-road equipment emissions for compliance with Rule 202, Visible Emissions.*

- *The prime contractor shall ensure that emissions from all off-road diesel powered equipment used in the Specific Plan area do not exceed 40% opacity for more than three minutes in any one hour. Any equipment found to exceed the 40% opacity shall be repaired immediately, and the County of Placer and the PCAPCD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual results shall be submitted to the County of Placer and the PCAPCD throughout the duration of construction in the Specific Plan area, except that a monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The PCAPCD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other PCAPCD or state rules or regulations.*

- *The prime contractor shall submit to the PCAPCD a comprehensive inventory (i.e. make, model, year, emission rating) of all heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 hours or more for the construction project. PCAPCD personnel, with assistance from the California Air*

Resources Board, will conduct initial Visible Emissions Evaluations of all heavy-duty equipment on the inventory list.

4.8-1c *The project shall provide a plan, for approval by the Placer County Air Pollution Control District, demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used for any construction projects undertaken within the Specific Plan area over its planning lifetime, including owned, leased and subcontractor vehicles, will achieve a project-wide fleet-averaged 20% NOx reduction and 45% particulate reduction compared to the most recent annual CARB off-road construction fleet average for western Placer County. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. Contractors can access the Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure.*
(See http://www.airquality.org/ceqa/Construction_Mitigation_Calculator.xls)

4.8-1d *Construction contractors shall be required to use low-VOC architectural coatings and asphalt in compliance with District Rules and Regulations. Contractors shall also be required to fuel stationary construction equipment with low-sulfur fuels, and use existing power sources (e.g., power poles) or clean fuel generators in place of temporary diesel power generators whenever feasible.*

4.8-1e *Construction contractors shall be required to provide management of construction traffic. Contractors shall include in the construction contracts the following requirements:*

- *Contractors shall provide temporary traffic control during all phases of construction activities to improve traffic flow (i.e. flag person);*
- *Contractors shall configure construction parking to minimize traffic interference;*
- *Contractors shall endeavor to schedule construction activities that affect traffic flow to off-peak hours (e.g. between 7:00 p.m. and 6:00 a.m. and between 10:00 a.m. and 3:00 p.m.);*
- *Contractors shall reroute construction traffic off congested streets; and*
- *Contractors shall provide dedicated turn lanes for movement of construction equipment on- and off-site.*

OFF-SITE INFRASTRUCTURE

4.8-2 Exhaust and fugitive dust emissions will be generated by construction activities in off-site infrastructure areas, such as excavation and grading, construction vehicle traffic, and wind blowing over exposed earth.

Emissions associated with proposed construction of off-site infrastructure would be generated by wind blowing over exposed earth caused by earthmoving activities, construction workers traveling to and from the construction sites, heavy-duty construction equipment operation, and application of architectural coatings.

Dust from construction activities can cause impacts both locally and regionally. The dry climate of the area during the summer months, combined with the fine, silty soils of the region, create a high potential for dust generation. Increased dustfall and locally elevated levels of PM_{10} near the construction activity are expected. Depending on the weather, soil conditions, the amount of activity taking place at any one time, and the nature of dust control efforts, these impacts could significantly affect existing land uses near the off-site utility infrastructure.

The degree of activity is unknown at this time, so average daily construction emissions were not estimated for off-site infrastructure construction activity. During maximum construction activity, the primary emissions would be dust from earthmoving activities, and NOx from construction vehicle exhaust.

The direct air quality impacts of construction of off-site infrastructure are ***significant and unavoidable***.

Mitigation Measure

Implementation of the Mitigation Measures 4.8-1a-e will substantially lessen construction-related air quality impacts, *but not to a level that is less than significant.*

OPERATIONAL IMPACTS

4.8-3 Activity within the Specific Plan area would result in the generation of both mobile and stationary source air pollutants, increasing total air pollution emissions.

Ongoing activity within the Specific Plan area would introduce stationary, area, and mobile sources of criteria air pollutant emissions to the study area. As shown in Table 4.8-7, the primary area and stationary sources would include residential gas heaters, residential fireplaces, residential landscaping equipment, and commercial landscape maintenance equipment. Other area source emissions would include those from residential barbecues and consumer product use; however, emissions from these sources would be small. The proposed Specific Plan contains policies that require the installation of outdoor electrical outlets at residences to encourage the use of electrical landscape maintenance equipment and require the use of natural gas fire places. Other policies designed to reduce air emissions, include requirements for natural gas outlets in

backyards, use of low NO_x hot water heaters, incorporation of solar heaters where feasible, use of energy efficient window glazings, wall insulation and ventilation methods, use of low VOC paints, and energy efficient building orientation. These measures would partially offset the project impact. For example, electrical landscaping equipment produces fewer emissions than gas-powered equipment, and wood-burning fire places are a large source of air emissions. Energy efficiency in construction reduces the use of electricity and other forms of energy, which reduces regional emissions. Where the Specific Plan clearly provides for self mitigation, those measures are not repeated below.

Mobile sources would include exhaust emissions from motor vehicles, and re-entrained dust emissions from motor vehicle travel on paved roads. As discussed above, the proposed Specific Plan provides a network of bicycle trails and lanes and transit facilities that would reduce reliance on vehicular travel. However, motor vehicles would continue to be the primary means of travel.

In addition to these direct emission sources, a collection of residential, commercial, and industrial buildings of the magnitude of this project will also affect the ozone production in the area by substantial energy usage from off-site power sources and a distinct potential for creating a "heat island" effect. This is the observed phenomenon that temperatures in urban areas are generally higher than those in the suburbs or in the surrounding vegetation (Akbari, Rosenfeld, and Taha, 1989). One of the causes of this effect is the absorption of sunlight by dark surfaces such as buildings, roofs, and pavement. Heat islands compromise air quality through two mechanisms. First, power plants have to generate the additional electricity to meet the load. Second, the higher air temperatures enhance the formation of smog. The production of ozone requires precursors (NOx and ROG) and, to drive the reaction, sunlight and heat. The ozone reaction occurs more rapidly as the temperature is increased. In Los Angeles, the concentration of ozone appears to increase by approximately 0.75 parts per hundred million per degree Centigrade increase in maximum air temperature (Sailor, 1993). Reducing localized temperatures on and around buildings can mitigate ozone production. In partial response to the "heat island" effect, the Specific Plan has proposed Policy 6.25 that would set parking lot shading standards. However, impacts will remain ***significant and unavoidable.***

<u>Mitigation Measures</u>

Implementation of the following mitigation measures will substantially reduce air quality impacts related to human activity within the Specific Plan area, *but not to a level that is less than significant:*

4.8-3a *The following guidelines shall be used by the County during review of future project-specific submittals for non-residential development within the Specific Plan area in order to reduce generation of air pollutants with intent that specified measures be required where feasible and appropriate:*

- *Include in all new parking lots tree plantings designed to result in 50% shading of parking lot surface areas within 15 years. Incorporated by reference in this*

measure are the City of Sacramento Parking Lot Tree Shading Design and Maintenance Guidelines dated June 17, 2003 (see EIR Appendix U). Also, see Specific Plan Policy 6.25;

- *Equip HVAC units with a PremAir or similar catalyst system, if reasonably available and economically feasible at the time building permits are issued. Catalyst systems are considered feasible if the additional cost is less than 10% of the base HVAC unit cost;*

- *Install two 110/208 volt power outlets for every two loading docks;*

- *Promote passive solar building design and landscaping conducive to passive solar energy use (i.e., building orientation in a south to southwest direction where feasible, encouraging planting of deciduous trees on western sides of structures, landscaping with drought-resistant species, and including groundcovers rather than pavement to reduce heat reflection). Landscaping plans shall prohibit the use of liquidambar and eucalyptus trees that produce smog-forming compounds (high emission factors for isoprenes); and*

- *Implement the following, or equivalent measures, as determined by the County in consultation with the APCD:*

  - *Establish building guidelines that encourage the use of low-absorptive coatings on all building surfaces and Energy Star roofing products on all roofs, if reasonably available and economically feasible, at the time building permits are issued;*

  - *Establish paving guidelines that require businesses, if feasible, to pave all privately-owned parking areas with a substance with reflective attributes (albedo = 0.30 or better) similar to cement concrete. The use of a paving substance with reflective attributes similar to concrete is considered feasible under this measure if the additional cost is less than 10% of the cost of applying a standard asphalt product; and*

  - *Power all off-road equipment used at office, industrial, and commercial uses by the lowest-emission technology reasonably available at the time building permits are issued.*

4.8-3b *The following measures shall be used singularly or in combination to accomplish an overall reduction of 10 to 20% in residential energy consumption relative to the requirements of State of California Title 24:*

- *Use of air conditioning systems that that are more efficient than Title 24 requirements;*

- *Use of high-efficiency heating and other appliances, such as water heaters, cooking equipment, refrigerators, and furnaces;*

- *Installation of photovoltaic rooftop energy systems; and*

- *Establishment of tree-planting guidelines that require residents to plant trees to shade buildings primarily on the west and south sides of the buildings. Use of deciduous trees (to allow solar gain during the winter) and direct shading of air conditioning systems shall be included in the guidelines.*

4.8-3c *Promote a reduction in residential emissions through implementation of the following measure:*

- *Prohibit any wood-burning fireplaces, woodstoves, or similar wood-burning devices. Homes may be fitted with UL rated natural gas burning appliances if desired. This prohibition shall be included in any CC&Rs that are established.*

4.8-3d *For all projects, use the lowest-emitting architectural coatings during construction. When zero-VOC coatings are commercially available, they should be used. When only low-VOC coatings are available, they shall be used in lieu of higher-emitting formulations. Design review submittals shall include information concerning the coatings products proposed for use in the project.*

4.8-3e *Bicycle usage shall be promoted by requiring the following:*

- *All non-residential projects shall provide bicycle lockers and/or racks;*

- *All apartment complexes or condominiums without garages shall provide at least two Class I bicycle storage spaces per unit;*

- *Require residential neighborhoods to be interconnected, with easy access to commercial and recreational land uses. All neighborhoods shall have access to the Class I bicycle trails without having to travel on an arterial street. All schools and public parks (except neighborhood tot lots) shall be connected with a Class I bicycle trail through the open space and greenbelts;*

- *A pedestrian/bikeway (P/B) Master Plan shall be developed for the entire Specific Plan area. This master plan shall be consistent with the guidelines established in the Placer County Regional Bikeway Plan and in the Specific Plan; and*

- *As each residential phase is constructed, each subdivision shall install its share of the overall P/B network, and ensure that the layout of each residential phase does not interfere with completion of the overall P/B network. Residential areas adjacent to open space corridors shall provide reasonable access to the Class I P/B trails located in the corridors. These Class I corridors shall provide linkages with*

the comprehensive network of other trails throughout the Specific Plan area. The P/B Master Plan shall provide linkages from all residential neighborhoods to all commercial areas. Non-vehicular access shall consist of a network of convenient linkages of Class I, II and III trails.

4.8-3f *Transit usage and ride sharing shall be promoted by requiring participation in the development of a regional transit system at such time as a system is established and set-asides of land for park-and ride facilities. Fair share participation may consist of dedication of right-of-way, easements, capital improvements, and/or other methods of participation deemed appropriate. In addition, future project design shall ensure that an adequate number of developers in the Specific Plan area provide reservations for future installations of bus turnouts and passenger benches and shelters, to be installed at such time as transit service is established and as demand and service routes warrant. The two transit centers shall be connected with the Class I bicycle trail. The Specific Plan shall provide for set-asides of land for two separate park-and-ride facilities. Construction of the park-and-ride facilities shall be phased over the buildout period of the project, with the first 50 spaces in place prior to issuance of the 3,000th residential building permit. Prior to issuance of the 6,000th residential building permit another 50 spaces shall be provided, followed by 50 more prior to the 9,000th residential building permit. Forty-three more spaces shall be provided prior to issuance of the 12,000 residential building permit for a total of 193 spaces to be constructed (equal to 0.1% of the anticipated daily trip generation of the project). A public transit development fee shall be required for all development projects. The amount of this fee shall be based upon the traffic generation potential of each project. A dial-a-ride transportation system shall be established to reduce individual vehicle trips and establish data for the eventual formation of a transit system within the Specific Plan area.*

An Air Quality and Transportation System Management (TSM) Plan shall be prepared for the Specific Plan to implement all feasible means of reducing Specific Plan area emissions. This plan shall provide for eventual public transit and implementation of trip reduction strategies that coordinate with surrounding areas. A Transportation Management Association (TMA) shall be established that shall be funded by the developer and all businesses located within the Specific Plan area. The TSM plan shall be updated annually by TMA staff to demonstrate compliance with all air quality requirements, and to incorporate the latest state-of-the-art techniques and strategies to reduce emissions. Initially, the TMA shall provide each home and business with an information packet that will contain, at a minimum, the following information:

- *Commute options: to inform Specific Plan area occupants of the alternative travel amenities provided, including ridesharing and public transit availability/schedules;*

- *Maps showing Specific Plan area pedestrian, bicycle, and equestrian paths to community centers, shopping areas, employment areas, schools, parks, and recreation areas;*

- *Instructions on how to use TMA services that will facilitate trip reduction opportunities; and*

- *Information regarding PCAPCD programs to reduce county-wide emissions.*

4.8-3g *All projects requiring issuance of residential and non-residential building permits shall participate in an off-site mitigation program coordinated through the PCAPCD to offset NOx and ROG emissions not mitigated through on-site measures.*

The PCAPCD, on behalf of Placer County, will determine air quality mitigation fees using calculation methodology established in practice and routinely applied to other, similar, contemporaneous land use development projects. The off-site mitigation program, coordinated through the PCAPCD, is designed to offset the project's long-term ozone precursor emissions. Monetary incentives shall be provided to sources of air pollutant emissions within the project's general vicinity that are not required by law to reduce their emissions. Therefore, the reductions are real, quantifiable and implement provisions of the 1994 State Implementation Plan. The off-site mitigation program reduces emissions within the region that would not otherwise be eliminated and thereby "offsets" the project's increase to regional emissions.

4.8-3h *School districts shall be encouraged to incorporate the following measures into the design, construction, and operation of elementary, middle and high school buildings and facilities:*

- *Install bicycle lockers and racks at all appropriate locations;*

- *Post signage prohibiting the idling of diesel vehicles for longer than five minutes;*

- *Construct at least one bus stop at a convenient location to be used for either fixed route service within the Specific Plan area or commuter service;*

- *Provide a community notice board and information kiosk with information about community events, ride-sharing, and commute alternatives;*

- *Provide preferential parking for carpools and hybrid vehicles (vehicles with self-charging electric engines); and*

- *Incorporate solar water heating systems and HVAC PremAir or similar catalyst systems in building design.*

4.8-3i *The following measures shall be incorporated into the design, construction, and operation of public park areas:*

- *The pedestrian/bikeway (P/B) master plan shall provide at least one Class I linkage to all school sites;*

- *Additional Class I and II linkages shall be provided so as to provide convenient access to/from the park sites;*

- *Install bicycle lockers and racks at all appropriate locations;*

- *Provide a community notice board and information kiosk with information about community events, ride-sharing, and commute alternatives;*

4.8-3j *Prohibit open burning throughout the Specific Plan area. Include this prohibition in any project CC&Rs that are established.*

4.8-3k *The County may substitute different air pollution control measures for individual projects, that are equally effective or superior to those proposed herein, as new technology and/or other feasible measures become available in the course of buildout of the Specific Plan area.*

4.8-4 In addition to Specific Plan-related vehicular emissions impacts, the additional vehicles on the local roadway systems would add a localized CO pollution increment at local intersections.

The microscale impacts that may occur from Specific Plan implementation were calculated using a screening form of the air quality model CALINE-4 (Caltrans, 1989). CALINE-4 is a dispersion model that predicts CO impacts near roadways. Its purpose is to help planners protect public health from the adverse effects of excessive CO exposure. CO emissions are typically highest near intersections, where vehicles are frequently idling and accelerating and are closely related to the Level of Service (LOS). The worst-case CO concentrations were calculated for five intersections, chosen as worst-case locations based on total traffic and congestion levels.

Hourly CO concentrations in parts per million (ppm) were calculated based on traffic volumes presented in Section 4.7 of this Revised Draft EIR. Table 4.8-8 shows the input data and assumptions used for the CALINE-4 runs.

Table 4.8-8
CALINE4 Input Data and Assumptions

Wind speed	0.5 meters per second
Wind Angle	Worst-Case
Stability	Class 7
Mixing height	1000 meters
Temperature	7.3 ºC (40 ºF)
Background CO	1.3 ppm (SMAQMD, 2004)
Altitude	25 meters
Emission factors	Emission factors were estimated from EMFAC2002 program for Placer County with a year 2025 vehicle mix.

Each intersection was modeled for 2005 existing conditions and for existing plus project conditions with the worst-case assumption that the project traffic changes would occur by 2015. Two cumulative runs (with and without the project) were also conducted assuming project and cumulative traffic increases occurred by the year 2025. Results of the model runs for all scenarios are shown in Table 4.8-9.

Table 4.8-9
Modeled Worst-Case CO Concentration Impacts (ppm)

Intersection	Existing (2005)		Existing Plus Project (2015)		Cumulative No Project (2025)		Cumulative Plus Project (2025)	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Fiddyment Road & Baseline Road	11.5	7.3	7.0	4.3	5.3	3.3	5.6	3.4
Walerga Road & PFE Road	10.7	6.8	5.1	3.1	4.9	2.9	5.1	3.1
Watt Avenue & Roseville Rd	17.5	11.5	7.4	4.6	5.0	3.0	5.5	3.3
Watt Avenue. & Elkhorn Blvd	15.1	9.8	7.1	4.4	5.3	3.2	5.4	3.3
Watt Avenue. & Baseline Road	9.9	6.2	6.3	3.9	5.1	3.1	5.3	3.2
Most Stringent Standard	20.0	9.0	20.0	9.0	20.0	9.0	20.0	9.0

Under existing conditions, two of the five intersections are shown to exceed the State/federal ambient eight-hour standards. Since the project area is an attainment area for carbon monoxide, this result is probably due to the conservative nature of the CALINE-4 screening model, and would only apply to locations very near the intersections in question.

Predicted concentrations in 2015 with the addition of project traffic are below current concentrations, despite increased traffic, due to the overall reduction in vehicle emission rates in the future. The results show that the Specific Plan will have a negligible effect on CO concentrations in the project area and would not cause or substantially contribute to projected violations of the State/federal ambient air quality standards. This impact is therefore considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.8-5 Sewer lift station operations within the Specific Plan area could cause odors and the potential for odor complaints.

In the event wastewater from service Shed A is directed to the Dry Creek Wastewater Treatment Plant (DCWWTP) a major lift station will be necessary in the western portion of the Specific Plan area in the vicinity of 20th Street (Figure 3-17A). Land uses on two sides of the lift station

would be in open space and parks; however, to the north and east, the site would be proximate to residential uses. Odors could be experienced in proximity to the lift station due to wastewater pumping. Potential odor objections could come from general cleaning activities, anaerobic conditions in sewer lines, or the use of solvents. Odorous gases resulting from raw sewage commonly include hydrogen sulfide, ammonia, and certain organic compounds.

PCAPCD Rule 205 regulates odors according to their potential to result in a nuisance. No quantitative thresholds are provided. Because sensitive receptors (residential uses) are proximate to the proposed lift station, the potential for odor complaints is a ***potentially significant impact***.

Mitigation Measure

Exposure to wastewater odors is typically not a public health concern. In addition, proper operation and maintenance of lift station components will reduce the potential for odors to relatively rare occasions. Response to odors is a subjective matter and difficult to predict. Awareness of the potential for odor to result by persons purchasing property near the lift station would, however, assist in reducing this impact to a *less than significant level.*

4.8.5 *Notice shall be provided in the recorded Covenants, Codes and Restrictions of all lots created within 500 feet of the proposed lift station that there is the potential for odors to result from lift station operations and maintenance.*

OFF-SITE INFRASTRUCTURE

No operational air quality impacts have been identified related to installation and maintenance of utilities in off-site utility corridors with the exception of the potential for odor and other air quality-related impacts that could occur with sewage pump stations and the expansion of wastewater treatment plants.

4.8-6 Increased volumes of wastewater requiring treatment could cause odors and air quality degradation due to pump station and wastewater treatment plant operations.

With the construction of multiple uses within the Specific Plan area, wastewater treatment plant expansions may occur at both the Dry Creek Wastewater Treatment Plant (DCWWTP) and Sacramento Regional Wastewater Treatment Plant (SRWTP). These plant expansions could potentially cause odor and air quality concerns.

An increase in treatment capacity at both WWTPs would likely result in an increase in stationary and mobile source emissions of criteria pollutants. In addition, increased wastewater processing rates may result in a raise in stationary source emissions of air toxics, warranting the need of a health risk assessment. Air contaminants would potentially be generated from the vaporization of volatile liquids present in wastewater and solids, and the flaring of digester gas. With an increase in treatment capacity, there is also a potential for increases in operations-related ROG, NO_x, and PM_{10} emissions in all stages associated with wastewater treatment activities. Reducing the total stationary and mobile source emissions and making sure they do not exceed any of the

Sacramento Metropolitan Air Quality Management District's significance thresholds can help mitigate air pollution amounts; however, these impacts would still be considered ***potentially significant***.

Odor impacts would likely occur at both WWTPs due to increased capacity. Odors could also occur in proximity to the two proposed lift stations to be constructed and operated between the project and the DCWWTP (Figure 3-6). Although both lift stations are off-site and in an open space area, they will eventually be proximate to sensitive receptors in the Riolo Vineyards and Silver Creek developments (Figure 4.1-2).

Odors typically occur in fresh or incompletely treated wastewater and liquid process side-stream, or raw sludge, screenings, grit, and skimmings containing malodorous matter, and emissions from treatment and pumping processes. In addition, major sources of odors at wastewater treatment plants typically include the headworks, flow equalization basin, digesters, and sludge dewatering facilities. Other potential objectionable odors would be from general cleaning activities, anaerobic conditions in treatment units, lift stations, or sewer lines, or the use of solvents. Existing and future odorous gases resulting from raw and partially treated wastewater in the DCWWTP, SRWTP, and lift stations commonly include hydrogen sulfide, ammonia, and certain organic compounds.

The SRWTP treatment facilities currently occupy approximately 900 acres near the center of a 3,500-acre site. Permanent bufferlands surround the existing treatment facilities and planned expansion areas of the SRWTP site to reduce the potential for odor complaints and to protect against urban encroachment. SRCSD has established a 1,000- to 3,000-foot-wide residential incompatibility zone within the northern, eastern, and southeastern boundaries of the SRWTP property. The SRWTP bufferlands are undeveloped and consist primarily of cultivated and undisturbed grassland. Future uses of this land are limited by SRCSD to natural habitat improvements, agricultural production, and other uses that enhance the land's buffering function. Although DCWWTP is situated on a smaller site, 104 acres, surrounding land uses are predominantly non-residential, although there are scattered rural residential uses north and east of the plant site.

PCAPCD Rule 205 regulates odors according to their potential to result in a nuisance. No quantitative thresholds are provided. Although there has been a positive history of infrequent odor complaints from both WWTPs, the project still has the potential to create additional odors. In addition, the two wastewater treatment facilities are not within the jurisdiction of Placer County and the County cannot compel other jurisdictions to adopt the recommended mitigation. This impact is therefore considered ***potentially significant and unavoidable*** as to the wastewater treatment plants; however, the two proposed lift stations are within the jurisdiction of Placer County. Impacts related to the two proposed lift stations are ***potentially significant.***

Mitigation Measures

Implementation of the following mitigation measures will substantially reduce air quality impacts related to additional wastewater activities at the two wastewater treatment plants, but *not to a level that is less than significant:*

4.8-6a *The operators shall obtain an Authority to Construct/NSR permit and a Permit to Operate from the air district with jurisdiction prior to addition and operation of new facilities.*

4.8-6b *Potential odor effects shall be mitigated by installing or maintaining existing odor control systems, including odor scrubbers or chemical addition, for all screening facilities and grit/primary sedimentation facilities.*

Response to odors is a subjective matter and thus is difficult to predict. Awareness of the potential for odors to result from lift station operations and maintenance by persons purchasing property in proximity to lift stations would, however, assist in reducing this impact to a *less than significant level.*

4.8.6c *The County shall ensure that notice is provided in the recorded Covenants, Codes and Restrictions of all lots created within 500 feet of the proposed lift stations that there is the potential for odors to result from lift station operations and maintenance.*

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.8-7 Cumulative air quality impacts would result from Specific Plan development.

As growth continues in the Sacramento Valley, attainment of air quality standards will be come more difficult. Proposed cumulative development planned in Placer and South Sutter counties by 2025 exceeds 160,000 new homes, 27 million square feet of retail space, 30 million square feet of office space an 42 million square feet of industrial space (See Table 4.7-13). Some of this cumulative development was not anticipated in the 1994 State Implementation Plan, the federal regional air quality plan.

The proposed Specific Plan would contribute to cumulative air emissions by allowing for substantially greater development in the Specific Plan area than currently exists. The amount of mobile and stationary emissions would be substantially greater than what would be generated under existing conditions, or future conditions if the Specific Plan area were to remain rural. The Placer County APCD has adopted a cumulative threshold of significance of 10 pounds per day for ozone precursors (ROG and NOx). Project emissions of these two pollutants, after mitigation, would exceed this threshold by a substantial amount. Consequently, the proposed Specific Plan would contribute considerably to air quality degradation, and impede the region's ability to attain air quality standards. The cumulative impacts of the project, together with other foreseeable regional development, would be ***significant and unavoidable,*** and the project's contribution would be ***cumulatively considerable.***

Mitigation Measure

Implementation of the Mitigation Measures 4.8-1a-e, 4.8-3a-k, 4.8-6a-c would substantially lessen the project's incremental contribution to significant cumulative impacts, *but not to a level that is less than cumulatively considerable.*

4.8-8 Proposed Specific Plan traffic would contribute to cumulative localized CO pollution increment at local intersections.

Cumulative hourly CO concentrations in parts per million (ppm) were calculated based on traffic volumes presented in Section 4.7 of this Revised Draft EIR. Table 4.8-8 shows the input data and assumptions used for the CALINE-4 runs.

Two cumulative runs (with and without the project) were conducted assuming project and cumulative traffic increases occurred by the year 2025. Results of the model runs for all scenarios are shown in Table 4.8-9.

Predicted concentrations in 2025 with the addition of project traffic are below current concentrations and existing plus project, despite increased traffic, due to the overall reduction in vehicle emission rates in the future. The results show that the Specific Plan will have a negligible cumulative effect on CO concentrations and would not cause or substantially contribute to projected violations of the State/federal ambient air quality standards. This impact is therefore considered ***less than significant.***

Mitigation Measures

No mitigation measures are required.

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4.9

Noise

4.9 NOISE

4.9.1 INTRODUCTION

The purpose of this analysis is to determine noise impacts due to traffic, commercial/industrial uses, aircraft and construction within the proposed Specific Plan area, and to determine off-site traffic noise impacts at existing noise-sensitive uses near the Specific Plan area. Mitigation measures are identified which may be used to minimize the noise impacts of the Specific Plan.

Appendix K provides definitions of the acoustical terminology used in this section. Unless otherwise stated, all sound levels reported in this section are A-weighted sound pressure levels in decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards use A-weighted sound levels, as they correlate well with public reaction to noise. The noise descriptor "Day-Night Average Level," which is commonly used in this section, is abbreviated as "L_{dn}" or "DNL." The DNL abbreviation is used throughout this section since it is the more modern usage that avoids the cumbersome use of the subscripted term.

4.9.2 ENVIRONMENTAL SETTING

The Specific Plan area is generally flat, mostly comprised of undeveloped grazing land. Approximately 150 residences are currently located within the Specific Plan area, mostly in the northwest corner of the Specific Plan area. The primary existing sources of noise are traffic on nearby roads and agricultural activities. A discussion of background noise level measurements and the primary existing noise sources are described below.

A minor source of noise affecting the project site is the Freedom Field Ultralite Park at 9500 Baseline Road. The field handles ultralite, hobbyist aircraft. According to a field spokesman, two to three flights per day occur during the daylight hours, and the permit for the field does not allow flights south of Baseline Road. No sound level measurements of the field were conducted.

A second minor noise source is a small lumberyard at the extreme northwest corner of the project site. No sound level measurements were conducted.

BACKGROUND NOISE LEVEL MEASUREMENTS

Continuous background noise level measurements were conducted at two locations, as shown in Figure 4.9-1. Site #1 was at 4998 Wallbrook Place, near Baseline and Walerga Roads. Site #2 was at 8382 Locust Road. Noise levels from Site #1 were primarily from Baseline Road traffic. At Site #2, the major source of noise was local traffic.

Noise monitoring equipment used for the measurements consisted of a Larson-Davis Laboratories (LDL) Model 820 integrating sound level meters equipped with a Bruel & Kjaer (B&K) Type 4176 two-inch microphone. The instrumentation complies with the applicable requirements of the American National Standards Institute (ANSI) for Type 1 (precision) sound level meters and was

calibrated prior to use with a B&K Type 4230 acoustical calibrator to ensure the accuracy of the measurements.

Figures 4.9-2 and 4.9-3 show the range of noise levels on an hourly basis at the background noise measurement sites. In general, the highest noise levels occurred during the mid-morning and afternoon hours. The lowest noise levels were usually from 2:00 a.m. to 3:00 a.m. The day/night average level (DNL) at Site #1 was 69.5 dB, and at Site #2 was 60.1 dB.

At two locations spot checks of measured traffic noise levels versus noise levels predicted by the FHWA Model were conducted. Site #3 was adjacent to Watt Avenue near Dyer Lane and Site #4 was adjacent to Baseline Road near Walerga Road. Figure 4.9-1 shows the locations of Sites #1 through #4. Table 4.9-1 compares measured and modeled noise levels at these locations.

Table 4.9-I
Comparison of Measured and Modeled Traffic Noise Levels

Location	Date/Time	Measured L_{eq}	Modeled L_{eq}, dBA
Site #3 – Watt Ave. Near Dyer Lane	10/12/05 – 4:28 p.m.	65.9	66.1
Site #4 – Baseline Rd. Near Walerga Rd.	10/13/05 – 4:10 p.m.	73.7	73.2
Source: Brown-Buntin Associates			

EXISTING AIRCRAFT NOISE LEVELS

McClellan Park is located about 2.5 miles south of the Specific Plan area. The existing Comprehensive Land Use Plan (CLUP) for the airport shows that a part of the Specific Plan area is affected by aircraft noise levels between 60 and 65 dB CNEL. However, the existing CLUP noise contours were based on military operations at the now-decommissioned McClellan Air Force Base. Although existing and possible future commercial uses of McClellan Park could result in noise impacts off airport property (which are discussed in the Impacts section), there are no existing aircraft noise impacts within the Specific Plan area. The County of Sacramento intends to update the CLUP, along with the CLUPs for Sacramento International Airport and Mather Field, to reflect current and planned future activities at the airport (Paul Hahn, Sacramento County, Office of the County Executive, pers. comm., March 2004).

The Airport Planning Policy Area (APPA) for McClellan Park includes the Specific Plan area. Sacramento County operates McClellan Park. On March 22, 2006 the Sacramento County Board of Supervisors considered requirements for new residential development within the APPA to record navigation easements on new lots, and to disclose to future property owners that McClellan aircraft noise may be audible. Action on the proposal was continued to April 19, 2006 in order to allow staff to meet with affected jurisdictions (pers. comm., Monica Newhouse, Sacramento County Airport System, March. 2006).

EXISTING TRAFFIC NOISE LEVELS

Existing traffic noise levels were calculated using the FHWA Highway Traffic Noise Prediction Model. The FHWA Model is the standard methodology recommended by the FHWA and Caltrans for traffic noise prediction. Traffic data used in the FHWA Model were obtained from the traffic

impact analysis prepared by DKS Associates, which was received by Brown-Buntin Associates on October 6, 2005. Table 4.9-2 is a summary of existing traffic noise conditions along roadways in the vicinity of the Specific Plan area (see Appendix K for detailed FHWA model results).

Table 4.9-2 shows that, with the exception of 16th Street north of Elverta Road, existing traffic noise levels exceed 60 dB DNL at setbacks that would be typical of buildings nearest to roads. As discussed in Section 4.9.4 below, 60 dB DNL is the common compatibility standard for noise-sensitive uses affected by transportation noise.

Table 4.9-2
Existing Traffic Noise Levels
Vicinity of Placer Vineyards Specific Plan Area

Road	Segment Description	DNL@ 75'
Baseline Road	East of County Line	66
Baseline Road	East of Locust Road	66
Baseline Road	East of Brewer Road	66
Baseline Road	East of Palladay Road	66
Baseline Road	East of 16th Street	67
Baseline Road	East of Tanwood Avenue	67
Baseline Road	East of Watt Avenue	67
Baseline Road	East of Dyer Lane	67
Baseline Road	East of Walerga Road	66
Fiddyment Road	North of Baseline Road	62
Walerga Road	South of Baseline Road	62
Watt Avenue	South of Baseline Road	63
Watt Avenue	South of Dyer Lane	63
PFE Road	East of Watt Avenue	61
PFE Road	East of Walerga Road	63
Elverta Road	East of Hwy 70/99	63
Elverta Road	East of Rio Linda Boulevard	65
Elverta Road	East of 16th Street	67
Elverta Road	West of Watt Avenue	69
Watt Avenue	North of Elverta Road	67
Watt Avenue	North of Antelope Road	64
Watt Avenue	North of Elkhorn Blvd	65
Walerga Road	North of Elverta Road	63
Walerga Road	North of Antelope Road	65
Walerga Road	North of Elkhorn Blvd	69
16th Street	North of Elverta Blvd	49
Walerga Road	North of PFE Road	65
SR 70/99*	North of Riego Road	70
SR 70/99*	South of Riego Road	71
Riego Road	East of SR 79/99	63

*Calculated at 150′ from road center
Source: Brown-Buntin Associates, 2001.

PROPOSED NOISE-RELATED GOALS AND POLICIES

The following goals and policies related to noise are contained in the proposed Specific Plan. Note all references to tables and figures are to the Specific Plan.

Policy 3.17 Nuisance Uses. Land uses that involve outdoor manufacturing or uses that may emit any appreciable amount of visible gases, particulates, steam, heat, odor, vibration, glare, dust, or excessive noise from the exterior of a building are not allowed in the Plan Area.

Goal 4.15 Minimize noise impacts on residential land uses.

Policy 4.45 Edge treatments and building orientations along arterial streets will reduce outdoor noise levels to 60 dB DNL or less for residential uses and 70 dB DNL for commercial uses such as offices. In those instances where the noise level is in excess of the standard, design practices shall be implemented to reduce noise levels in outdoor use areas.

1. Future residential/ sensitive development along arterials and collectors shall not exceed County noise standards. Creative site planning shall be the primary means to achieve a 60 dB DNL noise level at the outdoor use area (i.e., backyards, patios, etc.). When necessary, building facades and noise barriers may be placed between the arterial roadway and the outdoor use areas (see Section 6.4.3, "Walls, Fences, and Screening," in Chapter VI, "Community Design").

2. Commercial uses along Baseline Road and Watt Avenue and some residential uses along interior arterial streets may be exposed to excessive noise levels. Where it is not possible to reduce noise in outdoor activity areas to 60 dB DNL or less in residential developments, using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB DNL may be allowed, provided that available noise level reductions have been implemented and interior noise levels are not in excess of 45 dB DNL. Acoustical analysis shall be prepared for all uses exposed to levels in excess of "normally acceptable" noise levels to show how both the outdoor uses areas and indoor noise thresholds shall be met in these locations.

3. All residences, hotels, and motel uses exposed to a noise level in excess of 60 dB DNL will require sound-rated windows, added wall insulation, and mechanical ventilation capable of achieving the indoor noise requirements of 45 dB DNL, as determined by an acoustic analysis.

4. To determine compliance with noise standards, site specific acoustical analyses shall be required as a part of the Subsequent Conformity Review process, during the submittal of tentative subdivision designs and grading maps. Acoustical analyses shall be used to determine appropriate noise attenuation measures (i.e. setbacks, berms, building orientation, noise walls and other noise mitigation measures within the Placer County General Plan

Noise Element and the design guidelines found under Section 6.4.3 "Walls, Fences and Screening" of this Specific Plan) required to reduce traffic noise to levels that meet County and Specific Plan noise level standard.

5. "The Landscape Master Plan" that will be subsequently prepared for the project shall include the design of noise attenuating features within the landscape setbacks and landscape corridor lots in the Plan Area, especially along Baseline Road, Watt Avenue and Dyer Lane where the greatest noise impacts are anticipated to occur.

Policy 4.46 Impacts of noise-generating uses will be minimized. Noise attenuation strategies shall be incorporated into all potential noise generating uses, and may include the following:

1. Outdoor use spaces shall be located behind buildings so that the building mass shields noise-sensitive uses from the noise sources.

2. Noise barriers shall be constructed between commercial uses and residences.

3. Limitations on hours of operation, maximum sound levels, and types of uses may be placed on the proposed uses of amplified sound at schools, parks, bars, restaurants, clubs, and other events.

4. Mechanical equipment noise at commercial and residential areas must be controlled. Methods may include quiet equipment, sound-attenuating enclosures, and noise barriers.

5. Full disclosure shall be required for all residential uses that are adjacent to or directly across from schools, houses of worship, neighborhood parks, playgrounds, nightclubs, bars, and restaurants with live music and entertainment venues. The disclosure should state the typical hours of operation and noises associated with the use.

6. Additional acoustical analysis may be required for specific noise-generating activities that have the potential to adversely affect adjacent residences or other noise-sensitive uses (i.e., hospitals, retirement homes, daycare centers, schools, etc.) The analysis should identify the potential noise level and the means by which outdoor and indoor noise levels can be controlled to achieve the normally acceptable standards.

Policy 4.47 Construction noise shall be controlled so as to meet applicable County codes and minimize annoyances on surrounding land uses. Construction noise abatement is critical in later phases of Placer Vineyards development when portions of residential neighborhoods are already in place. Mitigation measures to reduce constructing noise impacts may include the following:

1. Construction noise emanating from any construction activities for which a Grading and Building Permit is required is prohibited on Sundays and federal holidays and shall only occur:

   a. Monday through Friday, 6 a.m. to 8 p.m. (during Daylight Savings Time)
   b. Monday through Friday, 7 a.m. to 8 p.m. (during Standard Time)
   c. Saturdays, 8 a.m. to 6 p.m.

2. Truck traffic shall be routed through less noise-sensitive areas.

Policy 5.14 Sound Walls. Use of sound walls is discouraged. Where sound walls are required because of noise levels and traffic volumes on major streets, screen landscaping and mounding should be provided to minimize their visual impact and create a more attractive streetscape. Refer to Section 4.10 for additional policies related to noise levels and to Section 6.4.3 for walls, fences, and screening techniques and design guidelines.

The policies of the Placer County General Plan encourage the use of setbacks, building orientation, noise barriers and other alternatives as noise mitigation in lieu of sound walls. The design intent of this Specific Plan is to limit the use of sound walls along arterial and collector roads. To mitigate traffic noise and the possible negative visual impacts of continuous sound or privacy walls, a variety of design treatments and land use relationships are recommended. These design treatments include:

- Landscape setbacks
- Land use patterns planned to be compatible to the scale of roadways
- The arrangement of lots and streets, including frontage or loop streets and open ended cul-de-sacs to provide an additional setback or interrupt the continuous wall
- Consistent wall design with interruptions to wall massing for pedestrian openings/connections and wall offsets with optional trellises and privacy gates
- Landscape treatment, such as earth berms, to buffer pedestrian paths and soften or minimize the presence of the wall

Goal 6.30 Encourage open communities. Limit the use of sound walls and fences that can separate neighborhoods.

Goal 6.31 Implement measures to reduce traffic noise on-site to acceptable levels along major thoroughfare and arterial routes (Watt Avenue, Baseline Road, Dyer Lane) and the major collector roadways with general outdoor noise levels in excess of 60 dB DNL, where such routes and roadways are adjacent to low- and medium-density residential development.

Policy 6.43 Attenuating Noise at Low- and Medium-Density Residential Areas Along Major Roadways. The following shall establish the primary and secondary means for achieving acceptable sound levels along streets that will carry varying levels of traffic. See Policy 6.48 for a description of the means of implementing these techniques.

1. Thoroughfares and Arterials. Watt Avenue and Dyer Lane will carry the highest level of traffic within the community. Residential uses along these streets will be protected from sound levels in excess of the 60 Ldn/ CNEL standard by the use of sound walls and landscape berms. Open ended cul-de-sacs (see Figure 6.21, Plan D) shall be used to minimize the unbroken length of the sound walls. On Dyer Lane west of Palladay Road and on 16th Street, north of Dyer Lane, where traffic volumes will be lower, design features described as appropriate for collector streets shall be implemented, if approved by the County.

2. Collector Streets. Many of the collector streets within the community will carry traffic volumes likely to generate noise levels requiring strategic site planning to accommodate noise impacts. Figures 6.23 and 6.24 present examples of designs for neighborhood subdivisions. The designs in these figures are discouraged and encouraged, respectively, when considering the goal of providing residential interconnections on collector and residential streets, where the use of sound walls is discouraged. Appropriate design techniques include open-ended cul-de-sacs (Figure 6.21, Plan D), front-facing development, frontage streets, and loop streets (Figure 6.21 Plans A, B and C). Figure 6.27 shows a typical street design plan designed in accordance with these standards which minimizes the impact of sound walls.

Policy 6.44 Edge Treatments for Use at Low- and Medium- Density Residential Areas. The use of sound walls shall be considered only in conjunction with a minimum of one of the other practical design-related noise mitigation measures described below. Access through sound walls should be provided according to the guidelines listed below so long as it does not introduce noise levels into neighborhoods that exceed County noise ordinance standards. Conceptual designs for a typical residential layout and neighborhood entry along a collector street are shown in Figure 6.27.

1. Sound Attenuation on Collector Roadways. The preferred treatment to accommodate noise levels on collector streets will be the use of landscape setbacks and rear-loaded homes fronting onto the street that have rear-yard fences and buildings that act as sound barriers. Refer to Figure 6.28 for recommended sound attenuation design treatments on collector roadways. The following types of housing can be designed for acceptable noise levels while fronting on these streets: townhomes, mansion homes or multiunit complexes (multiunit buildings that have the appearance of a single home from the street), and small lot motor court and large lot, rear- loaded single-

family homes. (Refer also to Appendix A: "Land Use and Development Standards," for examples of these housing types).

Sound walls on collector streets, should be avoided, however, if they are required as determined by the County, they shall not extend more than 300 feet along these streets without being broken by the use of an open-ended cul-de-sac, a section of fronting streets, or homes facing onto the street (see Figure 6.27).

2. Sound Walls. Sound walls that may be required along Watt Avenue and high traffic sections of Dyer Lane, 16th Street and A Street shall generally not exceed 600 feet. The preferred noise attenuation treatment should consist of relatively short lengths of sound wall, interrupted by street intersections, open-ended cul-de-sacs, use of landscaped berms with lower built in wall or fences, pedestrian easements and wall offsets with optional private entry gates to yards (see discussion of these features below). Sound walls shall be designed such that the entire length of a street will have a consistent appearance.

   For conditions where a sound wall is required, the height of sound walls shall be no more than six (6) feet measured from the adjoining finished grade of the street side of the wall or fence and no more than eight feet from the finished grade on the residential side of the wall or fence. When changes in elevation occur linearly along the wall or fence, the structure should be stepped in equal vertical increments. No step should exceed eighteen (18) inches in height. The preferred sound wall design shall be split face concrete masonry with frequent pilasters. Trees, shrubs, and vines shall be planted throughout the length of the sound wall.

3. Frontage and Loop Streets. Frontage and loop streets allow residential development to face the arterial street without the need for a wall or fence along the street. The right-of-way for the frontage or loop street may be reduced in width and the sidewalk on the opposite side of the residences may be eliminated. See Figure 6.21, Plans A, B and C.

4. Open Ended Cul-de-Sacs. Open ended cul-de-sacs that end at collector streets are intended to reduce the length of privacy walls and fences facing onto the arterial streets and provide pedestrian and bicycle access to the roadways. See Figure 6.21, Plan D.

5. Large Lots. Large lots with single-family homes or multiple dwellings are typically accessed from intersecting side streets or from the rear with the primary entries facing the street. Sound or privacy walls and fences in front yards are allowed only as specifically approved by the County

6. Landscaped Setbacks and Buffers. Use of additional landscaped setback buffer areas can be used between residential areas and streets. In this condition, local streets, loop streets, or frontage roads face onto a landscape buffer. Privacy walls or fences are not allowed in front yards of adjacent residential lots. The landscape buffer may incorporate earth berms or mounding, trees, shrubs, and other screening vegetation. Local streets adjacent to the landscaped buffer may be reduced in width and the sidewalk may be eliminated from one side.

7. Landscape Berms. Where sound walls are required, berms should be used in conjunction with sound walls, when feasible. Berms shall be designed not to exceed a maximum 3:1 slope.

Policy 6.45 Edge Treatments at Other Areas Along Major Roadways.

1. Compatible Land Uses. All parks, houses of worship and other noise sensitive uses shall be protected from exposure to noise levels in excess of 60 dB DNL. See noise policies of Chapter IV: Environmental Resources. Commercial, office, public and other non-residential uses are planned along the major arterial thoroughfares, Baseline Road and Watt Avenue. These non-residential uses will not require the use of sound walls along the street. A variety of landscaping, berming, or other screening techniques should be used to screen parking lots from pedestrian sidewalks.

2. Front-Facing Development. Buildings facing onto the street is the preferred treatment in the Town Center, high density residential developments throughout the Plan and along other collector streets. Vehicular access is generally from the rear. High-density projects should be designed such that active outdoor spaces are shielded from noise impacts by buildings or parking areas between the street and buildings. All residential uses exposed to a DNL in excess of 60 dB DNL will require sound-rated windows, added wall insulation, and mechanical ventilation capable of achieving the indoor noise requirements of 45 dB DNL. The applicant may be required to prepare a study demonstrating how these standards shall be met.

4.9.3 REGULATORY SETTING

Noise regulations that apply to the proposed Specific Plan are local. No federal or state noise regulations apply to this Specific Plan. Although the Specific Plan area is within Placer County, potential noise impacts due to traffic generated by the Specific Plan could occur in neighboring jurisdictions as well. Following is a discussion of local noise regulations that could apply to the Specific Plan.

PLACER COUNTY GENERAL PLAN NOISE ELEMENT

For transportation-related noise sources (e.g., traffic), the acceptable noise level in outdoor activity areas of residences, transient lodging, hospitals, theaters, and churches is 60 dB DNL (or CNEL) or less(Noise levels described in terms of DNL or CNEL are usually within +/- 1 dB of each other. For almost all applications they can be used interchangeably.) The interior noise level standard is 45 dB DNL. For non-transportation-related noise sources, the exterior noise level standard for residences and office/professional uses, is 60 dB DBL; for transient lodging and neighborhood/general commercial uses, the criteria are 65 and 70 dB DNL, respectively. The interior noise level standard for most land uses is 45 dB DNL. (Note, all table references that follow in this section are to the *Noise Element* of the *Placer County General Plan.*)

The *Noise Element* includes the following goals and policies applicable to the proposed project:

Goal 9.A: To protect County residents from the harmful and annoying effects of exposure to excessive noise.

Policies:

9.A.1. The County shall not allow development of new noise-sensitive uses where the noise level due to non-transportation noise sources will exceed the noise level standards of Table 9-1 as measured immediately within the property line of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards specified in Table 9-1.

9.A.2. The County shall require that noise created by new non-transportation noise sources be mitigated so as not to exceed the noise level standards of Table 9-1 as measured immediately within the property line of lands designated for noise-sensitive uses.

9.A.3. The County shall continue to enforce the *State Noise Insulation Standards* (*California Code of Regulations*, Title 24) and Chapter 35 of the *Uniform Building Code* (UBC).

9.A.5. Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 9-1 at existing or planned noise-sensitive uses, the County shall require submission of an acoustical analysis as part of the environmental review process so that noise mitigation may be included in the project design. The requirements for the content of an acoustical analysis are listed in Table 9-2.

9.A.6. The feasibility of proposed projects with respect to existing and future transportation noise levels shall be evaluated by comparison to Figure 9-1.

9.A.8. New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources, including airports, which exceed the levels specified in Table 9-3, unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table 9-3.

9.A.9. Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 9-3 at outdoor activity areas or interior spaces of existing noise-sensitive land uses.

9.A.10. Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 9-3 or the performance standards of Table 9-1, the County shall require submission of an acoustical analysis as part of the environmental review process so that noise mitigation may be included in the project design. At the discretion of the County, the requirement for an acoustical analysis may be waived provided that all of the following conditions are satisfied:

a. The development is for less than five single-family dwellings or less than 10,000 square feet of total gross floor area for office buildings, churches, or meeting halls;

b. The noise source in question consists of a single roadway or railroad for which up-to-date noise exposure information is available. An acoustical analysis will be required when the noise source in question is a stationary noise source or airport, or when the noise source consists of multiple transportation noise sources;

c. The existing or projected future noise exposure at the exterior of buildings which will contain noise-sensitive uses or within proposed outdoor activity areas (other than outdoor sports and recreation areas) does not exceed 65 dB DNL prior to mitigation. For outdoor sports and recreation areas, the existing or projected future noise exposure may not exceed 75 dB DNL prior to mitigation;

d. The topography in the project area is essentially flat; that is, noise source and receiving land use are at the same grade; and

e. Effective noise mitigation, as determined by the County, is incorporated into the project design to reduce noise exposure to the levels specified in Table 9-1 or 9-3. Such measures may include the use of building setbacks, building orientation, noise barriers, and the standard noise mitigations contained in the *Placer County Acoustical Design Manual*. If closed windows are required for compliance with interior noise level standards, air conditioning or a mechanical ventilation system will be required.

9.A.11. The County shall implement one or more of the following mitigation measures where existing noise levels significantly impact existing noise-sensitive land uses, or where the cumulative increase in noise levels resulting from new development significantly impacts noise-sensitive land uses:

a. Rerouting traffic onto streets that have available traffic capacity and that do not adjoin noise-sensitive land uses;

b. Lowering speed limits, if feasible and practical;

c. Programs to pay for noise mitigation such as low cost loans to owners of noise-impacted property or establishment of developer fees;

d. Acoustical treatment of buildings; or

e. Construction of noise barriers.

9.A.12. Where noise mitigation measures are required to achieve the standards of Tables 9-1 and 9-3, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.

Goal 9.B: To ensure that areas designated for industrial uses pursuant to Goal 1.E. and Policy 1.E.1. are protected from encroachment by noise-sensitive land uses.

Policies:

9.B.1. The County shall require that new noise-sensitive land uses established next to existing industrial areas be responsible for self-mitigating noise impacts from industrial activities.

9.B.2. The County shall apply noise standards in a manner consistent with encouraging the retention, expansion, and development of new businesses pursuant to Goal 1.N. and Policy 1.N.2.

9.B.3. Because many industrial activities and processes necessarily produce noise which will likely be objectionable to nearby non-industrial land uses, existing and potential future industrial noise emissions shall be accommodated in all land use decisions.

9.B.4. Whenever noise exposure standards herein fall subject to interpretation relative to industrial activities, the benefit of the doubt shall be afforded to the industrial use.

DRY CREEK/WEST PLACER COMMUNITY PLAN

Exhibit 1 of the *Dry Creek/West Placer Community Plan* includes the following policy applicable to the proposed project:

9. Noise: Development within the Specific Plan area shall be designed to avoid aircraft noise impacts or noise sensitive uses, resulting from operations at McClellan Air Force Base. No residential land use shall be permitted in areas which exceed noise levels indicated in Table 9-3, page 122 of the *Placer County General Plan*.

SUTTER COUNTY NOISE ELEMENT

For transportation-related noise sources, the acceptable noise level in outdoor activity areas of residences, transient lodging, hospitals, and churches is 60 dB DNL or less. Noise levels up to 63.5

dB DNL may be acceptable if available exterior noise reduction measures have been implemented and interior noise levels comply with County requirements. The interior noise standard is 45 dB DNL for most land use categories.

SACRAMENTO COUNTY NOISE ELEMENT

For transportation-related noise sources, the acceptable noise level for noise-sensitive uses is 60 dB DNL or less. Levels up to 65 dB DNL are acceptable if practical application of the best available noise-reduction technology cannot reduce noise levels to 60 dB DNL. The interior noise level standard is 45 dB DNL.

CITY OF ROSEVILLE NOISE ELEMENT

For transportation-related noise sources, the acceptable noise level in residential outdoor activity areas is 60 dB DNL or less. The interior standard is 45 dB DNL.

4.9.4 IMPACTS AND MITIGATION MEASURES

Sources of potentially significant noise are traffic on public roads, aircraft overflights from McClellan Park, and industrial or commercial uses and construction that may affect new noise-sensitive uses in the Specific Plan area.

STANDARDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, Placer County has determined that significant noise impacts could occur when:

- A project exposes people to noise levels in excess of standards established in local noise ordinances or general plan noise elements,

- A project causes a substantial permanent or temporary increase in noise levels above levels existing without the project.

Following is a discussion of local noise level criteria; the concept of substantial noise increases; and the standard of significance for construction noise, existing industrial/commercial noise that may affect the project, on-site traffic noise, off-site traffic noise and aircraft noise.

LOCAL NOISE LEVEL CRITERIA

- For transportation-related noise sources (e.g., traffic) the standard of significance is 60 dB DNL at noise-sensitive receptors. This criterion is used by Placer, Sutter and Sacramento Counties and the City of Roseville. Traffic noise impacts due to the project could potentially extend into these jurisdictions.

- Non-transportation-related noise sources (e.g., industry) that could potentially cause significant noise impacts would only be present within the Specific Plan area. Therefore, the 60 dB DNL criterion applied by Placer County is the standard of significance for non-transportation-related noise sources affecting noise-sensitive receptors. The *Placer County General Plan, Noise Element* standards for non-transportation-related sources and transportation-related sources are presented in Tables 9-1 and 9-3, respectively, of the *Noise Element.*

CONSTRUCTION NOISE

The Placer County Environmental Health Services "Standard Construction Noise Conditions of Approval" (EH-15) are:

Construction noise emanating from any construction activities for which a Grading or Building Permit is required is prohibited on Sundays and Federal Holidays, and shall only occur:

a. Monday through Friday, 6:00 am to 8:00 pm (during daylight savings)
b. Monday through Friday, 7:00 am to 8:00 pm (during standard time)
c. Saturdays, 8:00 am to 6:00 pm.

EXISTING INDUSTRIAL/COMMERCIAL NOISE

The 60 dB DNL exterior and 45 dB DNL interior criteria apply to existing industrial/commercial facilities that may affect residential uses in the proposed Specific Plan area.

AIRCRAFT NOISE

The 60 dB DNL exterior and 45 dB DNL interior criteria apply to aircraft noise that may affect residential uses in the proposed Specific Plan area.

ON-SITE TRAFFIC NOISE

The 60 dB DNL exterior and 45 dB DNL interior criteria apply to new noise-sensitive land uses in the proposed Specific Plan area.

OFF-SITE TRAFFIC NOISE

The 60 dB DNL exterior and 45 dB DNL interior criteria apply to existing noise-sensitive uses outside the Specific Plan area that may be affected by increased traffic attributable to the Specific Plan. Also, substantial increases in traffic noise levels attributable to the Specific Plan are significant impacts.

SUBSTANTIAL NOISE INCREASES

Transportation-Related Noise Sources

CEQA does not define the word "substantial" as used in the Guidelines. Some guidance to the concept of substantial noise increases was provided in 1992 by the Federal Interagency Committee on Noise (FICON), which addressed changes in noise levels resulting from aircraft operations. Their recommendations are based upon studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of the DNL and CNEL. Annoyance is a summary measure of the general adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment.

Although the FICON recommendations were specifically developed to address aircraft noise impacts, they are used in this analysis for all transportation noise sources that are described in terms of cumulative noise exposure descriptors such as the DNL and CNEL. These descriptors define noise exposure in terms of average noise exposure during a 24-hour period with penalties added to noise that occurs during the nighttime or evening Table 4.9-3 summarizes the FICON recommendations.

Table 4.9-3
Substantial Increases for Transportation Noise Exposure

Ambient Noise Level Without Project (DNL or CNEL)	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels By:
<60 dB	+5 dB or more
60-65 dB	+3 dB or more
>65 dB	+2 dB or more

Source: FICON as applied by Brown-Buntin Associates, Inc.

Non-Transportation-Related Noise Sources

For these types of noise sources, it is common to assume that a minimum 3 dB DNL increase in noise levels represents a substantial increase in ambient noise levels. This is based on laboratory tests that indicated a 3 dB DNL increase in the minimum change perceptible to most people.

4.9-1 Aircraft noise levels will not exceed adopted noise standards within the Specific Plan area.

The analysis of aircraft noise impacts for McClellan Park is based on information in the Final Supplemental EIR for the McClellan Air Force Base Draft Final Reuse Plan (SEIR) (County of Sacramento/EDAW, November 2002). In that EIR, aircraft noise exposure in the airport environs was analyzed for future conditions in accordance with the methodology for preparing aircraft noise exposure maps contained in FAA Federal Aviation Regulations (FAR) Part 150. The FAA's Integrated Noise Model (INM), Version 6.0, was used to evaluate potential aircraft noise impacts. A detailed breakdown of projected aircraft operations based on an estimated fleet mix and the timing of operations was used as input to the noise modeling program that evaluated overall noise impacts at the McClellan Park Airport. Noise modeling takes into account the time of day when noise is generated, as well as the level of noise generated. Noise generated during evening hours is weighted more heavily than daytime noise, and nighttime noise is weighted more heavily still. Thus, the noise levels calculated for the McClellan Park Airport take into account the greater disturbance that would

result from nighttime operations. The SEIR concluded that at buildout of McClellan Park, the total area within the 65 dBA CNEL contour would decrease from approximately 10,000 acres to 1,000 acres, and the residential area would decrease from approximately 2,400 acres to 23 acres.

A comparison of projected operations with baseline information in the SEIR shows that the percentage of evening operations would be reduced from 16.5% of total operations to approximately 8% in 2009, and 9% in 2022. Because total operations under both interim and buildout conditions would be reduced from baseline conditions, however, the actual number of operations during all periods except nighttime operations would be reduced.

Figures 4.9-4 and 4.9-5 show the noise contours for McClellan Park noise exposure for 2009 and 2022, respectively. Both figures show that the Specific Plan area will be outside the 60 dB CNEL contour in 2009 and 2022. Since the standard of significance is 60 dB DNL (as previously noted, DNL and CNEL are virtually identical noise descriptors for most situations), aircraft noise impacts due to possible future McClellan Park activities will be ***less than significant***.

Mitigation Measure

No mitigation measures are required.

4.9-2 Commercial uses, business parks, schools, public parks, fire stations, wastewater treatment plants, lift stations, the proposed County corporation yard and other stationary sources could result in increased noise levels and exceed adopted noise standards.

Noise sources commonly associated with commercial/business park property and other stationary activity include air conditioning units, trash compactors, fans, compressors, heavy equipment operation, and truck deliveries. In addition, schools and public parks can cause excessive noise generated by the presence of playgrounds, public gatherings, alarms, and bells. Fire stations can also generate excess noise related to alarms, sirens, and equipment use. Depending on the specific noise sources associated with the use and their proximity to noise-sensitive uses, impacts are ***potentially significant.***

Wastewater treatment plants and sewer lift stations generate some noise during operations, typically from fans, pumps and odor scrubbers. Although the location of equipment to be added to the DCWWTP site is unknown, Roseville Regional Wastewater Treatment Service Area Master Plan Draft Environmental Impact Report that the nearest sensitive receptor to noise generating equipment was approximately 500 feet.

With the type of equipment used at the DCWWTP, the effect was found to be ***less than significant*** (noise would be about 44 dB DNL at the nearest sensitive receptor with a threshold of 60 dB DNL). At the SRWTP, as reported in the discussion of Impact 4.1-11 in Section 4.1 of this Revised Draft EIR, permanent bufferlands surround the existing treatment facilities and planned expansion areas of the SRWTP site to reduce the potential for noise complaints to a ***less than significant level***

In the event wastewater from service Shed A is directed to the DCWWTP, a major lift station will be necessary in the western portion of the Specific Plan area in the vicinity of 20th Street (Figure 3-

17A). Land uses on two sides of the lift station would be in open space and parks; however, to the north and east, the site would be proximate to residential uses. Noise impacts could also occur in proximity to the two proposed lift stations to be constructed and operated between the project and the DCWWTP (Figure 3-6). Although both lift stations are off-site and in an open space area, they will eventually be proximate to sensitive receptors in the Riolo Vineyards and Silver Creek developments (Figure 4.1-2). Noise impacts from sewer lift stations in proximity to sensitive receptors are ***potentially significant***.

Mitigation Measure

Commercial uses, business parks, schools, public parks, fire stations, lift stations, the County corporation yard and other stationary source noise impacts can be reduced to a *less than significant level* by implementing the following mitigation measure:

4.9-2 *When specific uses are proposed, they shall be reviewed for their potential to produce significant noise impacts and, as required, noise studies shall be conducted to determine the most effective and practical mitigation measures. Mitigation measures shall be applied to assure that new stationary sources do not exceed adopted noise standards. Mitigation measures shall be consistent with the Noise Element of the Placer County General Plan, including use of setbacks, barriers, and other standard noise mitigation measures.*

4.9-3 Noise from construction-related activities in the Specific Plan area and in off-site infrastructure areas may exceed adopted noise standards.

During the construction of the project, noise from construction activities within the Specific Plan area and from off-site roads, water and sewer lines and related infrastructure would potentially affect noise-sensitive land uses in the immediate area. Activities involved in construction would generate noise levels at 50 feet as indicated by Table 4.9-4. Construction activities would potentially affect noise-sensitive land uses in the immediate area. Construction activities would be temporary in nature and would most likely occur only during the daytime hours. Construction noise could result in annoyance or sleep disruption for nearby residents if nighttime operations were to occur, or if equipment is not properly muffled or maintained. These impacts are ***potentially significant.***

Table 4.9-4
Typical Construction Equipment Noise Levels

Type of Equipment	Maximum Level(L_{max}), dB (50 Ft.)
Scrapers	88
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

Source: Cunniff 1977

Mitigation Measure

Construction-related noise impacts can be reduced to a *less than significant level* by implementing the following mitigation measure:

4.9-3 *The hours of operation of noise-producing equipment shall comply with Placer County's "Standard Construction Noise Condition of Approval." Effective mufflers shall be fitted to gas- and diesel-powered equipment to reduce noise levels as much as possible.*

4.9-4 Noise levels within Specific Plan area due to project-generated traffic will exceed adopted noise standards.

Table 4.9-5 shows traffic noise levels at 75 feet from road centers and distances to noise contours within Specific Plan area for Existing Plus Project development conditions. The 75-foot distance represents the nearest possible location of a noise-sensitive receptor to the road, and therefore represents worst-case potential noise exposure (Note: DNL values shown are rounded to 1 dB. Contour distances are calculated based DNL values calculated to 0.1 dB). Appendix K of this Revised Draft EIR contains calculation sheets for determining noise contours.

Table 4.9-5
Existing Plus Project Traffic Noise Levels Within Specific Plan Area

Roadway	Segment	DNL @ 75'	Dist. To 60 dB DNL, Ft	Dist. To 70 dB DNL, Ft	Significant Impact
Baseline Road	East of Locust Road	68	257	55	Yes
Baseline Road	East of Brewer Road	68	276	60	Yes
Baseline Road	East of Palladay Road	70	334	72	Yes
Baseline Road	East of 16th Street	70	343	74	Yes
Baseline Road	East of Tanwood Avenue	71	387	83	Yes
Baseline Road	East of Watt Avenue	71	416	90	Yes
Baseline Road	East of Dyer Lane	71	431	93	Yes
Walerga Road	South of Baseline Road	67	232	50	Yes
Watt Avenue	South of Baseline Road	65	157	34	Yes
Watt Avenue	South of Dyer Lane	70	361	78	Yes

Source: Brown-Buntin Associates

Table 4.9-5 shows that worst-case traffic noise levels within the Specific Plan area will exceed 60 dB DNL along all study roads. Most of these roadway segments would be fronted by non-residential uses, which would be subject to noise levels in excess of the Specific Plan standard for such uses (70 dB DNL). Residential uses are planned along the easternmost segment of Baseline, and along Walerga and Watt Avenue. Noise levels in these areas would exceed the County (and Specific Plan) standard by 3 to 11 dB. The proposed Specific Plan requires noise studies in areas that would be subjected to noise levels above County or Specific Plan standards. The Specific Plan also requires appropriate design and construction techniques to achieve the interior noise standards for residential uses. Furthermore, the Specific Plan requires the submission of site-specific noise studies as part of the Subsequent Conformity Review process described in Chapter Two of this EIR. This is a ***potentially significant impact***.

Mitigation Measure

On-site traffic noise impacts could be reduced by construction of noise barriers where sensitive land uses abut roads producing significant noise levels. In some locations, this could require sound attenuating barriers in excess of 10 feet in height, depending on lot design and final grading. However, the policies of the *Placer County General Plan* discourage the use of sound walls. The General Plan encourages the use of setbacks, building orientation, noise barriers, and the standard noise mitigations contained in the *Placer County Acoustical Design Manual*. The General Plan (Policy 9.A.12) further provides that where noise mitigation measures are required to achieve adopted standards, the emphasis shall be placed upon site planning and project design. The use of noise barriers shall be considered only after all other practical design-related noise mitigation measures have been integrated into the project. In response to the General Plan, the Specific Plan proposes to limit use of sound walls for noise mitigation purposes and encourages the use of a combination of noise barriers, including berms and landscaping in combination with lower height walls. All future noise attenuating barriers would be required to comply with the Specific Plan, including the size of landscape lots (setbacks) along major roadways.

Implementation of the following mitigation measures will reduce on-site traffic noise impacts to a *less than significant level* by ensuring that interior and exterior noise standards are achieved:

4.9-4 *Site-specific acoustical analyses shall be conducted when actual roadway design and tentative subdivision map design are proposed and grading is established to determine setbacks and any other measures (e.g. berms, site design, location of structures, noise walls/barriers) required to reduce traffic noise to level that meet County and Specific Plan noise standards, and Specific Plan design standards.*

4.9-5 Off-site noise levels due to traffic generated by development of the Specific Plan area could be substantial resulting in noise levels that adversely affect sensitive receptors at one or more locations.

Table 4.9-6 shows off-site traffic noise levels for Existing Plus Specific Plan area development conditions along some of the major roadways in proximity to the project. This condition assumes that the full effects of development will occur instantaneously, and therefore presents an unrealistic assessment of noise impacts. As shown in Table 4.9-2, noise levels along the roadways identified would increase by 0 to 15 dB. The largest increase, on 16th Street, would be 15 dB, which is substantial. In addition, it is possible that other roadways more distant from the project area and outside the jurisdiction of Placer County may also experience increases in noise levels that could affect sensitive receptors. This is considered a ***significant impact***.

Table 4.9-6
Existing Plus Project Noise Levels Outside Specific Plan Area

		DNL @ 75'	

		Existing No Project	Existing Plus Project	
Baseline Road	East of County Line	66	68	2
Fiddyment Road	North of Baseline Road	62	63	1
PFE Road	East of Walerga Road	63	64	1
Elverta Road	East of Hwy 70/99	63	66	3
Elverta Road	East of Rio Linda Boulevard	65	68	3
Elverta Road	East of 16th Street	67	69	2
Watt Avenue	North of Elverta Road	67	71	4
Watt Avenue	North of Antelope Road	64	65	1
Watt Avenue	North of Elkhorn Blvd	65	66	1
Walerga Road	North of Elverta Road	63	63	0
Walerga Road	North of Antelope Road	65	66	1
Walerga Road	North of Elkhorn Blvd	69	70	1
16th Street	North of Elverta Road	49	64	15
Walerga Road	North of PFE Road	65	65	0
Source: Brown-Buntin Associates				

Mitigation Measure

Alternatives for mitigating traffic noise at existing off-site sensitive receptor locations are construction of sound walls/barriers, relocation or demolition of adversely affected residences, and sound insulation of adversely affected residences. Usually, construction of sound walls is the most practical and cost-effective way to reduce traffic noise levels where such walls are feasible. However, some of the roadways that would be subject to traffic noise increases due to the proposed project already have sound walls in place.

The scattered residences located along 16th Street north of Elverta Road have access to Elverta Road. A sound wall would block their access and therefore would not be feasible. This condition could also exist along other roadways outside the immediate project area. Other means of mitigation (e.g., demolition or sound insulation) for this type of off-site noise impact are usually considered undesirable. In some locations it may be feasible to install sound walls where none exist; however, in-depth discussions would be required with affected landowners to determine the desirability of such modifications.

Some of the affected residences along 16th Street and others more distant from the project would be located in and under the jurisdiction of Sutter County, Sacramento County, and/or the City of Roseville, and Placer County cannot compel these jurisdictions to adopt or implement mitigation measures. However, no feasible mitigation measures have been identified. Therefore, the potential noise impacts due to off-site traffic increases are considered *significant and unavoidable*.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.9-6 The proposed Specific Plan would contribute to cumulative noise increases in the Specific Plan area due to the increase in traffic.

Table 4.9-7 shows traffic noise levels at 75 feet from road centers and distances to noise contours for the year 2025 Plus Project conditions within the Specific Plan area. With one exception, noise levels are projected to exceed 70 dB DNL along the study segments. Consequently, residential and non-residential development along these roadways could be exposed to unacceptable noise levels. This is a ***significant cumulative impact***.

Table 4.9-7
2025 Plus Project Traffic Noise Levels Within Specific Plan Area

Road	Segment	DNL @ 75'	Dist. To 60 dB DNL, Ft.	Dist. To 70 dB DNL, Ft	Significant Impact
Baseline Road	East of Locust Road	73	584	126	Yes
Baseline Road	East of Brewer Road	73	574	124	Yes
Baseline Road	East of Palladay Road	74	600	129	Yes
Baseline Road	East of 16th Street	73	587	127	Yes
Baseline Road	East of Tanwood Avenue	74	624	135	Yes
Baseline Road	East of Watt Avenue	73	563	121	Yes
Baseline Road	East of Dyer Lane	74	630	136	Yes
Walerga Road	South of Baseline Road	71	421	91	Yes
Watt Avenue	South of Baseline Road	70	374	81	Yes
Watt Avenue	South of Dyer Lane	72	502	108	Yes

Source: Brown-Buntin Associates

Mitigation Measure

Implementation of Mitigation Measure 4.9-4 would reduce on-site traffic noise impacts to a *less than cumulatively considerable (i.e. less than significant) level*.

4.9-7 The proposed Specific Plan would contribute to cumulative increases in off-site noise levels due to traffic.

Table 4.9-8 shows off-site traffic noise levels for 2025 Plus Specific Plan area development conditions along some of the major roadways in proximity to the project. A comparison of Tables 4.9-6 and 4.9-8 shows that even without the proposed Specific Plan, noise levels on study roadways would increase by 1 to 15 dB, which would be a significant cumulative impact. The proposed Specific Plan would not have a measurable effect on noise along most of the study roadways, but would increase noise levels by 1 to 3 dB on several segments, including 16th Street, which is projected to experience an increase from 49 dB DNL under existing conditions to 67 dB DNL under cumulative plus Specific Plan conditions. In addition, it is possible that other roadways more distant from the project area and outside the jurisdiction of Placer County may also experience an increase in noise level that could affect sensitive receptors. Therefore, the proposed Specific Plan would

contribute substantially to cumulative noise increases, and this cumulative impact would be ***significant,*** and the project's contribution would be ***cumulatively considerable***.

Table 4.9-8
2025 Plus Project Noise Levels Outside Specific Plan Area

Road	Segment	DNL@ 75'		Change	Significant Impact
		2025 No Project	2025 Plus Project		
Baseline Road	East of County Line	72	73	1	No
Fiddyment Road	North of Baseline Road	67	67	0	No
PFE Road	East of Walerga Road	67	67	0	No
Elverta Road	East of Hwy 70/99	70	71	1	No
Elverta Road	East of Rio Linda Boulevard	72	71	-1	No
Elverta Road	East of 16th Street	70	70	0	No
Watt Avenue	North of Elverta Road	72	72	0	No
Watt Avenue	North of Antelope Road	67	67	0	No
Watt Avenue	North of Elkhorn Blvd	68	68	0	No
Walerga Road	North of Elverta Road	66	66	0	No
Walerga Road	North of Antelope Road	66	66	0	No
Walerga Road	North of Elkhorn Blvd	70	70	0	No
16th Street	North of Elverta Road	64	67	3	Yes
Walerga Road	North of PFE Road	70	70	0	No

Source: Brown-Buntin Associates

Mitigation Measure

As discussed above, the scattered residences located along 16th Street north of Elverta Road have access to Elverta Road. A sound wall would block their access and therefore would not be feasible. In some locations it may be feasible to install sound walls where none exist; however, in-depth discussions would be required with affected landowners to determine the desirability of such modifications. Other means of mitigation (e.g., demolition or sound insulation) for this type of off-site noise impact are usually considered undesirable.

Some of the affected residences along 16th Street and others more distant from the project would be located in and under the jurisdiction of Sutter County, Sacramento County, and/or the City of Roseville, and Placer County cannot compel these jurisdictions to adopt or implement mitigation measures. Moreover, no feasible mitigation measures have been identified. Therefore, off-site cumulative noise impacts from off-site traffic increases are ***significant and unavoidable***.

ENDNOTES

County of Sacramento/EDAW. November 2002. *Final Supplemental EIR for McClellan Air Force Base Draft Final Reuse Plan*.

Federal Highway Administration (FHWA). 1978. *FHWA FAA Highway Traffic Noise Prediction Model*. December 1978.

Federal Interagency Committee on Noise (FICON). 1992. *Federal Agency Review of Selected Airport Noise Analysis Issues*. Federal Interagency Committee on Noise. August 1992.

Leigh Fisher Associates. 2000. *Capacity-Based Noise Exposure Contours for McClellan Park.* August 2000.

Sacramento Area Council of Governments. 1992. *McClellan Airfield Comprehensive Land Use Plan*. December 1992.

Sacramento County Airport System. 2005. *Draft Airport Land Use Compatibility Plan.* July 12, 2005.

4.10

Population, Employment and Housing

4.10 POPULATION, EMPLOYMENT AND HOUSING

4.10.1 INTRODUCTION

The Population, Employment and Housing section of this Revised Draft EIR describes the existing population, employment and housing levels in Placer County and the Sacramento metropolitan region. Estimates of the changes to those levels that could be created by development proposed in the *Placer Vineyards Specific Plan* are identified in this section. A *Placer Vineyards Specific Plan Baseline Fiscal Impact Analysis* has been prepared for Placer County by Hausrath Economics Group (HEG), which is available for review at the location specified in Section 2.9 in Chapter Two of this Revised Draft EIR. This analysis was incorporated into the *Placer Vineyards Specific Plan* and is reflected herein.

Changes in the demographics of an area resulting from new development do not necessarily cause direct adverse physical environmental impacts, but can cause indirect effects such as increased traffic and increases in ambient noise levels. The 1994 *Placer County General Plan EIR* indicated that a "substantial" increase in population (pages 3-13) would not, by itself, create an environmental impact. Rather, the increase could have adverse indirect impacts.

The purpose of this section is to identify and evaluate population, employment, and housing changes caused by the proposed Specific Plan that have the potential to cause physical environmental effects. The environmental effects of the demographic changes caused by the proposed Specific Plan identified in this section are either evaluated in this section, or in the applicable sections contained in Chapter Four of this Revised Draft EIR.

The information that follows is also used as a basis for analysis of projected and cumulative impacts on public services and infrastructure identified in Section 4.11 of this Revised Draft EIR. Data and projections were compiled from the Sacramento Area Council of Governments (SACOG), the U.S. Census, the California Employment Development Department (EDD), local economic development organizations, the California Department of Finance, and the Placer County Planning Department.

Changes in population and employment are generally characterized as social and economic effects. CEQA provides that an economic or social effect of a project shall not by itself be considered a significant effect on the environment (CEQA Guidelines Section 15382). The direction for treatment of economic and social effects is restated in Section 15131(a) of the CEQA Guidelines:

> Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

4.10.2 POPULATION

POPULATION SETTING

During the 1990s, the Sacramento region experienced a higher rate of population growth than the state. The population of the six-county greater Sacramento area increased by an average of 31,260 new residents per year between 1990 and 2000. The Sacramento region's share of California's population increased from 5.4% in 1990 to 5.6% in 2000. Most of the Sacramento region's growth has been the result of in migration, while California's population growth is primarily due to natural increase, as the number of births exceeds the number of deaths (Sacramento Region Economic Development Corporation, *Economic Profile*, 2000).

The Sacramento Metropolitan Statistical Area (MSA) consists of Placer, El Dorado, Yolo and Sacramento counties. Population in the MSA was 1,796,857 in 2000 (SACOG, US Census 2000, PL 94-171).

Since 1980, Placer County has been a rapidly growing area within the MSA. Over the past decade, Placer County was the most rapidly growing county in the MSA region, and one of the fastest growing counties in the state.

Between 1980 and 1990, Placer County (including the incorporated cities) grew from 117,247 to 172,796 persons, an increase of 55,549 residents, or 47%. Between 1990 and 2000, Placer County (including cities) grew from 172,796 to 248,399 persons, an increase of 75,603 residents, or 43.8%. During the same period, the State of California grew by 13.8% (California Department of Finance, 2000 Report PL 94-171). Between 2000 and 2005, Placer County grew another 23% to 305,675. During this period, most of the growth in Placer County occurred in its cities. The unincorporated population remained relatively constant, with a 0.04% growth rate and a population of 104,689 (California Department of Finance Report E-4, 2005).

According to population projections prepared by the California Department of Finance (California Department of Finance, 2004), Placer County's population is projected to increase to 349,113 by 2010, 456,040 by 2020, 544,690 by 2030 and 603,637 by 2040. The Sacramento Area Council of Governments (SACOG) forecasts for 2010 and 2020 are 336,805 and 396,785, respectively (note: SACOG's forecasts exclude the Tahoe Basin). SACOG's projections would therefore be significantly less than those forecast by the California Department of Finance. SACOG projections for the unincorporated areas of the county show an increase of 26,530 between years 2000 and 2010, and an additional 23,200 between 2010 and 2020.

The Specific Plan area constitutes the western portion of the *Dry Creek/West Placer Community Plan*. The Environmental Impact Report prepared for the *Dry Creek/West Placer Community Plan* in 1989 indicated there was a total population of approximately 1,900 residents in the Community Plan area. Most of those residents were located east of Walerga Road and outside the area encompassed within the Specific Plan area. The Specific Plan area has not experienced substantial population growth in the intervening years, and the current population of the Specific Plan area is estimated to be 500 residents.

The Specific Plan area is located adjacent to Sacramento and Sutter counties. Table 4.10-1 summarizes SACOG projections for the three counties to the year 2025.

Table 4.10-1
Population Projections

Year	Placer County	Sacramento County	Sutter County
2005	301,560	1,361,637	87,342
2010	330,381	1,454,596	98,668
2015	358,488	1,539,049	110,210
2020	390,240	1,633,676	123,311
2025	422,741	1,725,710	137,108

Source: SACOG, 2004

Although faced with growth pressures from the south and east, population within the Specific Plan area itself has not increased substantially through the years, primarily because the requisite planning process has not been completed. Several subdivision development projects have recently been approved east of Walerga Road that will result in additional population in the unincorporated area, as well as in the City of Roseville.

PROPOSED POPULATION-RELATED SPECIFIC PLAN TEXT

The Specific Plan proposes to construct 14,132 residential units in the Specific Plan area. The projected population in the Specific Plan area based on the Specific Plan projections is 34,762.

REGULATORY SETTING

There are no specific federal or state regulations pertaining to population that address impacts associated with the proposed Specific Plan. Given the Specific Plan area's proximity to the City of Roseville and Sutter and Sacramento counties, the planning goals and policies of those jurisdictions, as well as Placer County, relating to population growth have been reviewed, and the relevant goals and policies identified below.

PLACER COUNTY

The *Placer County General Plan*, adopted in 1994, does not contain provisions that specifically relate to population increases in terms of growth management, or that focus on the magnitude of population increase that may be appropriate during the General Plan planning horizon. The various goals, policies and implementation programs of the General Plan seek to minimize population-related impacts by providing a comprehensive framework for the preparation of individual specific plans that ensures that local and regional concerns are adequately addressed in the planning of major new growth areas, and that such areas are planned to avoid adverse economic impacts on existing urban centers.

Overall policy guidance is set forth in Goal 1.A, General Land Use: "To promote the wise, efficient, and environmentally-sensitive use of Placer County lands to meet the present and future needs of Placer County residents and businesses." Policies supporting this goal include:

Policies

1.A.3: The County shall distinguish among urban, suburban and rural areas to identify where development will be accommodated and where public infrastructure and services will be provided. This pattern shall promote the maintenance of separate and distinct communities.

1.A.4: The County shall promote patterns of development that facilitate the efficient and timely provision of urban infrastructure and services.

Goals, policies and implementation programs included in the separate Elements of the General Plan would respond to impacts that may be indirectly caused by population growth.

Part III of the General Plan establishes general standards for future proposed urban or suburban development within the County's "Future Study Areas." The "Future Study Area" in the project vicinity is located north of Baseline Road, and does not include the Specific Plan area. The General Standards provide that the County will require the preparation of individual General Plan amendments and specific plans for development proposals to work out the most appropriate arrangement and mixture of land uses, circulation system layout, extent of infrastructure and public services, and institutional framework necessary to accommodate development.

The standards and requirements included in Part III include the following:

1. The County shall consider GPAs (General Plan Amendments) that designate areas for significant new growth only when they can be comprehensively planned as single units according to an adopted specific plan that complies with these standards and requirements …

5. New development will be expected to provide a balanced component of land use types, including residential (very low, low and moderate cost), commercial, industrial, office, recreational, public, institutional and open space. Mixed-use projects, including residential uses, will be considered where they support the provision of infrastructure and development of industrial uses …

6. New development areas proposed for urban densities shall be designed to achieve, or shall have a goal of achieving, a jobs-housing balance …

9. New development areas shall be designed and constructed to provide all public infrastructure, facilities and services necessary to serve both initial and buildout populations, including but not limited to: adequate surface water supplies; sewage collection, treatment and disposal facilities; public utilities; police and fire protection and emergency services; school and medical facilities where warranted by population; and public transportation. Extensions of new infrastructure, including water, sewer roads etc. should be compatible with existing incorporated cities' General Plans (see also #16).

16. In conjunction with the processing of a GPA application for development located within the future study area, the County will enter into an agreement with the adjoining city that would specify acceptable levels of service (including police, fire, park programs, etc.) and measures to mitigate impacts to municipal facilities (transportation, circulation, parks, libraries, etc.)

    The determination of the impact of development on an adjoining city shall consider the fiscal effects of such development based on a fiscal analysis prepared as part of the General Plan Amendment proposal. Costs and revenues to both the City and County, resulting from a project, shall be considered in such an analysis.

COUNTY OF SACRAMENTO

The *County of Sacramento General Plan* provides the following overall goal for the *Land Use Element:*

> Element Goal: An orderly pattern of land use that concentrates urban development, enhances community character and identity through the creation and maintenance of neighborhoods, is functionally linked with transit, and protects the County's natural, environmental and agricultural resources.

COUNTY OF SUTTER

The *County of Sutter General Plan 2015* does not contain provisions that specifically relate to population increases in terms of growth management, or that focus on the magnitude of population increase that may be appropriate during the General Plan planning horizon. The General Plan contains the following finding in the *Land Use Element*:

> Sutter County does not have the facilities or resources to provide full urban services for new urban residential development. Therefore, it is necessary that all new urban residential development within the unincorporated portions of Sutter County be required to have full urban services and that these services be provided by some entity other than Sutter County.

CITY OF ROSEVILLE

The following are the applicable goals and policies of the *Roseville General Plan*:

Growth Management

Goals:

Goal 1: The City shall encourage a pattern of development that promotes the efficient and timely provision of urban infrastructure and services, and preserves valuable natural and environmental resources.

Goal 6: The City shall manage and evaluate growth in a regional context, not in isolation.

Goal 7: Potential population growth in Roseville must be based on the long-term carrying capacities and limits of the roadway system, sewer and water treatment facilities, and electrical utility service, as defined in the Circulation Element and the Public Facilities Element.

Goal 8: Growth and development must occur at a rate corresponding to the availability of desired facilities capacity and the attainment of defined general Plan levels of service for public activities.

Goal 9: Growth should be managed to minimize negative impacts to existing businesses and residents within the City.

Policy-Growth Management-General-1: Growth must provide a strong diversified economic base and a reasonable balance between employment and affordable housing.

Policy-Growth Management-General-5: The City shall accommodate projected population and employment growth in areas where the appropriate level of public infrastructure and services are planned or will be made available concurrent with development.

Policy-Growth Management-General-7: The City shall oppose urban density residential, commercial or industrial development in unincorporated areas unless adequate public facilities and services can be provided and mechanisms to ensure their availability and provision are secured during the land use entitlement process. It is the City's preference that urban development occur within incorporated areas.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A project is generally viewed as having an adverse impact on population if it has the potential to substantially alter the location, distribution, density or growth rate of the population of an area, thus increasing the likelihood of adverse environmental impacts. For the purposes of this Revised Draft EIR, Placer County has determined that a significant environmental impact would occur if the proposed Specific Plan would:

- Exceed the regional population projections.
- Create substantial unplanned growth or concentration of people.

4.10-1 Development of the proposed Specific Plan area would increase the population of western Placer County.

The Placer County Board of Supervisors adopted the current *Placer County General Plan* on August 14, 1994 (Resolution No. 94-237). The Board also adopted a Resolution amending the *Dry Creek/West Placer Community Plan* to include the West Placer Specific Plan area (Resolution No. 94-238). As part of the latter resolution, the Board found that the General Plan Environmental Impact Report had adequately addressed the amendment to the *Dry Creek/West Placer Community Plan.*

As discussed in Exhibit 1 to Resolution No. 94-238 (included as Appendix D of this Revised Draft EIR), the proposed Specific Plan area was envisioned to be a mixed-use community including residential, retail commercial, and business/professional uses, as well as public facilities such as parks, schools, and open space. The resolution and exhibit indicated development in the Specific Plan area would accommodate a maximum of 14,132 dwelling units "… although this number may not be realized due to site constraints, inclusion of buffers, and other factors that may limit developable land."

The 1994 *Placer County General Plan EIR* did not attempt to estimate the additional population attributable to the additional housing units in the *Dry Creek/West Placer Community Plan*. The Background Report for Housing, however, indicated that the number of persons per household varied in the unincorporated areas of the county based on type of housing, and whether the housing was renter-occupied. Based on an anticipated decrease in the number of persons per household, the Background Report used 2.5 persons per household for the growth scenarios in the General Plan (*Placer County General Plan Background Report*, Volume I, page 2-7 and Table 2-7). Given the Specific Plan's proposal of 14,132 dwelling units at full buildout, an approximate population increase of 35,000 persons would result if it is assumed, consistent with the 1994 Background Report, that 2.5 persons reside in each household.

The Specific Plan used more specific person-per-household rates based on type of unit and estimated a total population increase of 34,762 for the Plan area. Using this methodology, the increased resident population resulting from development of the Specific Plan area is shown in Table 4.10-2 below.

Table 4.10-2
Population Projections at Buildout – Specific Plan Area

Type of Unit	Calculated Density (du/ac)	Dwelling Units	Persons per Household	Population
Low Density	3.5	2,864	2.7	7,733
Low Density (Active Adult)	3.5	903	1.8	1,625
Medium Density	5.5	6,266	2.7	16,918
High Density	15	2,844	2.0	5,688
Commercial Mixed Use	18	844	2.0	1,688
Special Planning Area	0.28	411	2.7	1,110
Total		**14,132**		**34,762**

Table 4.10-2 **Population Projections at Buildout – Specific Plan Area**				
Type of Unit	**Calculated Density (du/ac)**	**Dwelling Units**	**Persons per Household**	**Population**
1. The Base Plan Residential and Population Summary Table provided by EDAW was used as the basis for this table.				

The *Placer Vineyards Specific Plan* proposes to construct 14,132 residential units, which is the maximum identified in the referenced General Plan resolution for the Specific Plan area. As noted in Table 4.10-2, the projected increase in population in the Specific Plan area based on the Specific Plan projections is 34,762. This calculation appears reasonable based on the form and type of development proposed.

This increase is consistent with the *Placer County General Plan* when considered in light of the planned increases in population projected for the Specific Plan area at the time the General Plan was adopted. The EIR for the *Placer County General Plan* assumed a population of approximately 35,000 for the Specific Plan area, and a population forecast for the total unincorporated area of 142,235 by 2010, which would be an increase of 37,546 above the County's 2005 unincorporated area population. The General Plan does not include population projections beyond 2010. However, SACOG projections (noted above) estimate that total County unincorporated population will increase by 23,200 between 2010 and 2020. The period beginning in 2008 and continuing until about 2025 is the likely period of buildout of the Specific Plan area. Thus, current projections would suggest that the projected buildout population for the Specific Plan area is accommodated within the General Plan and SACOG projections through 2020.

The 1994 *Placer County General Plan EIR* acknowledged that an increase in population would not, by itself, directly result in adverse environmental impacts. The General Plan EIR pointed to policies and standards in the General Plan that would help to minimize potential population-related impacts by providing a comprehensive framework for the preparation of individual specific plans, as considered here.

As noted earlier, CEQA does not identify a population increase as a significant environmental impact in and of itself. The additional number of residents in the Specific Plan area resulting from the development of the Specific Plan could, however, contribute to other environmental effects such as increased traffic, air quality degradation, and additional demands for public services and infrastructure. Impacts indirectly attributable to population growth, including air quality, traffic, public services and other issues are addressed in individual sections of Chapter Four of this Revised Draft EIR.

The increase in population that would result from full buildout of the Specific Plan area has been planned, and would not be significant when viewed in the context of other development planned in Placer County, and the time period within which the Specific Plan is likely to be built out. The population increases that would result from development pursuant to the Specific Plan are consistent with regional growth projections, and would not result in unplanned or concentrated

growth. The increase in population resulting from development of the Specific Plan is, therefore, considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

OFF-SITE INFRASTRUCTURE

There are no impacts related to population that would result from installation and maintenance of utilities, roadway widenings and wastewater treatment plant improvements. All off-site infrastructure attributable to the Placer Vineyards Specific Plan will be sized to serve the General Plan projected population for the Specific Plan area. For a discussion of growth inducing impacts, see Chapter Five of this Revised Draft EIR.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.10-2 The Placer Vineyards Specific Plan would contribute to cumulative increases in population in Placer, Sutter, and Sacramento counties.

According to SACOG projections, 535,020 additional persons are projected to reside in the Placer, Sutter, and Sacramento region by 2025, of which approximately 6.5% (of the projected regional growth) would reside in the Placer Vineyards Specific Plan area.

CEQA does not identify a population increase in and of itself as a significant environmental impact. The population increase is planned and is consistent with regional population projections. Impacts directly attributable to population growth, including air quality, traffic, public services and other issues are addressed in individual sections of Chapter Four of this Revised Draft EIR. Therefore, the cumulative impact of population increases resulting from this and other developments are considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.10.3 EMPLOYMENT AND HOUSING

The 1994 *Placer County General Plan EIR* concluded that the General Plan would result in a substantial increase in the housing stock, "…but these impacts are considered not significant for purposes of CEQA. The designation of land for housing will not in itself have direct adverse environmental impacts." Indirect impacts would be considered in the various sections in Chapter Four of this Revised Draft EIR (e.g., traffic) dealing with those issues. The policies of the General Plan dealing with jobs/housing balance were viewed as mitigation measures that ameliorated the indirect impacts.

EMPLOYMENT SETTING

EMPLOYMENT IN THE SIX COUNTY GREATER SACRAMENTO REGION

The economy of the greater Sacramento region underwent a significant expansion during the 1980s and 1990s as employment levels increased. All sectors of the greater Sacramento area economy have increased in employment between 1990 and 2000, with the exception of mining. The five employment categories that have shown the greatest growth are government services, finance, real estate and insurance, retail trade, and construction. Additionally, the region's manufacturing sector has grown steadily since the late 1970s, spurred largely by expansion of high-technology industries. The following tables show recent employment trends and the largest manufacturing companies in the region. Table 4.10-3 demonstrates the growth in employment between 1990 and 1999, and the decline in unemployment between 1990 and 2000. Table 4.10-4 shows wage and salary employment in the Sacramento region by economic sector. Table 4.10-5 lists the largest private sector employers in Placer County in 2002. The employers primarily represent the manufacturing, computer, health and tourism sectors.

Table 4.10-3
Work Force, Employment and Unemployment in the Greater Sacramento Area

Work Force/Employment Measure	1990	1999	2000
Civilian Labor Force	823,400	934,880	952,158
Employment	780,700	892,210	909,800
Unemployment	42,700	42,710	42,392
Unemployment Percent	5.2%	4.6%	4.5%

Source: California Employment Development Department. Year 2000 data are average for latest 12 months.

Table 4.10-4
Wage and Salary Employment in the Greater Sacramento Area

Sector	1999	2000
Agriculture	10,500	17,158
Mining	600	500
Construction	35,500	51,400
Manufacturing	47,000	58,567
Transportation and Public Utilities	29,700	35,517
Wholesale Trade	31,500	35,452
Retail Trade	124,100	143,325
Finance, Insurance, Real Estate	41,200	55,850
Services	144,800	220,867
Government	193,100	220,892

Source: California Employment Development Department. Year 2000 data are average for latest 12 months.

Table 4.10-5 Largest Private Sector Employers in Placer County		
Name – City	**Industry**	**Number of Employees**
Hewlett-Packard – Roseville, Rocklin	Computer & Office Equipment – Manufacturing	4,000
Pride Industries – Roseville	Individual & Family Services	1,050
Thunder Valley Casino	Casinos	2,200
Kaiser Medical Center & Offices – Roseville	Hospitals	2,707
Sutter Roseville Medical Center – Roseville	Hospitals	1,672
Union Pacific	Transportation, Railroad	1,200
Squaw Valley Ski Corp – Olympic Valley	Misc. Amusement, Recreation Services	1,500
SureWest – Roseville	Telecommunication Services	1,000
Sutter Auburn Faith Hospital – Auburn	Hospitals	750
Solectron Global Services	Software Design and Logistics	708
John L. Sullivan Automotive Group	Automobile Dealerships	708
TASQ Technology Inc.	Financial Transaction Systems	580
Agilent Technologies – Roseville	Manufacturing	550
Alpine Meadows Ski Resort – Olympic Valley	Misc. Amusement, Recreation Services	500
Oracle Corp – Rocklin	Computer & Data Processing Services	450
NEC Electronics USA, Inc. – Roseville	Electronic Components & Accessories	850
Nordstrom – Roseville	Retail, Department Store	450
Formica Corp.	Table or Counter Tops Mfg.	355
Ace Hardware Retail Support Center	Warehouse Retail Hardware Store	350
Coherent Auburn Group – Auburn	Electronic Components & Accessories	329
Sierra Pacific Industries – Lincoln	Sawmills & Planning Mills	320
Albertson's Distribution Center	Retail Distribution	300
Placer Sierra Bank	Banking Services	279
Source: Sacramento Regional Research Institute, December 2004.		

EMPLOYMENT IN PLACER COUNTY

Placer County has evolved from its historic dependence on the railroad, lumber and agricultural industries. As noted by the California Employment Development Department - Labor Market Information, the County's significant population growth has increased consumer demand and the number of jobs in retail, service and construction. In 2004, Placer County had a total labor force of 154,437, of which 5.1% were unemployed compared to the state and regional average unemployment rates of 5.2% and 4.5%, respectively. Employment forecasts in Placer, Sacramento and Sutter counties are illustrated in Table 4.10-6.

Table 4.10-6 Employment Forecasts in Placer, Sacramento and Sutter Counties			
Year	**Placer**	**Sacramento**	**Sutter**
2005	156,237	657,100	33,506
2010	180,607	734,253	38,474
2015	196,896	775,273	41,582
2020	214,411	816,876	44,890

Table 4.10-6 Employment Forecasts in Placer, Sacramento and Sutter Counties			
Year	**Placer**	**Sacramento**	**Sutter**
2025	231,308	854,804	48,135
Source: SACOG 2004			

HOUSING SETTING

HOUSING IN PLACER COUNTY

In 2004, the housing supply in Placer County consisted of 132,672 dwelling units, of which 117,350 were occupied units and 15,322 were unoccupied units. Between 1990 and 2004, Placer County had a 41.3% increase in housing supply. According to 2004 Census data, 80.4% of the county's housing stock was single family residential, while 15.8% was multiple family and 3.7% were mobile homes. Regional housing projections in Placer, Sacramento and Sutter counties are included in Table 4.10-7 below.

Table 4.10-7 Regional Housing Projections – Housing Units			
Year	**Placer County**	**Sacramento County**	**Sutter County**
2005	121,507	502,142	29,373
2010	128,711	525,837	33,035
2015	141,461	571,255	38,415
2020	153,943	614,405	44,095
2025	175,339	691,548	52,830
Source: SACOG 2004			

The housing vacancy rate in Placer County was 17.7 % in 1990. The vacancy rate had declined to 11.6% by 2004. The vacancy rate is projected to be approximately 13% countywide by the year 2025. A high proportion of the vacant units in the County occurs in the Tahoe Basin and these units are considered vacation homes or vacation rentals.

HOUSING AFFORDABILITY

Housing affordability refers to the relationship between total household income and total household expenditures for housing, including mortgage, taxes, insurance and utilities. This relationship is expressed as the percentage of total household income allocated to housing expenditures. Housing is considered affordable when monthly housing costs do not exceed 30% of a household's gross monthly income. As the region has continued to attract higher paid wage earners, demand for land and housing has increased the sales price of housing. Median sales prices for single family residences in Placer County and the Greater Sacramento Area are shown in Table 4.10-8.

Table 4.10-8 Single Family Median Housing Costs		
Jurisdiction	**June 2003**	**June 2004**
Placer County	$332,750	$405,000
Greater Sacramento Area	$296,813	$353,125
Note: Data reflect single family unit, new and resale homes. Greater Sacramento Area data does not include Sutter or Yuba Counties. Source: California Association of Realtors - Sacramento Regional Research Institute, December 2004.		

SACOG prepares a Regional Housing Needs Allocation Plan for the region that includes the counties of El Dorado, Yolo, Yuba, Placer, Sacramento and Sutter. This Plan allocates a fair share of housing needs of various income groups to each jurisdiction. The goal of the Plan is to assure a fair distribution of affordable housing among cities and counties. The most recent Regional Housing Needs Allocation Plan was adopted on September 20, 2001 and covers the period between 2000 and 2007. The Plan provisions applicable to the proposed Specific Plan are shown in Table 4.10-9.

Table 4.10-9 Regional Fair Share Housing Allocation - Years 2000-2007					
Jurisdiction	**Grand Totals Dwelling Units (2000-2007)**	**Very Low**	**Low**	**Moderate**	**Above Moderate**
Placer County Unincorporated	57,856	20.38% 2020 DU	15.77% 1886 DU	20.54% 1965 DU	43.38% 2743 DU
City of Roseville	44,446	20.84% 2671 DU	16.88% 2150 DU	20.91% 2548 DU	41.38 3973 DU
Sacramento Co. Unincorporated	251,832	20.71% 4,987 DU	16.84% 3,943 DU	20.97% 4,689 DU	41.48% 8,527 DU
Sutter County Unincorporated	15,197	20.11% 454 DU	17.10% 439 DU	14.77% 166 DU	48.33% 404 DU
Source: Regional Housing Needs Allocation Plan, SACOG, adopted Sept. 20, 2001.					

The California Department of Housing and Community Development (HCD) is required to publish income limits from the U.S. Department of Housing and Urban Development (HUD) for extremely low, very low, low, and moderate-income categories of varying household size. In addition, HCD identifies the median income. The most recent income limits were released and published in February 2005. HUD's income limits are based on a four-person family with adjustments made in areas of unusually high or low incomes relative to housing costs. HUD uses the following definitions to describe housing affordability by income group:

Extremely Low Income	Below 30% of Median Income
Very Low Income	30% to 50% of Median Income
Low Income	50% to 80% of Median Income
Moderate Income	80% to 120% of Median Income
Above Moderate	120% of Median Income

HUD's income levels, as applied in Placer County, for a four-person family are shown in Table 4.10-10. A four-person family would need to have an annual income level of $64,101 to $76,900 to be included in the moderate-income category. An income level between $19,251 and $32,050 would be considered very low income, and low income would be between $32,051 and $51,300. To illustrate the meaning of these numbers, a single person working at minimum wage would earn $14,040 per year. A couple earning minimum wage would earn $28,080 per year. According to the regional fair share allocation, 20.38% of the new housing in the Placer County unincorporated area should be in the very low category, and 15.77% should be in the low category.

Table 4.10-10
Placer County Income Categories: Four-Person Family

Income Level Category	Income Level
Extremely Low Income (below 30% of area median)	Below $19,250
Very Low Income (30% to 50% of area median)	$19,251 to $32,050
Low Income (50% to 80% of area median)	$32,051 to $51,300
Median Income	$51,301 to $64,100
Moderate Income (80% to 120% of area median)	$64,101 to $76,900

Source: California Department of Housing and Community Development, February 2005.

SACOG has also compiled information on median income by family size for the Sacramento Metropolitan Statistical Area (Table 4.10-11) and affordable rents and purchase prices by income level (Table 4.10-12) for the region. The City of Roseville uses these data in its 10% Affordable Housing Goal Program. The affordable rents and purchase prices were calculated using median income for Placer County as of 2002.

Table 4.10-11
Median Household Income by Family Size for Placer County

Family Size	Very Low Income Less than 50% of Median Income	Low Income 51% - 80% of Median Income	Middle Income 81%-100% of Median Income	Moderate Income 101% - 120% of Median Income
1	$22,450	$35,900	$44,850	$53,850
2	$25,650	$41,000	$51,300	$61,500
3	$28,850	$46,150	$57,700	$69,200
4	$32,050	$51,300	$64,100	$76,900
5	$34,600	$55,400	$69,250	$83,050
6	$37,200	$59,500	$74,350	$89,200

Source: California Department of Housing and Community Development, 2005.

Table 4.10-12
Housing Affordability (Maximum Monthly Housing Cost)

Family Size	Very Low Income	Low Income	Median Income	Moderate Income
1	$561	$898	$1,121	$1,346
2	$641	$1,025	$1,282	$1,535
3	$721	$1,154	$1,442	$1,730
4	$801	$1,283	$1,603	$1,923
5	$865	$1,385	$1,731	$2,076
6	$930	$1,488	$1,859	$2,230

Table 4.10-12 Housing Affordability (Maximum Monthly Housing Cost)				
Family Size	**Very Low Income**	**Low Income**	**Median Income**	**Moderate Income**
Source: California Department of Housing and Community Development, 2005.				

WAGES AND SALARIES

Wage and salary data from the 2000 Census are not available by county. Annual wage data have been compiled for the Sacramento Metropolitan Statistical Area for the fourth quarter of 2000. Wage data are presented in Table 4.10-13.

Table 4.10-13 Wages by Occupation for the Sacramento Primary Metropolitan Statistical Area	
Occupational Title	**Mean Annual Wage**
General and Operational Managers	$98,441
Pharmacists	$94,022
Computer Software Engineers, Systems Software	$90,820
Electrical Engineers	$88,986
Advertising and Promotions Managers	$84,705
Real Estate Brokers	$84,310
Civil Engineers	$70,296
Industrial Engineers	$68,285
Computer Programmers	$67,379
Computer Systems Analysts	$64,870
Operations Research Analysts	$59,215
Database Administrators	$58,976
Financial Analysts	$58,018
Registered Nurses	$57,668
Multi-Media Artists and Animators	$53,715
Police and Sheriff's Patrol Officers	$53,349
Legal Secretaries	$40,985
Child, Family, and School Social Workers	$39,724
Construction Laborers	$34,022
Emergency Medical Technicians and Paramedics	$29,483
Data Entry Keyers	$27,441
Retail Salespersons	$24,343
Packers and Packagers, Hand	$19,549
Source: Sacramento Regional Research Institute and Employment Development department, OES Employment and Wages by Occupation, December 2004.	

JOBS/HOUSING BALANCE

The jobs/housing balance may be quantified as the ratio of the number of dwelling units to the number of jobs in a community or area. The concept of "balance" is based on the notion that if a community provides housing proportionate to the number of jobs in a community or area, the majority of the residents will have the opportunity to work and reside in the same community. This balance could result in fewer automobile trips due to a reduced need to commute in or out

of the community for employment purposes, with reduced impacts on area roadways and intersections, and reduced impacts on air quality.

If there was one wage earner per household, creation of one housing unit for each new job created would appear to respond to the new demand. Recent studies, however, indicate that more than one wage earner typically resides in a housing unit, and this decreases the need for additional housing based on new employment.

In 2000, Placer County had an employment base of 114,812 jobs, and 107,302 housing units. With a 15% vacancy factor, approximately 91,206 of these units were occupied. If all of those employed in Placer County resided in the County, this would equate to approximately 1.25 wage earners per household, a figure consistent with recent studies (*Bickford Ranch Draft Environmental Impact Report*, p. 5-14). Some of those employed in Placer County, however, live elsewhere, and some who live in Placer County work outside the county. The extent to which this occurs depends on a variety of factors related not only to employment and housing in the community, but economic factors affecting the community and region. At the regional level, SACOG has suggested during its Blueprint planning process that the Placer Vineyards Specific plan area be planned so as to supply housing for those employed beyond the Specific Plan area boundaries. The SACOG recommended jobs/housing ratio is 0.49 for the Placer Vineyards Specific Plan area.

The availability of an adequate housing supply, presenting various price levels, including those that are reasonably available to those holding jobs that are offered in the community, provides the potential to reduce long commutes that would result from workers' inability to find affordable housing and thus needing to live outside the Specific Plan area.

Because of the market need to match housing costs and income levels, the relationship of housing affordability to housing supply is complex and difficult to accurately predict, both within single jurisdictions and multiple jurisdictions, as is the case with the Specific Plan area.

SPECIFIC PLAN PROPOSED HOUSING AND EMPLOYMENT-RELATED GOALS AND POLICIES

The following goals and policies related to housing and employment are contained in the proposed Specific Plan.

Housing Goals and Policies:

Goal 3.7 Provide an adequate supply of residential land in a range of densities and housing types. Provide affordable-housing opportunities distributed throughout the community.

Policy 3.5 Location and Density Range. The total of all residential units within the plan shall not exceed 14,132 units. Residential uses shall be located in areas designated in the land use plan and within the density ranges provided in Table 3-2, "Land Use Summary Table." [See Table 3.4-1 of this Revised Draft EIR]

Policy 3.6 Mix of Densities and Variety. Subject to the applicable density range, a variety of housing types and densities will be provided.

Policy 3.7 Secondary Dwelling Units. Secondary units shall be consistent with Placer County Zoning Ordinance standards. Units constructed with the initial development projects shall be included in the calculation of density for that project.

Policy 3.8 Active Adult Community. The eastern portion of the Plan Area (designated under property 1A on the ownership land use map) shall be reserved as a residential community for active adults (55+ years and older)

Policy 3.24 Affordable-Housing Requirement. In compliance with the Placer County affordable-housing policy, new development shall provide at least 10% of the total residential units in the Plan Area (2,163 units) for multifamily rental or for sale at a price affordable to low-income households.

Policy 3.25 Affordable-Housing Obligation. Owners of residential land will be required to satisfy the affordable-housing obligation by constructing a minimum of 10% of the units identified in Table 3-5 for occupancy by very low–, low-, and moderate-income households.

Policy 3.26 Affordable-Housing Options. While individual property owners are responsible for ensuring that land sufficient to accommodate the number of affordable units is available, flexibility regarding how the units are provided is encouraged. Property owners may construct the units as part of their market-rate developments concurrent with and in proportion with the development of market-rate units within the balance of the property, or they may choose to use one or more of the affordable-housing options specified in the development agreement.

Units may be rentals or for sale. Rental units shall be made available for a period of no less than 55 years from the date of occupancy. For-sale units shall be available for a period no less than 30 years from the date of occupancy.

Policy 3.27 Distribution. Affordable housing units shall be focused on High Density Residential (HDR) and Commercial/Mixed Use (CMU) parcels. However, affordable housing may also be provided in other residential land use areas. Refer to the Development Agreement for the allocation of affordable-housing units.

Policy 3.28 Concurrent Development of Affordable Units. Landowners and the County shall enter into a development agreement that ensures, generally, concurrent development of affordable-housing units and development of market-rate units. At the time of approval of the Specific Plan, the development agreement will be required to identify the terms for the implementation of affordable-housing units and the parcels where affordable-housing units shall be allocated. Affordable units shall also be identified on all individual tentative subdivision maps.

Employment Goals and Policies:

Goal 3.11 Further the County's goals for growth management, economic development, and community character by designating land uses that facilitate and encourage the creation of high-quality employment centers along Baseline Road.

Goal 3.12 Help to achieve a balance of jobs and housing within the region that minimizes environmental impacts by reducing vehicle miles traveled by commuters and air pollution released from automobiles.

Policy 3.10 Employment. Higher intensity employment uses shall be concentrated along Baseline Road and secondarily in the Town Center and along Watt Avenue.

REGULATORY SETTING

There are no specific federal regulations pertaining to employment and housing that address environmental impacts associated with the proposed Specific Plan. Given the Specific Plan area's proximity to Sutter and Sacramento counties and the City of Roseville, the planning goals and policies of those jurisdictions, as well as those of Placer County, relating to employment and housing issues are discussed below.

PLACER COUNTY GENERAL PLAN

The following are applicable goals and policies from the *Placer County General Plan* (1994) and the *Placer County Housing Element* (2003):

Job-Housing Balance

Goal 1.M: To work toward a jobs-housing balance.

Policies:

1.M.1. The County shall concentrate most new growth within existing communities emphasizing infill development, intensified use of existing development, and expanded services so individual communities become more complete, diverse, and balanced.

1.M.2. The County shall encourage large residential projects to be phased or timed to occur simultaneously with development that will provide primary wage earner jobs.

1.M.3. The County shall encourage the creation of primary wage-earner jobs, or housing which meets projected income levels, in those areas of Placer County where an imbalance between jobs and housing exists.

Affordable Housing Supply

Goal A: To provide a continuing supply of affordable housing to meet the needs of existing and future Placer County residents in all income categories.

Policies:

A.2. The County shall maintain an adequate supply of appropriately zoned land with public services to accommodate projected housing needs.

A.4. The County shall give highest priority for permit processing to development projects that include a low-income residential component.

A.5. The County shall encourage "mixed-use" projects where housing is provided in conjunction with compatible non-residential uses.

A.8. The County shall evaluate the adoption of an inclusionary housing ordinance as a means of integrating affordable units within new residential development. This ordinance will identify acceptable methods to provide affordable housing which will include the following:

a. Construction of housing on-site.
b. Construction of housing off-site.
c. Dedication of land for housing.
d. Payment of an in-lieu fee.

A.9. Housing for low-income households that is required in a new residential project shall be dispersed throughout the project, to the extent practical, given the size of the project and other site constraints.

A.11. The County shall require low-income-housing units in density bonus or inclusionary projects to be available concurrently with the market-rate units in the project to avoid delaying the construction of the affordable units to the end of the project.

A.13. The County shall facilitate expanded housing opportunities that are affordable to the County's workforce.

A.16. The County will encourage the development of multi-family dwellings in locations where adequate infrastructure and public services are available.

A.18. For residential projects where 10% of the units are affordable to very low-income households, or 20% are affordable to low-income households, 50% of the development-related fees over which the County has direct control shall be waived. The Board of Supervisors may waive more fees as an additional incentive for affordable housing on a case by-case basis.

Goal B: To promote quality residential development in the County.

Policy:

B.1. The County encourages residential development of high architectural and physical quality that is compatible with neighboring land uses.

Affordable Housing Guidelines For Specific Plan Content

Placer County has recently issued the following Guidelines for addressing affordable housing needs in specific plans.

Each specific plan shall provide the following information within the affordable housing discussion:

1. Affordable Housing Allocation – At least 10 percent of all residential units proposed, except as provided for herein, shall be set aside as affordable housing units. The distribution shall be 4 percent very low, 4 percent low and 2 percent moderate (as defined by the State of California, Department of Housing and Community Development [HCD]). A table with a break down of units shall be included. Mixed-Use units (CMU or MU) are not required to be included in the affordable housing calculation. Faculty/staff housing and retirement housing shall be included in the affordable housing calculation.

2. Affordable Housing Sites – The location of the proposed affordable housing shall be described and shown within each specific plan. In addition, the developers shall identify and disclose specific sites for affordable housing units at the time of subdivision.

3. Language –Language and terminology consistent with HCD convention shall be used throughout the affordable housing discussion. Affordability criteria shall be those as set forth by HCD.

4. Affordability Timeframe – Units shall be affordable for 30 years for ownership units and 55 years for rental units, or as required otherwise by financing.

The following issues should be generally discussed within each specific plan, with more specific details anticipated in the project development agreement:

1. Density Bonus– A general discussion of anticipated density bonus requests shall be provided; however, additional requirements for approval of a density bonus may be described in the project development agreement.

2. Implementation – Each specific plan is responsible for building the required affordable housing units as shown within the specific plan boundaries. Options such as land

dedication, credits/transfers, and in-lieu fees, in lieu of building affordable housing units, will only be considered in the project development agreement. The project development agreement may consider credit/transfers provided that the credit or transfer enhances the ability to construct affordable units. A lottery system shall be established for sale of affordable units, and conducted by the County or a neutral party at a public meeting.

3. Resale Controls – Shared Appreciation in high housing cost areas such as Placer County, should be tied to the increase in Area Median Income. Resale of affordable units should set a resale price based on the increase in Area Median Income or use land trusts.

4. Timing for Construction – Affordable units shall be developed concurrent with market rate units or upon established triggers for construction as set forth in the development agreement.

DRY CREEK/WEST PLACER COMMUNITY PLAN

In adopting the 1994 General Plan, the Board of Supervisors also adopted Exhibit 1 to the previously adopted *Dry Creek/West Placer Community Plan*, thereby creating a number of policies and standards applicable to the preparation of a specific plan for the project area. According to Exhibit 1, development within the West Placer Specific Plan area shall be planned and designed to comply with the following standards:

h. Residential Areas. Residential areas shall consist of the following three types:

(1) Village Residential. These areas shall be located within walking distance of a village commercial core area. The housing should consist of high-density single-family (with or without carriage or secondary dwelling units) and multi-family units.

(2) Single-Family Residential. These areas should surround village residential areas at densities consistent with suburban residential development (e.g., four to seven dwellings per acre). Subdivision design should provide opportunities for pedestrian and bicycle access to village core areas. Physical separation of single-family residential areas by such means as sound walls, berms, and major roads should be discouraged. Single-family residential areas should be incorporated into their village so village residential and single residential areas function as a single unit and are not separated by physical or design characteristics.

(3) Rural Residential. These areas should be located in buffer zones within the specific plan boundaries. Rural land uses shall only be considered in areas where residential land use is consistent with the standards in Part I for buffers (page 19). Rural residential densities of 0.2 dwellings per acre or more shall be allowed only when public sewer and water facilities are provided.

SACRAMENTO COUNTY HOUSING ELEMENT

The following are applicable goals and policies of the *Sacramento County Housing Element*, as revised on July 17, 1996:

Goal: Promote an adequate supply of decent, safe, and affordable housing to meet the needs of all residents of Sacramento County without regard to race, color, age, sex, religion, natural origin, family status or disability.

Goal: Accommodate projected population and employment growth in areas where the appropriate level of public infrastructure and services are or will be available during the planning period.

Policies:

HE-1: The County shall maintain an adequate supply of residential and agricultural-residential zoned land to accommodate projected housing needs.

HE-51: The County shall adopt programs and procedures with the intent of ensuring that a portion of the county's housing production is affordable for each income classification.

Objective: Viable commercial services and a diversity of employment opportunities located in proximity to residents.

SUTTER COUNTY GENERAL PLAN

The following are applicable goals and policies from the *Sutter County General Plan*. The *Sutter County General Plan* does not contain policies regarding jobs-housing balance. Below are policies from the County's Housing and Economic Development elements:

Housing

Goals:

1. Encourage the provision of safe and sanitary housing with adequate public services for all existing and future residents of Sutter County.

2. Encourage the adequate supply of various housing types at various densities to meet the needs of all income groups and insure that housing opportunities are open to all without regard to race, color, age, sex, religion, national origin, family status or physical handicap.

Policies:

2.1 All Sutter County development projects will be required to assist in meeting the regional housing needs. All development project submittals shall show how the development

project is assisting to meet the County's regional fair share need for affordable housing to lower income households.

2.2 An adequate supply of available land to meet non-agricultural, unincorporated housing needs shall be provided within the County's urban areas.

Economic Development

Goal:

1.1 To preserve and promote a healthy and diverse economy to serve the needs of Sutter County residents.

Policies:

1.1-3 Recruitment efforts should attempt to focus on businesses and industries capable of creating a majority of positions that provide salaries above minimum wage.

1.1-4 Economic development efforts should attempt to diversify the County's economic base while encouraging retention and expansion of existing businesses and industries.

CITY OF ROSEVILLE

The following are the applicable goals and policies of the *Roseville General Plan*, adopted November 18, 1992:

Community Form

Goal 6: Roseville will strive to be a balanced community with a reasonable mix of land uses, housing types and job opportunities.

Policy 1: Strive for a land use mix and pattern of development that provides linkages between jobs and employment uses, will provide a reasonable jobs/housing balance, and will maintain the fiscal viability of the City.

Policy 2: Support density bonuses for the construction of affordable housing, in accordance with the density bonus ordinance and the Housing Element, particularly in areas where few such housing opportunities exist and significant employment centers exist or are planned.

Policy 5: Maintain land use patterns, intensities and densities that promote a positive business climate (e.g., supply of business professional, commercial and industrial lands).

Housing Element

City-Wide Housing Goals:

Goal 1: Provide decent, safe, adequate and affordable housing in sufficient quantities for all economic segments of the community.

Goal 2: Ensure that all segments of Roseville's community actively work together to provide affordable housing.

Affordable Housing Goal:

Goal 2: Strive to ensure the affordability of Roseville's housing supply over time.

Residential Land Inventory Policy:

Policy 1: Encourage development of mixed-use projects in accordance with goals and policies contained in the Land Use Element.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

For the purposes of this Revised Draft EIR, a significant environmental impact for employment and housing would occur if the proposed project would:

- Not conform with the jobs/housing policy of the *Placer County General Plan*, resulting in physical impact(s) on the environment (e.g., impacts on traffic and air quality resulting from people commuting between home and work). This could occur if the jobs/housing ratio fell significantly below the historic ratio of approximately 1.25 jobs per household.

- Substantially affect the housing supply or create a substantial demand for additional housing by not providing a variety of housing types and opportunities, resulting in physical impact(s) on the environment (e.g., impacts on traffic and air quality resulting from people commuting between home and work, overcrowded housing conditions). This could occur should a project not be in compliance with the adopted *Regional Housing Needs Plan*, which calls for 20.38% of the new housing in Placer County to be very low income, and 15.77% to be low income.

4.10-3 Buildout of the proposed Specific Plan could promote an imbalance of jobs and housing in both the regional and project level context.

An adequate jobs/housing balance is desirable because a lack of affordable housing close to urban job centers tends to encourage traffic congestion and environmental pollution. Locating affordable residential development long distances from job centers results in greater commuting time, and could eventually promote development that encroaches on open space and agricultural

land. As discussed above, the jobs/housing balance is an objective that promotes development that locates housing and employment opportunities in reasonable proximity to each other. Because economic factors, personal choice and other factors are involved, the effort is by nature imprecise.

It is typical for residential areas to be built in significant numbers prior to construction of employment-generating uses (e.g., commercial, industrial). Until the employment-generating uses are constructed and operating, the lack of jobs/housing balance would result in physical impacts on the environment, including traffic and air quality impacts. In the case of Placer Vineyards, housing is being created early in the process, and will become more balanced over time as commercial and office uses are developed. By Specific Plan buildout, it is projected that the Specific Plan would result in production of 14,132 dwelling units, but approximately 7,594 jobs would also be created; therefore, at full buildout the ratio of jobs to housing will be approximately 0.54 jobs per dwelling unit. Job generation in the Specific Plan area is summarized in Table 4.10-14 below.

Table 4.10-14
Summary of Job Generation

Land Use	Acres	FAR	Square Feet	Job Generation Factor	Jobs
Commercial	34.00	0.25	370,260	1 per 500 gross sf	741
Commercial Mixed Use					
Retail	10.05	0.45	197,000	1 per 500 gross sf	394
Office	10.05	0.45	197,000	1 per 333 gross sf	592
Town Center Commercial					
Retail	26.80	0.45	525,334	1 per 500 gross sf	1,051
Office	6.70	0.45	131,333	1 per 333 gross sf	394
Power Center	60.00	0.25	653,400	1 per 500 gross sf	1,307
Office	34.50	0.30	450,846	1 per 400 gross sf	1,127
Business Park					
Retail	9.85	0.25	107,267	1 per 500 gross sf	215
Office	88.65	0.25	965,399	1 per 750 gross sf	1,287
Schools	140.0		8,271 students	1 per 17 students	487
Totals					**7,594**

1. The *Placer Vineyards Specific Plan* Draft, March 2006 and the *Placer Vineyards Specific Plan Baseline Fiscal Impact Analysis*, January 2006 were used as the basis for this table.

Because the data indicate that dwellings usually house more than one worker, there would be a substantially higher number of dwellings built than will be needed to respond to the housing demand created by new employment within the Specific Plan area. However, the Plan area is located near other growing employment centers such as McClellan Park and the City of Roseville which could help to offset this imbalance. For example, the redevelopment plan for McClellan Park anticipates the generation of approximately 35,000 new jobs at full buildout. The jobs/housing balance inquiry is useful in assessing the need for housing in a community, the source of the housing demand, and the possible impact of creation of new jobs on the housing market. The analysis is affected by many complex economic factors, including the economic characteristics of surrounding communities, the health of the local and national economies, and

the changing desires and attitudes of individuals in the marketplace. According to U.S. Census 2004 estimates, there are approximately 1.24 wage earners per household in Placer County (145,865 employed individuals/117,350 households). This would indicate that the number of jobs to be generated on-site will be insufficient to maintain a healthy jobs/housing balance. However, given the nature of the inquiry and the context (a project adjacent to significant existing and proposed employment centers in three counties), the long-term impact of the proposed Specific Plan on the jobs/housing balance is not so substantial that it would clearly affect the physical environment by generating new and substantial demand for jobs that are not otherwise planned. As noted above, at the regional level, SACOG has suggested during its Blueprint planning process that the Placer Vineyards Specific plan area be planned so as to supply housing for those employed beyond the Specific Plan area boundaries. The SACOG recommended jobs/housing ratio is 0.49 for the Placer Vineyards Specific Plan area.

The long-term impact would, therefore, be ***less than significant.*** However, the short-term impact would be ***significant and unavoidable***, because it could lead to more and longer commutes to work in the near-term, contributing to air, noise, traffic, and public services (roadway maintenance) impacts.

Mitigation Measure

No mitigation measures are available.

4.10-4 Development of the Specific Plan area will create a demand for affordable housing.

Although CEQA case law has held that a project's tendency to increase the demand for affordable housing in not an environmental effect, but rather is an economic or social effect outside the purview of CEQA (see *San Franciscans for Reasonable Growth v. City and County of San Francisco* [1988] 209 Cal.App.3d 1502, 1521-1522, fn. 13), the following discussion is nevertheless included herein, though outside the scope of CEQA, in order to provide the public and County decision-makers with information relevant to consideration of the proposed project.

Placer County's General Plan *Housing Element* includes Goal 2.A, calling for a continuing supply of affordable housing to meet the needs of residents of all income categories. Policy 2.A.11 provides that housing projects of one hundred or more units that are developed through a specific plan process shall be required to provide at least 10% of the units to be affordable to low income households. The General Plan provides for construction of such units on the project site or, where that is deemed impractical by the County, dedication of land elsewhere or payment of an in-lieu fee. The Specific Plan is proposed to provide a total of 14,132 housing units at full buildout. A breakdown of the affordable housing units required by the Placer Vineyards Specific Plan according to affordability category is presented in Table 4.10-15.

Table 4.10-15 Summary of Affordable Housing Obligation		
Affordability Category	**Required Allocation (Percentage of Total Units)**	**Number of Affordable Units Required**
Very Low Income	4%	565
Low Income	4%	565
Moderate Income	2%	283
Total	10%	1,413
Source: *Placer Vineyards Draft Specific Plan*, March 2006		

SACOG adopted the *Final Regional Housing Needs Plan* on September 20, 2001. The basis for the Plan is the obligation of every city and county in the region to address not only local housing needs, but also the housing needs of the entire region. This is based on the expansion of jobs into suburban areas, two-career households, changing commute patterns, and the interdependent economy and society of the region. Placer County's "fair share," as established by SACOG, calls for 2,020 units of very-low income and 1,886 units of low-income housing for Placer County by 2007.

The *Final Regional Housing Needs Plan* makes it clear that the housing unit allocations contained in the Plan are goals, rather than housing unit quotas. The emphasis is on ensuring that local agencies undertake efforts to assure that adequate sites and zoning are available to accommodate at least the number of units allocated. The Plan applies to the entire unincorporated area of Placer County over the timeframe 2000 to 2007 (which is shorter than the General Plan planning period).

Specific Plan proponents have designed a housing program to provide for a full range of housing opportunities for all income levels for the Specific Plan area. As shown in Table 4.10-15 above, Specific Plan developers propose to provide 1,413 units of affordable housing as shown in Table 4.10-15 above in order to fulfill the requirement set forth in the County's *Affordable Housing Guidelines for Specific Plans,* as described above. .

Housing Element Policy A.9 states: "Housing for low-income households that is required in a new residential project shall be dispersed throughout the project, to the extent practical, given the size of the project and other site constraints". According to Specific Plan Policy 3.27, affordable housing units shall be focused on High-Density Residential (HDR) and Commercial/Mixed-Use (C/MU) parcels. However, affordable housing may also be provided in other residential land use areas. The HDR sites represent 20.1% (2,844) of the total number of units. The HDR sites are generally located adjacent to commercial nodes to allow access to services and employment. The C/MU sites represent 6% (844) of the total number of units.

The Board of Supervisors will determine whether the Specific Plan provisions satisfy the goals and policies of the current General Plan as they relate to the minimum provision for affordable housing in the Specific Plan, including the number and affordability of such units, as well as the location and general design of the units. The Specific Plan proposes to construct an adequate number of affordable housing units in compliance with the County's Affordable Housing Guidelines and in accordance with the income limits established by the California Department of

Housing and Community Development. This impact is therefore considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.10-5 Existing housing units could be lost due to Specific Plan development.

No housing units within the Riego community area would be lost due to project implementation; however, there are some scattered farmsteads/rural residences in the balance of the project area that could ultimately be removed as the project builds out, including those affected by widening of roads. It is estimated that fewer than ten residences would require removal. The project proposes to add more than 14,000 housing units, a portion of which will be constructed in compliance with Placer County affordable housing goals. This is a ***less than significant impact.***

Mitigation Measure

No mitigation measures are required.

OFF-SITE INFRASTRUCTURE

There are no impacts related to employment and housing that would result from installation and maintenance of off-site infrastructure.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.10-6 The proposed Specific Plan could contribute to cumulative imbalance of jobs and housing in the regional.

Cumulative development in the vicinity of the Specific Plan area includes the following major projects: (note: "maximum site coverage" percentages have been assumed from the Placer County Zoning Ordinance for "planned development commercial" at 50% and "industrial" at 60%):

- **West Roseville Specific Plan.** The West Roseville Specific Plan area, located one mile north of Baseline Road at Walerga Road, encompasses approximately 3,150 acres. Proposed development of this site includes 8,430 dwelling units, 48.5 acres of commercial, 19.6 acres of professional office, 74.2 acres of light industrial, 34.3 acres of general industrial, 148.9 acres of public/quasi-public uses and 968.7 acres of open space and parks. Assuming a population per household of 2.5 pph, the West Roseville Specific Plan area would provide housing for approximately 21,250 residents. Assuming 25 jobs per acre of commercial development, 40 jobs per acre of office development and 15 jobs per acre of industrial development, the Plan area will generate approximately 3,625 new jobs at full buildout.

- **Elverta Specific Plan.** The Elverta Specific Plan area, located in Sacramento County immediately south of the Placer Vineyards Specific Plan area, encompasses approximately 1,744 acres. Proposed development of this site includes 4,950 dwelling units, 4.4 acres of office, 15 acres for commercial, 73 acres for community centers and neighborhood parks, and 20.2 acres for a proposed elementary school. Assuming a population per household of 2.5 pph, the Elverta Specific Plan would provide housing for approximately 12,375 residents. Assuming 25 jobs per acre of commercial development and 40 jobs per acre of office development, the Plan area will generate approximately 551 new jobs at full buildout.

- **South Sutter County Specific Plan.** The South Sutter County Industrial/Commercial Reserve is located northwest of the Placer Vineyards Specific Plan area, in the southeastern corner of Sutter County, and encompasses approximately 7,500 acres. This area is being actively pursued for urban development, and is currently zoned by Sutter County for industrial use; however, Measure M, approved by voters in November of 2004, confirmed that a majority of residents are in favor of mixed-use development of the area including at least 3,600 acres for business/industrial uses, at least 1,000 acres of community facilities such as schools, parks, and retail, and a maximum of 2,900 acres of residential development, with a maximum of 17,500 dwelling units. Development of this area would require the preparation of a Specific Plan and environmental review (Houdesheldt, pers. comm., 2006). No specific land uses have been established for this area; therefore, population and job projections cannot be determined at this time. However, according to Measure M, the site could consist of as many as 17,500 dwelling units and 3,600 acres of business/industrial uses which could house 43,750 residents and generate 54,000 new jobs.

- **Regional University and Community.** The proposed Regional University and Community development project is located between the West Roseville Specific Plan area and Brewer Road, about two miles north of Baseline Road and encompasses approximately 1,136.5 acres. Proposed development of this site includes a 600-acre regional university with an estimated total enrollment of 6,000 students, 4,312 dwelling units and 22.2 acres of commercial uses. Assuming a population per household of 2.5 pph, the Regional University and Community project site would provide housing for approximately 10,780 residents. The University is anticipated to employ 600 faculty and staff and, assuming 25 jobs per acre of commercial development, the community will generate approximately 555 jobs for a total of 1,155 new jobs at full buildout.

- **Curry Creek Community Plan.** The proposed Curry Creek Community Plan area is located north of Baseline Road between South Brewer Road and Watt Avenue on approximately 5,200 acres. Proposed development of this site includes 16,200 dwelling units, 2,025,000 square feet of retail and 2,124,000 square feet of office. Assuming a population per household of 2.5 pph, the Curry Creek Community Plan would provide housing for approximately 40,500 residents. Assuming 25 jobs per acre of commercial development and 40 jobs per acre of office development, this community will generate approximately 10,555 new jobs at full buildout.

- **Placer Ranch.** The proposed Placer Ranch development area is located north of the West Roseville Specific Plan area and encompasses approximately 2,213 acres. Proposed

development of this site includes 6,793 dwelling units, 527 acres of business park and light industrial uses, 150 acres of office uses, 99 acres for commercial uses, 275 acres of parks, landscape corridors and open space, and three schools. Additionally, the proposed project includes a 300-acre branch campus of California State University Sacramento, with an estimated total enrollment of 25,000 students. Assuming a population per household of 2.5 pph, the Placer Ranch development project would provide housing for approximately 13,493 residents. Assuming 25 jobs per acre of commercial development, 40 jobs per acre of office development, 15 jobs per acre of industrial development and 0.18 jobs per university student, this project will generate approximately 20,880 new jobs at full buildout.

- **Lincoln Crossing.** The Lincoln Crossing development project is located on 1,070 acres in the City of Lincoln northeast of the Specific Plan area. Proposed development of this site includes approximately 2,958 dwelling units, 45 acres of commercial development, three schools, and a community center as well as parks and open space. Assuming a population per household of 2.5 pph, the Lincoln Crossing development project would provide housing for approximately 7,395 residents. Assuming 25 jobs per acre of commercial development, this project will generate approximately 1,125 new jobs at full buildout.

- **Riolo Vineyards.** The proposed Riolo Vineyards development project is located southeast of the Placer Vineyards Specific Plan area on the south side of Dry Creek encompassing 319 acres. Proposed development of this site includes approximately 805 residential dwelling units, neighborhood parks, public facilities and open space. Assuming a population per household of 2.5 pph, the Riolo Vineyards development project would provide housing for approximately 2,013 residents. No job-generating land uses are proposed for this area.

- **Creekview Specific Plan**. The proposed Creekview Specific Plan is located north of the West Roseville Specific Plan area and encompasses approximately 570 acres. Proposed development of this Plan area includes approximately 2,160 dwelling units, 38 acres of industrial, 14 acres for a school, and a community clubhouse on 3 acres (Isom, pers. comm., 206). Assuming a population per household of 2.5 pph, the Creekview Specific Plan area would provide housing for approximately 5,400 residents. Assuming 15 jobs per acre of industrial development this Specific Plan will generate approximately 570 new jobs at full buildout.

- **Sierra Vista Specific Plan.** The proposed Sierra Vista development project is located on approximately 2,000 acres to the north of the Placer Vineyards Specific Plan area. At full buildout, the area would consist of approximately 10,617 dwelling units as well as 77 acres for commercial use and 57 acres for office space (Isom, pers. comm., 2006). Assuming a population per household of 2.5 pph, the Sierra Vista Specific Plan area would provide housing for approximately 26,543 residents. Assuming 25 jobs per acre of commercial development and 40 jobs per acre of office development, this Specific Plan will generate approximately 4,205 new jobs at full buildout.

- **Lincoln 270**. The proposed Lincoln 270 development area is located on approximately 279 acres southeast from the Lincoln Crossing development project. Proposed development of this site consists of approximately 48 acres for business professional development, 32 acres

for a medical campus, 58 acres of general commercial, 38 acres light industrial and 102 acres open space. Assuming 25 jobs per acre of commercial development, 40 jobs per acre of office development and 15 jobs per acre of industrial development, this project will generate approximately 6,170 new jobs at full buildout.

- **Morgan Place.** The proposed Morgan Place development area is located on approximately 12 acres southeast of the Placer Vineyards Specific Plan area. Proposed development of this site includes approximately 91 dwelling units. Assuming a population per household of 2.5 pph, the Morgan Place development project would provide housing for approximately 228 residents. No job generating land uses are proposed for this area.

- **Silver Creek.** The proposed Silver Creek development area is located on approximately 28.6 acres southeast of the Placer Vineyards Specific Plan area. Proposed development of this site includes approximately 79 dwelling units. Assuming a population per household of 2.5 pph, the Silver Creek development project would provide housing for approximately 198 residents. No job generating land uses are proposed for this area.

Table 4.10-16 contains a summary of employment potential under cumulative conditions.

Table 4.10-16
Summary of Major Surrounding Development Projects

Project	Total Acres	Comm. Acres	Office Acres	Industrial Acres	University Students	Total D.U.	Total Pop.	Total Jobs
West Roseville Specific Plan	3,150	48.5	19.6	108.5	0	8,430	21,075	3,625
Elverta Specific Plan	1,744	15	4.4	0	0	4,950	12,375	551
South Sutter County Specific Plan	7,500	300	0	3,600	0	17,500	43,750	61,500
Regional University and Community	1,155	22.2	0	0	6,000	4,312	10,780	1,155
Curry Creek Community Plan	5,200	155*	108.4*	0	0	16,200	40,500	10,555
Placer Ranch	2,213	99	150	527	25,000	6,793	13,493	20,880
Lincoln Crossing	1,070	45	0	0	0	2,958	7,395	1,125
Riolo Vineyards	319	0	0	0	0	805	2,013	0
Creekview Specific Plan	570	0	0	38	0	2,160	5,400	570
Sierra Vista Specific Plan	2,000	77	57	0	0	10,617	26,543	4,205
Lincoln 270	279	58	118	0	0	0	0	6,170
Morgan Place	12	0	0	0	0	91	228	0
Silver Creek	28.6	0	0	0	0	79	198	0
Totals	**25,240.6**	**819.7**	**457.4**	**4,273.5**	**31,000**	**74,895**	**183,750**	**110,336**

* Based on an FAR of 0.30 for commercial and 0.45 for office

Sources: City of Roseville Community Development Department; Sacramento County Planning and Community Development Department; Lennar Homes; Placer County Planning Department; EIP Associates; City of Lincoln Planning Division; Sacramento Builders' Exchange; Placer Vineyards Specific Plan Administrative Draft 2006; CSU

Table 4.10-16 Summary of Major Surrounding Development Projects								
Project	**Total Acres**	**Comm. Acres**	**Office Acres**	**Industrial Acres**	**University Students**	**Total D.U.**	**Total Pop.**	**Total Jobs**
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Based on rates of 25 jobs per commercial acre, 40 jobs per office acre, 15 jobs per industrial acre and 0.18 jobs per university student, additional jobs in the vicinity of the Placer Vineyards Specific Plan area could total approximately 110,336. Total jobs in the area, including the Placer Vineyards Specific Plan, which is projected to generate approximately 7,594 jobs, would be approximately 117,931.

When considering the total number of dwelling units projected for the above-described projects and the proposed *Placer Vineyards Specific Plan*, the approximate number of jobs per household ratio is 1.32 (117,931 jobs/89,027 total dwelling units). This ratio would imply that there will be a significantly greater number of jobs per household in the region than the current County average of 1.24. However, this is an incomplete and artificial picture that does not provide for all potential future housing within the region. Although the Specific Plan area alone may not generate a sufficient number of jobs to assure a balance of houses and jobs, it is clear that the region will generate more than sufficient jobs when taken as a whole. Therefore, the cumulative impact of the long-term ratio of jobs to housing is ***less than significant.***

Mitigation Measure

No mitigation measures are required.

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4.11

Public Services/Infrastructure

4.II PUBLIC SERVICES/INFRASTRUCTURE

4.II.I INTRODUCTION

This section of the Revised Draft EIR for the proposed *Placer Vineyards Specific Plan* describes and analyzes public services and infrastructure. Public services and infrastructure addressed in this section include: fire protection, police protection, public schools, solid waste disposal, sanitary sewer or wastewater, water supply, recycled water service, drainage, electrical and natural gas service, telecommunications and cable television, library services, parks and recreation facilities, and general County facilities and services. The existing levels of service are identified and the impact of the proposed Specific Plan upon the service capacity of each service provider is evaluated. This section also identifies the anticipated demand for each service that would result from implementation of the proposed Specific Plan. As appropriate, this section presents feasible mitigation measures that could reduce or avoid significant effects. A plan for the sequencing and timing of infrastructure is described in the *Placer Vineyards Specific Plan Public Facilities Financing Plan, Base Case Scenario* (EPS, 2006), which is available for review at the location specified in Section 2.9 in Chapter Two of this Revised Draft EIR.

The information provided in this section is based on discussions with the Placer County Executive Office, Placer County Building Department, Placer County Local Agency Formation Commission (LAFCo), Placer County Fire Department, California Department of Forestry and Fire Protection, Sacramento Metropolitan Fire District, Placer County Office of Emergency Services, Placer County Sheriff's Department, Elverta Joint Elementary School District (EJESD), Grant Joint Union High School District (GJUHSD), Center Unified School District (CUSD), Western Placer Waste Management Authority, Sacramento Regional County Sanitation District (SRCSD), Placer County Water Agency (PCWA), Placer County Flood Control District (Flood Control District), Placer County Department of Public Works, Sacramento County Planning and Community Development Department and Placer County Facilities Services Department.

Hausrath Economics Group has prepared a fiscal impact study of the proposed project for Placer County describing the fiscal effects the project may have on Placer County services. A complete copy of this study is available at the location specified in Section 2.9 in Chapter Two of this Revised Draft EIR. The fiscal impact study will be considered by the Placer County Planning Commission and Board of Supervisors as part of their consideration of the proposed project.

Some of the proposed services would involve the formation of a County Service Area (CSA) or establishment of a Zone of Benefit in the existing Placer County County Service Area (CSA #28). In addition, one or more Community Facilities Districts (CFD) may be formed. Some of these changes may require approval by the Placer County LAFCo.

THE ROLE OF LOCAL AGENCY FORMATION COMMISSIONS

The State Legislature has broadened the role of LAFCos by requiring a Municipal Service Review for each service prior to adopting or amending a Sphere of Influence. A Sphere of

Influence is a geographical area that is identified as the eventual physical boundaries and service area of a local agency, as determined by LAFCo. In addition to the requirement that a Municipal Service Review be conducted for changes to a Sphere of Influence, the statute requires that adopted spheres of influence be reviewed and updated, as necessary, not less than once every five years.

In conducting the Municipal Service Review, LAFCo is required to comprehensively review all of the agencies that provide the identified service or services within a designated geographic area. A Municipal Service Review requires a written determination by LAFCo with respect to the following:

- Infrastructure needs or deficiencies;
- Growth and population projections for the affected area;
- Financing constraints and opportunities;
- Cost avoidance opportunities;
- Opportunities for rate restructuring;
- Opportunities for shared facilities;
- Government structure options, including advantages and disadvantages of consolidation or reorganization of service providers;
- Evaluation of management efficiencies; and
- Local accountability and governance.

The State Legislature has found and declared that a single multi-purpose governmental agency is accountable for community service needs and financial resources and, therefore, may be the best mechanism for establishing community service priorities, especially in urban areas. Whether governmental services are proposed to be provided by a single purpose agency, several agencies, or a multi-purpose agency, the statute directs that responsibility should be given to the agency or agencies that can best provide governmental services.

CAPITAL FACILITIES IMPACT FEE

Since Proposition 13 was passed in 1978, property tax revenues have been insufficient for capital funding of public services. Federal and State assistance has not replaced the decline in local property tax revenue. In the early 1990's, due to a substantial state budget deficit, the State shifted its share of property tax revenue (bailout) away from various local governments (including counties) to backfill and maintain its obligation to fund K-12 education. As a result, the ability of counties such as Placer to fund capital improvements was further reduced, particularly in light of rapid growth.

In 1994, Placer County prepared a study entitled *County Facilities Needed to Serve Growth* (Recht, Hausrath and Associates) which quantified the impact of new residents and businesses on County facilities, estimated the cost to expand those facilities in order to accommodate growth, and outlined a fee program that allocates this cost to specific types of land uses. The purpose of that study was to document the relationship between new development and additional capital facilities needed to serve it. This study was prepared in accordance with Section 66000 *et seq.* of

the Government Code, which regulates the process, amount, and procedures by which local government can exact fees from developers.

To systematically fund the expansion of its infrastructure, a Capital Facilities Impact Fee Ordinance (Chapter 38 of the Placer County Code) was adopted by the Board of Supervisors on October 15, 1996, and has subsequently been amended to maintain its currency. Fees generated through Placer County's Capital Facilities Impact Fee program vary by dwelling type and type of square footage of commercial and industrial development. For example, the fee for a single family dwelling, as of October, 2005 in the unincorporated area, was $3,177.07.

Revenue from the program is used to fund specific capital improvements necessitated by new development including the expansion and construction of office space, libraries, adult and juvenile detention facilities, clinics and laboratory space, social service facilities, communications/dispatch equipment, warehouses, vehicles and related furnishings and equipment. During the most recent reported fiscal year (July 1, 2003 to June 30, 2004) the County collected a total of $7,562,579 in Capital Facilities Impact Fees (Frank Steurch, Placer County Building Department, pers. comm., July 2005; Therese Leonard, Placer County Executive Office, pers. comm., July 2005).

PUBLIC FACILITIES FINANCING PLAN

The proposed Specific Plan provides that the Board of Supervisors will consider adoption of a Public Facilities Financing Plan and Public Services Plan concurrent with Specific Plan consideration. A draft Financing Plan, *Placer Vineyards Specific Plan Public Facilities Financing Plan, Base Case Scenario*, has been prepared and identifies the funding mechanisms required for the capital cost of infrastructure necessary to accomplish Specific Plan buildout. A Public Services Plan will identify funding for the maintenance of new infrastructure and public services needed by future residents and businesses.

PROPOSED SPECIFIC PLAN GENERAL PUBLIC INFRASTRUCTURE GOALS

The following goals related to public infrastructure appear in the proposed Specific Plan:

Goal 8.1 Create a comprehensively planned infrastructure system to serve the needs of future residents and allow existing residents to tie into upgraded facilities.

Goal 8.2 Provide public facilities in a timely manner, as required, to serve new development without adversely affecting existing levels of service.

Goal 8.3 Conserve energy and water through the use of recycled water and other designs.

4.II.2 FIRE PROTECTION

ENVIRONMENTAL SETTING

Fire protection services for the Specific Plan area are provided by Placer County Fire Department and Sacramento Metropolitan Fire District. Placer County Fire Department provides fire protection for 83% of the Specific Plan area. Fire protection service for the remaining portion on the western side of the Specific Plan area (Riego area) is provided by Sacramento Metropolitan Fire District. AMR ambulance service, a private company, provides paramedic services in western Placer County. Figure 4.11-1 illustrates fire protection service areas and locations of existing fire stations in the vicinity of the Specific Plan area.

The Placer County Fire Department has a full service contract with the California Department of Forestry and Fire Protection (CDF) to provide fire protection services, including structural and wildland fire protection, dispatch services, fire inspections, first response emergency medical services, disaster response, all hazards response, inspections and development review. Placer County's agreement with CDF includes paramedic response from the CDF Sunset station, with future service planned from the Dry Creek station.

The Placer County Fire Department also has Mutual Aid agreements with the Pleasant Grove Fire Protection District and the Roseville Fire Department, and is under an interim mutual aid agreement with the Sacramento Metropolitan Fire District. Through these agreements, the Placer County Fire Department would be able to receive assistance, if needed.

With the exception of the Riego area, the Specific Plan area is within the service boundaries of the Placer County Fire Department, and is served by one of its five fire stations. The Dry Creek fire station serves most of the Specific Plan area, and is located at 8350 Cook-Riolo Road, approximately 1.5 miles east of the eastern boundary of the Specific Plan area. Response times from this station currently vary from seven to eight minutes. The Dry Creek fire station has two CDF contracted firefighters on duty on a 24-hour basis and 20 on-call volunteers. The station has two Type I engines for structural fires, a Type II, rural structure engine, a Type III engine for wildland fires, and a Type IV pick-up pumper. Additionally, a water tender is planned and budgeted for purchase in fall of 2005. (Mike Boyle, Placer County Office of Emergency Services, pers. comm., July 2001; Greg Guyan, Battalion Chief, California Department of Forestry, pers. comm., July 2001; Bob Eicholtz, Placer County Fire Protection Planner, pers. comm., July 2001; Battalion Chief, Placer County Office of Emergency Services, pers. comm., July 2005).

The Sacramento Metropolitan Fire District provides full fire protection services at fire stations co-located with paramedic services. The District was formed on December 1, 2000 by the consolidation of the American River Fire Protection District and the Sacramento County Fire Protection District. The District has 42 stations (38 fulltime, 2 volunteer, 2 part-time) and 692 employees (673 paid and 19 reserve firefighters). The District has four existing fire stations (stations 116, 117, 25 and 26) that would provide services to the portion of the Specific Plan area within its jurisdiction and to the remainder on a mutual aid basis. These fire stations are located in Sacramento County (see Figure 4.11-1). Basic life support services as well as full fire

protection services are provided. Central dispatch is provided through Sacramento Regional Dispatch.

The District provides for a Type I engine within a one-mile radius for front-line response and a ladder truck for higher access within three miles. The District currently has 39 engine companies, 14 reserve firefighter engine companies, 5 truck companies, and various other medic units and watercrafts. The District has adopted a 20-year *Facilities Master Plan* which is being implemented over a multi-year period and will involve existing station relocations, improved capabilities and services, and equipment.

The Uniform Fire Code is the fire code for Placer County, as adopted, amended, and stated in Chapter 15.04.040 of the Placer County Code. The Office of Emergency Services is the designated Fire Marshal for Placer County. The Sacramento Metropolitan Fire District has also adopted the Uniform Fire Code, including local amendments.

Currently, Insurance Services Office (ISO) ratings are used by insurance companies to determine fire insurance rates. This rating system is recognized in the policies of the *Placer County General Plan* for fire protection agencies to maintain as a minimum standard. The ISO rating is established by taking into account the number and type of fire engines, personnel, response times, water availability and a variety of other factors to rate entire fire service areas or individual sub-areas within fire service areas. ISO ratings range from one to ten, with one being excellent fire service and ten indicating minimal or no fire protection. Currently, the ISO rating for the Placer County Fire Department area is five within one thousand feet of a fire hydrant and eight in a rural area such as the Specific Plan area. The *Placer County General Plan* calls for an ISO of four in urban areas and eight in rural areas. ISO ratings for the Sacramento Metropolitan Fire District are three for urban areas with hydrants and eight for non-hydrant areas such as the Specific Plan area (Mike Boyle, Placer County Office of Emergency Services, pers. comm., July 2001; Greg Guyan, Battalion Chief, California Department of Forestry, pers. comm., July 2001; Bob Eicholtz, Placer County Fire Protection Planner, pers. comm., July 2001; Traci Timpone, Area Supervisor, Sacramento Metropolitan Fire District, pers. comm., July 2001; Battalion Chief, Placer County Dept. of Emergency Services, pers. comm., July 2005).

PROPOSED FIRE-RELATED SPECIFIC PLAN TEXT

The Specific Plan states that a total of two Placer County Fire Department stations and an administrative center are anticipated to be necessary to serve the Specific Plan area at buildout. The fire administrative center is to be co-located with other County administrative offices within the Town Center south of Baseline Road and east of 16th Street.

REGULATORY SETTING

Regulations and standards pertaining to fire protection are contained in the adopted portions of the Uniform Fire Code, the Uniform Building Code and standards set by the National Fire Protection Association (NFPA) established by reference through Placer County Code Section 15.04.040, Adoption and Authorization for Amendments to the Uniform Fire Code. Placer County maintains the most current version of the national codes. Applicable planning goals and policies of the *Placer County General Plan* relating to fire service are discussed below.

LOCAL

Placer County General Plan

Applicable Fire Protection Goals and Policies of the *Placer County General Plan* with relevance to this Specific Plan are listed below:

Goal 4.1. To protect residents of and visitors to Placer County from injury and loss of life and to protect property and watershed resources from fires.

Policies:

4.1.1. The County shall encourage local fire protection agencies in Placer County to maintain the following minimum fire protection standards (expressed as Insurance Service Organization (ISO) ratings):

a. ISO 4 in urban areas
b. ISO 6 in suburban areas
c. ISO 8 in rural areas

4.1.2. The County shall encourage local fire protection agencies in the county to maintain the following standards (expressed as average response times to emergency calls):

a. 4 minutes in urban areas
b. 6 minutes in suburban areas
c. 10 minutes in rural areas

4.1.3. The County shall require new development to develop or fund fire protection facilities, personnel, and operations and maintenance that, at a minimum maintains the above service level standards.

4.1.9. The County shall ensure that all proposed developments are reviewed for compliance with fire safety standards by responsible local fire agencies per the Uniform Fire Code and other County and local ordinances.

4.1.11. The County shall encourage local fire protection agencies to provide and maintain advanced levels of emergency medical services (EMS) to the public.

Applicable Fire Hazard Goals and Policies of the *Placer County General Plan* with relevance to this Specific Plan are listed below:

Goal 8.C. To minimize the risk of loss of life, injury, and damage to property and watershed resources resulting from unwanted fires.

Policies:

8.C.1. The County shall ensure that development in high-fire-hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable state and county fire standards.

8.C.2. The County shall require that discretionary permits for new development in fire hazard areas be conditioned to include requirements for fire-resistant vegetation, cleared fire breaks, or a long-term comprehensive fuel management program. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas.

8.C.3. The County shall require that new development meets state, county, and local fire district standards for fire protection.

8.C.6. The County shall encourage fire protection agencies to continue education programs in schools, service clubs, organized groups, industry, utility companies, government agencies, press, radio, and television in order to increase public awareness of fire hazards within the county.

8.C.7. The County shall work with local fire protection agencies, the California Department of Forestry and Fire Protection, and the U.S. Forest Service to promote the maintenance of existing fuel breaks and emergency access routes for effective fire suppression.

8.C.9. The County shall work with local fire agencies to develop high-visibility fire prevention programs, including those offering voluntary home inspections and promoting awareness of home fire prevention measures.

8.C.10. The County shall continue to implement state fire safety standards through enforcement of the applicable standards contained in the Placer County Land Development Manual.

8.C.12. The County shall support annexations and consolidations of fire districts and services to improve service delivery to the public.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities;

- Result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives;

- 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; or

- Be inconsistent with the goals and policies in the *Placer County General Plan.*

Placer County has adopted required average response time standards through its General Plan policies, maintenance of ISO ratings, and compliance with fire safety standards, the Uniform Building Code and applicable portions of the Uniform Fire Code through local ordinance. Additionally, the County has developed required staffing ratios for both firefighters and support staff. The County requires one firefighter per 900 to 1,150 people and 2 support or planning staff per 10,000 to 25,000 people.

4.II.2-I Development of the proposed Specific Plan area would require additional personnel to serve new fire stations.

The proposed Specific Plan, at full buildout, includes 14,132 dwelling units and 3,619,618 square feet of new commercial space. This development would convert the Specific Plan area from existing large lot rural residential/agriculture to urban uses over the next 20 to 30 years. Development pursuant to the Specific Plan will result in the need for additional personnel to provide fire protection and emergency medical services to serve the Specific Plan area. Table 4.11-1 describes County staffing ratios for fire protection personnel needed to serve the Specific Plan area.

Table 4.II-I
Fire Protection Personnel Required to Serve Specific Plan Area

Year/Phase of Development	Dwelling Units	Population	Fire Fighters Needed	Support or Planning Personnel Needed
Buildout	14,132	34,762	30.2 – 38.6	2.8 – 7.0

1. Level of service standards provided by Placer County Executive Office
2. Dwelling units projections provided by Placer County Planning Department
3. Population projections provided by the *Placer Vineyards Specific Plan* Draft, March 2006

Staffing of the proposed fire stations in the Specific Plan area may not meet Placer County level of service standards; therefore, this impact is ***potentially significant***.

Mitigation Measure

Implementation of the following mitigation measure would reduce the impact of increased demand on fire services and personnel to a *less than significant level:*

4.11.2-1 *The staffing ratios contained in Table 4.11-1 shall be maintained for the Specific Plan area during all phases of development concurrent with demand. The applicants shall*

be required to establish a special benefit assessment district or other funding mechanism to assure adequate funding for the ongoing maintenance and operation of fire protection and related services, with funding responsibilities imposed on residential and commercial properties within the Specific Plan area, including the costs for services required to satisfy Placer County Fire Department staffing requirements set forth above. The funding mechanism shall be subject to the prior review and approval of Placer County, and shall be approved by the affected landowners prior to recordation of the first final subdivision map. It shall be maintained until such time as the County determines that property tax revenues are adequate to maintain the required staffing.

4.II.2-2 Development of the Specific Plan area will require additional fire protection infrastructure including construction of fire stations and purchase of fire trucks and equipment to serve the Specific Plan area.

Development of the proposed Specific Plan area will result in the need for additional fire protection infrastructure including new fire stations, trucks, and equipment necessary to provide fire protection services.

The Placer County Fire Department has indicated that the Specific Plan traffic plan and location of fire stations must provide an initial four-minute delivery of service from receipt of call to 95% of the residential population with support from an additional company within eight minutes. All commercial or industrial areas must have the same initial response, have two companies within six minutes, and three companies within ten minutes. The Placer County Fire Department proposes to provide fire engine-based paramedic and Advanced Life Support Services (ALS) with AMR or other ambulance service providing emergency medical transport. The County intends to meet or exceed ALS services provided by Roseville (Greg Guyan, Placer County Fire Department, pers. comm., December, 2005).

The need for additional fire protection infrastructure and equipment in the Specific Plan area is a ***potentially significant impact***.

<u>Mitigation Measures</u>

Implementation of the following mitigation measures would reduce the impact on fire protection to *less than significant level* by ensuring that adequate fire protection infrastructure, including new fire stations, trucks, and equipment, is available in a timely manner*:*

4.11.2-2a *A minimum of two fire stations shall be provided to serve the Specific Plan area at buildout, which shall be fully funded and equipped (i.e., desks, computers, telephones, radio systems, beds, refrigerators and all other needs).*

4.11.2-2b *The western fire station shall be constructed and equipped, at a location approved by the Placer County Fire Department, prior to issuance of a certificate of occupancy for the first dwelling unit located west of Watt Avenue. This first station may initially be located in a temporary building or location; however, a permanent station shall be*

available for occupancy within 18 months of issuance of the certificate of occupancy for the first dwelling unit located West of Watt Avenue. The eastern fire station shall be constructed and equipped, at a location approved by the Placer County Fire Department, prior to issuance of a building permit for the5,000th dwelling unit.

4.11.2-2c *Formation of a County Services Area (CSA), a Community Facilities District (CFD), or expansion of CSA #28, including a landowner-approved special tax of an adequate amount or other financing mechanism acceptable to the County, shall be required prior to recordation of the first final subdivision map to ensure that a funding mechanism for fire protection infrastructure and equipment is in place to provide adequate fire safety services in the Specific Plan area during all stages of development. Required fire stations shall be completed and fully staffed and equipped prior to the issuance of certificates of occupancy. Fire stations shall be located on sites readily accessible to service areas and final fire station locations shall be subject to approval by the Placer County Fire Department.*

4.11.2-3 Specific Plan area development could create additional fire hazards in large open space/natural areas and utility corridors by limiting pre-suppression and suppression accessibility. High fuel loading could result in areas of restricted or limited access. Development of residential areas in close proximity to utility infrastructure and open space areas increases the potential for fire related hazards.

The introduction of development and people to the Specific Plan area could create additional fire hazards in proposed open space, wetland preserves, stream corridors, landscaped areas, utility corridors and/or large lot residential areas. As more development occurs, the potential to restrict access to open space areas for fire suppression and fuels management increases. As more people and activities are present in the area, the potential for wildland fires increases. This is considered a ***potentially significant impact.***

Mitigation Measures

The following mitigation measures would reduce the impact on wildland fires to a *less than significant level:*

4.11.2-3a *Development and subdivision design shall include adequate setbacks, as determined by the Placer County Fire Department, between open space/corridor areas and structures. Fire pre-suppression and suppression access easements to utility corridors and open space areas shall be required as part of the subdivision map process. Building envelopes or another method shall ensure separation of structures, and shall ensure access, as deemed appropriate by the Placer County Fire Department prior to approval of any tentative subdivision map.*

4.11.2-3b *A County Service Area (CSA), Community Facilities District (CFD), or Zone of Benefit under CSA #28, or other entity for sustainable park maintenance shall be formed for the Specific Plan area prior to recordation of the first final subdivision map. Funds for a fuels reduction program for open spaces and corridors shall be*

included in the financing arrangement by a vote of the landowners prior to recordation of the first final subdivision map. The maintenance entity shall establish and identify ongoing funding for a continuous maintenance program for vegetation (both wildland and landscaped) in any and all open space, vacant areas, and landscape trail, easement and corridor areas within the Specific Plan area prior to recordation of the first final subdivision map.

4.11.2-3c *The developers shall fund a fire-safe plan for the subdivisions adjacent to wildland (natural, landscape, and corridor) areas. The fire-safe plan shall include a fuels management plan, and recommend building separations and distances from wildland areas, evacuation and access routes, fire safety zones and maintenance schedule prior to approval of tentative subdivision maps.*

4.11.2-4 Construction of fire stations and related facilities within the Specific Plan area could lead to physical impacts on the environment.

Fire stations are an integral part of the Specific Plan and are shown at two locations on the Land Use Diagram. Analysis of impacts related to construction within the Specific Plan area is included in each of the topical areas contained in this Revised Draft EIR. No additional impacts related to construction of fire stations have been identified. This impact is, therefore, ***less than significant***.

Mitigation Measures

No mitigation measures are required.

OFF-SITE INFRASTRUCTURE

4.11.2-5 Fire protection service impacts could result from installation and maintenance of utilities and other infrastructure.

Off-site infrastructure would include underground utility lines, widened roadways, and wastewater treatment plant improvements. None of these proposed improvements would pose a fire hazard or be subject to threat of fire from another source. Construction activity could present an obstacle to movement, but would be temporary and subject to control through standard traffic control procedures. The impact would be ***less than significant.***

Mitigation Measures

No mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.11.2-6 Cumulative impacts on fire services could occur due to development of the Specific Plan area.

Fire services are provided based on established service standards and goals reflected in the *Placer County General Plan* and requirements of the Placer County Fire Department. The proposed Specific Plan would contribute to demand for fire services. The expansion of fire services is demand-responsive, and with the implementation of existing policies, implementation measures, and mitigation measures listed in this section, these facilities would continue to be provided based on evolving service goals. Therefore, the cumulative impact on fire services would be ***less than significant.***

Mitigation Measures

No mitigation measures are required.

4.11.3 POLICE PROTECTION

ENVIRONMENTAL SETTING

The Placer County Sheriff's Department provides general law enforcement services to the Specific Plan area. The Sheriff's Department currently has a Sheriff, an undersheriff, and four captains overseeing divisions within the Department, 225 sworn officers including 12 Lieutenants and 35 Sergeants, and 165 non-sworn civilians and support staff for the entire County. The Sheriff's Department currently has 48 vehicles, including 26 deputy-marked patrol units, ten K-9 units, three aircraft, three patrol boats, and six other miscellaneous vehicles. Local funding for the Sheriff's Department comes from the County general fund, originating from a variety of sources, most notably County property taxes, Proposition 172 monies, other taxes and fines.

The Sheriff's substation located nearest the Specific Plan area is in the Town of Loomis at the intersection of Horseshoe Bar Road and Interstate 80, about twelve miles from the Specific Plan area. The area served by this substation is western Placer County below Newcastle. There are currently 28 sworn officers, including three detectives and a lieutenant, assigned to this substation, as well as ten volunteers, and five civil officers and administrative staff. During 2004, officers from the South Placer Substation responded to approximately 31,000 service calls for all categories of priority.

The Sheriff's Department maintains response time records throughout the County. The average response time in the vicinity of the Specific Plan area (Reporting District #121) for the period between July 1, 2000 and June 30, 2001 was two minutes and 32 seconds for Priority One calls (emergency life threatening calls) and ten minutes for Priority Two calls (crime in progress calls). As of July 2005, these average response times have remained approximately the same. Reporting districts are geographic areas used by the Sheriff's Department for statistical information purposes only (Placer County Sheriff's Department, July 2001; Lieutenant DeCecco, Placer County Sheriff's Department, pers. comm., July 2005).

The Specific Plan area is located in Area I, Sector II of the Ocean Beat area of the Sheriff's Department, which is bounded by Sacramento County, Sutter County, Yuba County and the city of Roseville. The Sheriff's Department at present has assigned one deputy for this area. The

Sheriff's Department has mutual aid agreements with other law enforcement agencies in the area (Amanda Flaherty, Community Services Officer, Placer County Sheriff's Department, pers. comm., July 2001; Lieutenant DeCecco, Placer County Sheriff's Department, pers. comm., July 2005).

The California Highway Patrol provides traffic-related enforcement services throughout Placer County. The nearest Highway Patrol offices are the Auburn Area Office located in Newcastle, and the North Sacramento Area Office, serving the Sacramento area north of the American River, located at 5109 Tyler Street, Sacramento.

PROPOSED LAW ENFORCEMENT-RELATED SPECIFIC PLAN TEXT

The following text related to law enforcement appear in the proposed Specific Plan:

The Specific Plan proposes to co-locate a Sheriff's substation with other County administrative offices within the Town Center South of Baseline Road and east of 16th Street.

REGULATORY SETTING

There are no specific federal or State regulations pertaining to police protection that would specifically address environmental impacts associated with the proposed Specific Plan. The goals and policies of the *Placer County General Plan* and the *Placer County Criminal Justice Master Plan* relating to police protection are discussed below.

LOCAL

The Placer County General Plan

Goal 4.H. To provide adequate sheriff's services to deter crime and to meet the growing demand for services associated with increasing population and commercial/industrial development in the county.

Policies:

4.H.1. Within the County's overall budgetary constraints, the County shall strive to maintain the following staffing ratios (expressed as the ratio of officers to population):

a. 1: 1,000 for unincorporated areas
b. 1: 7 for jail population
c. 1: 16,000 total county population for court and civil officers

4.H.2. The County Sheriff shall strive to maintain the following average response times for emergency calls for service:

a. 6 minutes in urban areas
b. 8 minutes in suburban areas

c. 15 minutes in rural areas
d. 20 minutes in remote rural areas

4.H.3. Within the County's overall budgetary constraints, the County shall provide sheriff facilities (including substation space, patrol, and other vehicles, necessary equipment, and support personnel) sufficient to maintain the above service standards.

4.H.4. The County shall require new development to develop or fund sheriff facilities that, at a minimum, maintain the above standards.

4.H.5. The County shall consider public safety issues in all aspects of commercial and residential project design, including crime prevention through environmental design.

Placer County Criminal Justice Master Plan

The County's *Criminal Justice Master Plan* calls for increases in service levels as funding is made available and as future growth occurs. Lower service levels will result if available funding does not meet growth demands.

IMPACTS AND MITIGITATON MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered law enforcement facilities;

- Result in the need for new of physically altered law enforcement facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives; or

- Be inconsistent with the goals and policies in the *Placer County General Plan*.

Placer County has developed required staffing ratios for sworn officers, non-sworn officers and support staff. The County requires 1.10 to 1.42 sworn officers per 1,000 people, 1.1 non-sworn officer per 10,000 people and 1 support staff per 12,000 to 18,000 people. Additionally, the County requires one patrol vehicle per officer.

4.II.3-1 The proposed Specific Plan would increase the demand for police protection services requiring additional personnel.

The proposed Specific Plan would include a total buildout of 14,132 dwelling units. According to persons-per-household rates contained in the Specific Plan, the project will house approximately 34,762 people at buildout. This addition to the County's population will require

between 38.2 and 49.4 sworn officers, 3.8 non-sworn officers and between 1.9 and 2.9 support staff. An estimated total of 43.9 to 56.1 employees will be needed at full buildout. Table 4.11-2 below describes the County's staffing needs for the Specific Plan area based on the County's staffing ratio requirements.

Table 4.11-2
Police Protection Personnel Required to Serve Specific Plan Area at Buildout

Year	Units	Population	Sworn Officers Needed	Non-Sworn Officers Needed	Support Staff Needed
Buildout	14,132	34,762	38.2 – 49.4	3.8	1.9 – 2.9

1. Level of service standard provided by Placer County Executive Office
2. Dwelling unit projections provided by Placer County Planning Department
3. Population projections provided by the *Placer Vineyards Specific Plan* Draft, March 2006

Development pursuant to the Specific Plan would increase the demand for additional sworn and non-sworn officers and support staff to adequately serve the Specific Plan area. The County has estimated that the new Sheriff's substation described under Impact 4.11.3-2 below would generate, at a minimum, a need for specific support staff as follows: 1 Administrative Secretary, 4 Administrative Clerks, and 1 Equipment Worker. This demand for sworn and non-sworn officers, and support staff is a ***potentially significant impact.***

Mitigation Measure

Implementation of the following mitigation measures would reduce this impact to a *less than significant level:*

4.11.3-1 *The staffing ratios contained in Table 4.11-2 shall be maintained for the Specific Plan area. The applicants shall be required to establish a special benefit assessment district or other funding mechanism to assure adequate funding for the ongoing maintenance and operation of law enforcement services, with funding responsibilities imposed on residential and commercial properties within the Specific Plan area, including the costs for services required to satisfy the staffing standards set forth above and General Plan standards now in existence or as later amended. The funding mechanism shall be subject to the prior review and approval of Placer County.*

4.11.3-2 The urban response time standards set forth in the *Placer County General Plan* are unattainable from the existing Sheriff's substation in Loomis. Development of the Specific Plan area would require new facilities, including a Sheriff's substation, equipment and patrol vehicles.

The proposed Specific Plan will ultimately result in an increase in population of 34,762 residents and 3,597,838 square feet of new commercial space. The demand for between 42.0 and 53.2 new sworn and non-sworn officers will result in a need for between 16.8 and 21.3 vehicles as well as equipment and new law enforcement facilities to house the additional personnel.

As previously noted, the Specific Plan proposes to co-locate a Sheriff's substation with other County administrative offices within the Town Center south of Baseline Road and east of 16th Street. The County has indicated that a substation approximately 19,000 square feet in size open 80 hours per week would be required to serve the Specific Plan area. The County has made specific recommendations regarding vehicles, equipment and facilities. This is considered a ***potentially significant impact***.

Mitigation Measure

Implementation of the following mitigation measures will reduce this impact to a *less than significant level:*

4.11.3-2a *The project developer(s) shall comply with Placer County Policy 4.H.4, which requires that all future development either fund or develop law enforcement facilities. The project developer(s) shall dedicate land for development of a 19,000-square foot substation prior to recordation of the first final subdivision map. Said development shall be consistent with the requirements of the County, the needs of the County Sheriff's Department and the County Facilities Services Department. Compliance with Policy 4.H.4 shall include formation of a County Service Area (CSA), Community Facilities District (CFD), or expansion of CSA #28 for the construction of an equipped Sheriff's substation prior to recordation of the first final subdivision map.*

4.11.3-2b *The project developer(s) shall enter into a Development Agreement with Placer County prior to recordation of the first final subdivision map for facilities, staffing, and the purchase and scheduled replacement of the number of equipped vehicles needed as determined by the Sheriff in the same frequency and manner currently used by the County in its patrol vehicle replacement program. All patrol vehicles shall include the necessary equipment to accomplish the mission of the Placer County Sheriff's Department or as otherwise required by the Sheriff.*

4.11.3-3 Public safety could be compromised if the Specific Plan does not adequately consider public safety issues in its design.

General Plan Policy 4.H.5 calls for project design to consider public safety issues, including crime prevention through environmental design. The *Dry Creek/West Placer Community Plan* was amended by the adoption of Resolution 94-238 concurrently with the adoption of the *Placer County General Plan*. Although design criteria for public safety are not specifically mentioned in Exhibit 1 of Resolution 94-238, the adopted criteria set forth many elements related to public safety, such as requiring entries into small shops and offices to be oriented directly onto a pedestrian-oriented street. The Specific Plan indicates that the land use plan was designed with safety considerations in mind. The Specific Plan explains that the design layout ensures that residents and law enforcement personnel have access to and visibility of schools, parks and open spaces (see page 6-68 of the Specific Plan). Pedestrian areas will be well lighted and designed in such a manner as to maximize the safety of pedestrians (see page 6-30 of the Specific Plan), and

buildings will be designed and sited to provide a safe environment (see page 6-6 of the Specific Plan.

The Specific Plan Design Guidelines do not include specific guidance or provisions with regard to public safety considerations. In the absence of such guidance, Specific Plan development could result in improvements that do not provide adequate access and visibility for law enforcement personnel, or that otherwise degrade public safety. This is a ***potentially significant impact.***

Mitigation Measures

Implementation of the following mitigation measure will reduce this impact to a *less than significant level:*

4.11.3-3 *Law enforcement personnel shall have access to and visibility of schools, parks and open spaces, pedestrian areas shall be well lighted and designed in such a manner as to maximize the safety of pedestrians, and buildings shall be designed and sited to provide a safe environment. Improvement plans submitted for review and approval by the Placer County Planning Department shall be accompanied by a written explanation regarding the manner in which the design of the improvements achieves compliance with these requirements.*

4.11.3-4 Construction of a sheriff's substation and related facilities within the Specific Plan area may lead to physical impacts on the environment.

A sheriff's substation is an integral part of the Specific Plan and is to be constructed in the Town Center. Analysis of impacts related to construction within the Specific Plan area is included in each of the topical areas contained in this Revised Draft EIR. No additional impacts related to construction of the substation have been identified. This impact is, therefore, ***less than significant***.

Mitigation Measures

No mitigation measures are required.

OFF-SITE INFRASTRUCTURE

4.11.3-5 Law enforcement service impacts may result from installation and maintenance of utilities and other infrastructure.

Off-site infrastructure would include underground utility lines, widened roadways, and wastewater treatment plant improvements. None of these proposed improvements would pose an issue for law enforcement. Construction activity could present an obstacle to movement, but would be temporary and subject to control through standard traffic control procedures. The impact would be ***less than significant.***

Mitigation Measures

No mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.11.3-6 Cumulative impacts on police protection due to development of the Specific Plan area.

Similar to fire protection services, police protection services are provided based on established service standards and goals. Cumulative development in western Placer County would be subject to standards outlined in the *Placer County General Plan* and Exhibit 1 of the *Dry Creek/West Placer Community Plan*. Given current policies, implementation measures, and the mitigation measures outlined in this section (Mitigation Measures 4.11.3-1, 4.11.3-2a, 4.11.3-2b and 4.11.3-3), the cumulative impact on police protection would be ***less than significant.***

Mitigation Measures

No mitigation measures are required.

4.11.4 PUBLIC SCHOOLS

ENVIRONMENTAL SETTING

The Specific Plan area is served by three school districts. The CUSD covers the eastern three-quarters of the Specific Plan area. The EJESD and the GJUHSD share a common boundary within the Specific Plan area. They are located in the western one-quarter of the Specific Plan area, approximately 0.25 mile west of Palladay Road. See Figure 4.11-2 for school district boundaries and locations of existing schools.

The CUSD has a total of nine schools and is currently constructing a new junior high school. The district is located in the Antelope area of northern Sacramento County, extending north of Antelope Road in Sacramento County to north of the Specific Plan area in Placer County. The CUSD has a total enrollment of 6,288 students and is at 100% capacity. The name, type, location and enrollment of schools in the CUSD are shown in Table 4.11-3A.

Table 4.11-3A
Center Unified School District Enrollment

School	Address	Enrollment
Center High School	3111 Center Street, Antelope	1,657
McClellan High School	8725 Watt Ave., Antelope	99
Center Junior High School	3243 Center Court Lane, Antelope	1,015
Global Youth Charter High School	84089 Watt Avenue, Antelope	24
Dudley Elementary (K-6)	8000 Aztec St., Antelope	896
North Country (K-6)	3901 Little Rock Dr., Antelope	728
Oak Hill (K-6)	3909 N. Loop Blvd., Antelope	870
Spinelli (K-6)	3401 Scotland Dr., Antelope	586

Table 4.11-3A Center Unified School District Enrollment		
School	**Address**	**Enrollment**
Antelope Charter (K-12)	8725 Watt Ave., Antelope	413
Source: California Department of Education, Education Data Partnership website, 2005		

The EJESD is located west of the CUSD and has two schools with a total enrollment of 325 students. The name, type, location and enrollment of these schools are shown in Table 4.11-3B.

Table 4.11-3B Elverta Joint Elementary School District Enrollment		
School	**Address**	**Enrollment**
Elverta Joint Elementary School (K-6)	7900 Eloise Ave., Elverta	212
Alpha Technology Middle School (7-8)	8926 Elwyn Ave., Elverta	113
Source: California Department of Education, Education Data Partnership website, 2005		

The GJUHSD has an enrollment of 13,015, with 15 middle, high, and alternative schools. Rio Linda Junior High and Rio Linda High School are located south of the Specific Plan area. The type, location and enrollment of these schools are shown in Table 4.11-3C.

Table 4.11-3C Grant Joint Union High School District Enrollment		
Name	**Address**	**Enrollment**
Rio Linda Jr. High (7-8)	1101 G, Rio Linda	613
Rio Linda High School (9-12)	6309 Dry Creek Rd., Rio Linda	1,838
Source: California Department of Education, Education Data Partnership website, 2005		

Five other school districts and one elementary school are located in the vicinity of the Specific Plan area. The Pleasant Grove Elementary School District and East Nicolaus Joint Union High District are located northwest of the Specific Plan area in Sutter County. Rio Linda Joint Elementary School District serves areas south of the CUSD and Specific Plan area, within the GJUHSD. Areas east of the Specific Plan area are within the Roseville Joint Union High School District and the Dry Creek Joint Elementary School District. Antelope Meadows Elementary School (K-5) is located at 8343 Palmerson Drive in Antelope, southeast of the Specific Plan area within the Dry Creek Joint Elementary School District.

School districts that serve the Specific Plan area have established School Impact Fees designed to mitigate impacts associated with serving additional students generated by new development. Fees for the GJUHSD are $2.24 per square foot of residential development and $0.36 per square foot for commercial development. Proceeds from the fees are shared with the EJESD, with GJUHSD receiving 37.34% of the fee and EJESD receiving 62.66% (Rick Keomanivong, GUHSD, pers. comm., July 2005).

Development fees for the CUSD are currently $2.24 per square foot for residential development and $0.36 per square foot for commercial development (pers. comm., Marie Huggins, CUSD, March 2006).

On March 5, 2002, the voters in the GUHSD approved a bond measure (Measure E) which provides improvements for general upgrades and specific additional facilities. To pay for the improvements specified in Measure E, a $30 per $100,000 assessment is levied for new development.

The Specific Plan proponents are proposing adjustments to the school district boundaries because existing district boundaries divide proposed neighborhoods as shown on Figure 4.11-2. These proposed boundaries are tentative in character, and subject to change, depending on the outcome of the formal statutory processes for changing boundaries, as set forth in Education Code sections 35500 et seq. and 35700 et seq., and as discussed below.

The demand for school facilities within the three districts is predicated upon the rate of development and number of housing units to be developed in each district.

PROPOSED SCHOOLS-RELATED SPECIFIC PLAN TEXT

The following discussion related to schools appears in the proposed Specific Plan:

Six elementary schools, two middle schools and one high school are designated by the ES, MS and HS symbols on the Land Use Diagram. The Land Use Diagram designates ±140 acres for schools.

School sites are situated adjacent to park sites and open spaces to allow joint use of facilities, trail access, and efficient use of the land. School/park sites have been placed at the center of each neighborhood to provide a focus for neighborhood interaction and to allow children to walk to school. School sites have been located based on the estimated number of students in each surrounding neighborhood and may need to be revised slightly based on actual build-out densities. Schools are sized for "stand alone" facilities, which may develop independently of parks.

Policy 3.22: Land Use for Unused School Sites. If the school district decides a school site shown on the Land Use Diagram is not needed, residential development will be permitted at the residential density of the land adjacent to the designated school site. The total number of residential units allocated to the underlying property will not be increased by the readjustment of land use. If this situation occurs, the adjacent neighborhood park site shall remain as indicated on the Land Use Diagram, providing a central focus for the neighborhood

The Specific Plan proponents are also proposing adjustments to school district boundaries, because existing district boundaries would divide proposed neighborhoods as shown on Figure 4.11-2.

REGULATORY SETTING

There are no specific federal regulations pertaining to schools that address environmental impacts associated with the proposed project. State law regulating school facilities and

mitigation, and the policies of the *Placer County General Plan* relating to school facilities, are discussed below.

STATE

SB 50 Implications

The Leroy F. Greene School Facilities Act of 1998 (SB 50) and the bond procedures under Proposition 1A of 1998 regulate school facilities financing and mitigation of land use approvals by setting fee caps, removing entitlement application denial authority from lead agencies, and setting the CEQA standard for full and complete mitigation for school facilities. Prior to enactment of the legislation, a City or County had the authority to deny or require full mitigation for projects that required an amendment to a General Plan and/or a zone change. State law now prohibits a local agency from either denying approval of a land use project because of inadequate school facilities, or imposing school impact mitigation measures other than the designated fees provided for in the Government Code. Effective subsequent to 2006, if a statewide bond measure fails, SB 50 would again permit a City or County to deny or refuse to approve a development project that requires a legislative act on the basis of the inadequacy of school facilities. However, the City or County will not be able to require a higher fee than provided for in the original legislation.

Education Code Sections 35500 and 35700 et seq.

School district reorganizations are governed by Section 35500 et seq. and 35700 et seq. of the Education Code. Initiation of school district boundary reorganization may be by "petition" by a developer or group of citizens or by the majority of a school district governing body. A developer may initiate proceedings for a reorganization of a school district boundary for an uninhabited area (i.e., that there are fewer than 12 registered voters in the area). Education Code Section 35753(8) prohibits boundary changes that are developer-initiated for the purposes of generating higher real estate values. A citizens' petition requires 25% of the registered voters residing within the area to be reorganized.

The more common form of school district boundary reorganization is through a petition of a majority vote of the governing body of one or more school districts that have jurisdiction in the area proposed to be reorganized. In the case of the proposed reorganization involving the boundaries of CUSD, EJESD, and GJUHSD, a project proponent or group of citizens would approach all three school district boards for a proposed reorganization. A resolution of petition supporting the proposed reorganization must be adopted by all three school district boards, thereby initiating the proceedings to be filed with the County Superintendent of Schools in both Sacramento and Placer counties. The approved resolutions are subsequently presented to the Placer and Sacramento County Committees on School District Reorganization for consideration. Each County Committee has 60 days to hold a public hearing. If approved by both County Committees, the reorganization is either recorded and the district boundary is changed, set for election, or appealed to the State Board of Education (Michael Winters of Cauldwell, Flores and Winters, Inc., pers. comm., March 2002).

LOCAL

Placer County General Plan

The following are applicable goals and policies from the *Placer County General Plan*:

Goal 4.J: To provide for the educational needs of Placer County residents.

Policies:

4.J.5. The County should plan and approve residential uses in those areas that are most accessible to school sites in order to enhance neighborhoods, minimize transportation requirements and costs, and minimize safety problems.

4.J.6. The County should include schools among those public facilities and services that are considered an essential part of the infrastructure that should be in place as development occurs.

4.J.7. The County shall consider school district plans in establishing acceptable levels of service for schools, determining school location and land and facility needs, and determining appropriate financing methods. The County should designate existing and future school sites in community plans and specific plans to accommodate school district needs.

4.J.8. The County shall encourage school facility siting that establishes schools as focal points within the neighborhood and community.

4.J.9. The County shall encourage the location of schools in areas with safe pedestrian and bicycle access.

4.J.10. The provision of adequate school facilities is a community priority. The County and school districts will work closely to secure adequate funding for new school facilities and, where legally feasible, the County shall provide a mechanism which, along with state and local sources, requires development projects to satisfy an individual school district's financing program based upon their impaction.

4.J.11. The County and residential developers should coordinate with the school districts to ensure that needed school facilities are available for use in a timely manner. The County, to the extent possible, shall require that new school facilities are constructed and operating prior to the occupation of the residences which the schools are intended to serve.

4.J.13. Before a residential development, which includes a proposed general plan amendment, rezoning or other legislative review can be approved by the Planning Commission or Board of Supervisors, it shall be demonstrated to the satisfaction of the hearing body

that adequate school facilities shall be provided when the need is generated by the proposed development.

4.J.14. Whenever possible, the County shall support and participate with school districts in joint development of recreation areas, turf areas, and multi-purpose buildings.

4.J.15. The County and the school districts should work together in using existing school facilities for non-school-related and child care activities.

4.J.16. The County should encourage use of schools as community centers to provide a range of services.

School District Facility Master Plans

Both the CUSD and the GJUHSD have facilities master plans. These plans typically describe the educational program and evaluate the ability of the current and future facilities to address existing and future curriculum and instructional needs. Programs and policies provide a framework for the district in determining future facilities needs.

The CUSD and GJUHSD have established policies to maintain existing schools and to provide sufficient funds to accommodate students from new residential developments as the districts continue to grow. The policies require that school sites be adequate in size and location to serve the districts' educational needs, and when possible, serve the community's needs. In addition to a site selection process, including an environmental impact investigation, a financing plan including alternative methods of financing new construction is included. Alternative methods of financing for the purchase of school sites and the construction of buildings are outlined in the plans, including establishing school facilities improvement districts, community facilities districts, and the use of developer fees.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities;

- Result in the need for new of physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives; or

- Be inconsistent with the goals and policies in the *Placer County General Plan.*

4.II.4-I Buildout of the Specific Plan area will substantially increase the public school student population, exceeding current school capacities.

The number of students to be generated in the Specific Plan area is determined by the number of residential units in the Specific Plan area multiplied by student generation rates of the local school districts, as presented in Table 4.11-4.

Table 4.II-4
School Enrollment Impact

Year	Type of Unit	Dwelling Units (DU)	K-6 Factor per DU	K-6 Impact	7-8 Factor per DU	7-8 Impact	HS Factor per DU	HS Impact	Total School Enrollment
Year 2015 Absorption	Low-Density	987	0.383	378	0.126	124	0.228	225	
	Medium-Density	3,501	0.383	1,341	0.126	441	0.228	798	
	High-Density	1,732	0.151	262	0.058	101	0.127	220	
	Commercial Mixed-Use	290	0.151	44	0.058	17	0.127	37	
	Total	**7,000**		**2,025**		**683**		**1,280**	**3,988**
Buildout	Low-Density	3,275	0.383	1,254	0.126	413	0.228	747	
	Medium-Density	6,266	0.383	2,400	0.126	790	0.228	1,429	
	High-Density	2,844	0.151	430	0.058	165	0.127	361	
	Commercial Mixed-Use	844	0.151	128	0.058	49	0.127	107	
	Total	**13,229**		**4,212**		**1,417**		**2,644**	**8,273**

1. Dwelling unit projections provided by Placer County Planning Department, age-restricted units were excluded from the LDR count
2. Student generation rates provided by CUSD, October 2005

At buildout, the Specific Plan area will generate approximately 8,273 new students in the region. Existing educational facilities are unable to accommodate the projected growth from the Specific Plan area; therefore, the Specific Plan proposes to set aside 140 acres of land for school district acquisition for the development of six elementary schools, two middle schools and one high school located throughout the Specific Plan area as shown on Figure 4.11-2. School location, sizes and enrollment capacities are based on the CUSD's Master Plan criteria. Elementary schools are located in the center of neighborhoods, yet off major streets, while providing for easy access. Schools are located adjacent to open space corridors to allow for pedestrian and bicycle access.

Student enrollments projected by the Specific Plan are based on student generation rates provided by the CUSD in 2005 (Michael Winters of Cauldwell, Flores and Winters, Inc., pers. comm., October 2005). These generation rates are anticipated to be revised in early 2006. According to these figures, 4,212 elementary students, 1,417 middle school students and 2,644 high school students will reside in the Specific Plan area upon full buildout, thereby totaling 8,273 students. A variety of factors have influenced the lowering of enrollment generation factors between 1996 and 2001. In this area, the closure of McClellan Air Force Base may have influenced this downward trend. Other factors may include better data, changes in demographics such as age, socio-economic levels, subsequent development and type of development.

Enrollment projection factors included in District Master Plans will continue to change with characteristics of the population throughout the development of the Specific Plan area.

Since Proposition 1A was passed by the voters and SB 50 was passed by the Legislature, school fees generated by new development are currently deemed sufficient mitigation of any impacts based on generation of students on school facilities. Because of the passage of Proposition 1A and SB 50, County General Plan Policy 4.J.13, described above, may be unenforceable. The impact is considered ***less than significant,*** provided school impact fees are collected pursuant to State law.

Mitigation Measures

No mitigation measures are required.

4.II.4-2 A change in school district boundaries could adversely affect one or more of the three school districts.

Procedures are provided in the Education Code that protect the interests of all affected districts, when changes are proposed. The proposed change, and similar modifications for similar purposes, would be viewed as minor in nature and would permit the boundary to follow a logical dividing line as the area builds out: 16th Street and Dyer Lane. This is considered a ***less than significant impact.***

Mitigation Measures

No mitigation measures are required.

4.II.4-3 Construction of schools within the Specific Plan area could lead to physical impacts on the environment.

Schools are an integral part of the Specific Plan and are to be constructed on several sites throughout the Specific Plan area. Analysis of impacts related to construction of schools within the Specific Plan area such as loss of agricultural land, loss of wildlife habitat, disruption of cultural resources, degradation of water quality, generation of noise, etc. is included in each of the topical areas contained in this Revised Draft EIR. No additional impacts related to construction of schools have been identified. This impact is, therefore, ***less than significant***.

Mitigation Measures

No mitigation measures are required.

OFF-SITE INFRASTRUCTURE

4.II.4-4 Impacts on schools due to installation and maintenance of utilities and widening of roadways.

Construction activity associated with installation of off-site utilities or widening of roadways (in particular Watt Avenue in Sacramento County) could disrupt traffic and school access during the construction period. Construction activity could present an obstacle to movement, but would be temporary and subject to control through standard traffic control procedures. This impact would therefore be ***less than significant.***

Mitigation Measures

No mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.11.4-5 The Specific Plan would contribute to cumulative increases in demand for schools.

Development of the proposed Specific Plan area, in conjunction with other planned residential development in the vicinity, would increase the demand for school services and facilities in the CUSD, the GJUHSD and the EJESD. New residential development within these districts would be required to pay school impact fees to the appropriate school district(s) to offset the capital costs of constructing new schools. Based on the discussion in Impact 4.11.4-1, this impact is ***less than cumulatively considerable (i.e., less than significant)***.

Mitigation Measures

No mitigation measures are required.

4.11.5 SOLID WASTE DISPOSAL

ENVIRONMENTAL SETTING

WESTERN REGIONAL LANDFILL

Solid waste generated in Placer County is collected and hauled by the Auburn-Placer Disposal Service from County Franchise Areas One and Four, which include the western and southern portions of Placer County. Solid waste is hauled to the 39.9-acre Western Placer Waste Management Authority's Materials Recovery Facility (MRF) at the southeast corner of Athens Avenue and Fiddyment Road in Lincoln, approximately seven miles from the Specific Plan area.

The MRF currently receives approximately 1,082 tons of solid waste per weekday (281,300 per year) including solid waste that is brought to buy back centers located throughout the County. However, the MRF is currently permitted by the Placer County Solid Waste Local Enforcement Agency (LEA) to receive 1,750 tons per day (TPD). Approximately 11.9% of municipal solid waste (including bio-solids) and 86.7% of construction debris is hauled directly to the landfill because it is unsuitable for processing. Approximately 36.9% of the solid waste that is processed at this facility is diverted for recycling. (Will Dickinson, Placer County Solid Waste Division Manager, pers. comm., November 2003; Eric Oddo, Western Placer Waste Management

Authority, pers. comm., July 2005; Paul Szura, Assistant General Manager Nortech Waste, pers. comm., January 2006).

Unrecyclable solid waste received at the MRF is disposed of at the adjacent Western Regional Landfill, which has a disposal area of 231 acres. An additional 465 acres for landfill expansion are located west of the current site, but is not permitted for landfill use by the LEA at this time. In addition to municipal solid waste from the MRF, the landfill directly accepts sewage sludge and other materials. The landfill is permitted to accept about 3,800 cubic yards per day, or 1,364,000 cubic yards per year (1,900 tons per day or 682,000 tons per year). The landfill currently receives approximately 1,060 tons per weekday (275,600 tons per year).

A household hazardous waste facility is located at the Western Placer MRF. The facility is open at no charge to Placer County residents every Saturday, Sunday, and Wednesday from 8:00 a.m. to 4:00 p.m. Residents may bring up to five gallons or 50 pounds of household hazardous waste to the facility.

The Western Regional Sanitary Landfill is owned and operated by the Western Placer Waste Management Authority (WPWMA) comprised of Placer County and the cities of Roseville, Rocklin and Lincoln through a joint powers agreement for solid waste management. The Placer County Facilities Services Department, Solid Waste Management Division provides staff to the Waste Management Authority.

The total site capacity of Western Regional Sanitary Landfill is 36,350,000 cubic yards. As of July, 2005, the remaining net site capacity was approximately 13,680,000 tons of refuse. The estimated landfill closure date is 2036, based on the current permitted configuration and assumed waste growth rates (Eric Oddo, pers. comm., July 2005). The estimated closure date and service life of the landfill is predicated upon current growth and landfill capacity projections. In the last decade, unincorporated Placer County has grown an average of 4.38% per year and the cities of Roseville, Rocklin, and Lincoln had respective growth rates of 7.9%, 9.1%, and 5.5%.

Disposal/tipping fees for general refuse brought to the landfill and the MRF are currently $12.00 per cubic yard or $69.75 per ton for general refuse. These fees are used to cover the operation and maintenance costs of the landfill and to comply with regulatory requirements.

PROPOSED SOLID WASTE DISPOSAL-RELATED SPECIFIC PLAN TEXT

The following text related to solid waste disposal appears in the proposed Specific Plan:

Solid waste generated by existing residents of the Specific Plan area is collected and disposed of by the Auburn Placer Disposal Service. After collection, solid waste is transported to the Western Placer Waste Management Authority's MRF. Unrecyclable solid waste is disposed of at the adjacent Western Regional Landfill, which is anticipated to serve the needs of Placer County through the year 2036.

REGULATORY SETTING

There are no specific federal regulations pertaining to solid waste that would address environmental impacts associated with the proposed Specific Plan. Relevant goals and policies of the *Placer County General Plan* and the *Dry Creek/West Placer Community Plan*, local landfill permitting requirements, and State regulations relating to solid waste are discussed below.

STATE

Regulation affecting solid waste disposal in California is embodied in California State Assembly Bill (AB) 939, which is known as the Integrated Waste Management Act and was codified in the Public Resources Code and in Title 14 of the California Code of Regulations in 1992. AB 939 was designed to increase landfill life by diverting solid waste from landfills within the state and conserving other resources through increasing recycling programs and incentives. AB 939 requires that Counties prepare Integrated Waste Management Plans to implement landfill diversion goals, and requires that Cities and Counties prepare and adopt Source Reduction and Recycling Elements (SRRE). The SRRE must set forth a program for management of solid waste generated with the jurisdiction of the respective City or County. Each source reduction and recycling element must include, but is not limited to, all of the following components for solid waste generated in the jurisdiction of the plan:

- A waste characterization component,
- A source reduction component,
- A recycling component,
- A composting component,
- A solid waste facility capacity component,
- An education and public information component,
- A funding component, and
- A special waste component. The SRRE programs are designed to achieve landfill diversion goals by encouraging recycling in the manufacture, purchase and use of recycled products.

Landfills and MRFs are required to secure a Solid Waste Facilities Permit from the Placer County Solid Waste Local Enforcement Agency and obtain a report of Waste Discharge Requirements from the California Regional Water Quality Control Board (RWQCB) (California Integrated Waste Management Board, Website, July 2001).

AB 1327, known as the Solid Waste Reuse and Recycling Access Act of 1991, requires each jurisdiction to adopt an ordinance by September 1, 1994 requiring each development project to provide an adequate storage area for collection and removal of recyclable materials. Placer County has adopted an ordinance (Municipal Code Section 8.16.080) in compliance with AB 1327.

LOCAL

Placer County General Plan

The following are applicable goals and policies from the *Placer County General Plan*:

Goal 4.G: To ensure the safe and efficient disposal or recycling of solid waste generated in Placer County.

Policies:

4.G.1. The County shall require waste collection in all new urban and suburban development.

4.G.2. The County shall promote maximum use of solid waste source reduction, recycling, composting, and environmentally-safe transformation of wastes.

4.G.5. The County shall promote the siting of new solid waste collection and transfer facilities in locations as close as practical to the areas they serve.

4.G.7. The County shall require that all new development complies with applicable provisions of the Placer County Integrated Waste Management Plan.

4.G.9. The County shall encourage businesses to use recycled products in their manufacturing processes and consumers to buy recycled products.

Integrated Waste Management Plan

See discussion above under "State" of the Regulatory Setting regarding AB 939.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;
- Not comply with federal, State, and local statutes and regulations related to solid waste; or
- Be inconsistent with the goals and policies in the *Placer County General Plan.*

The Placer County Solid Waste Division has indicated that any project that contributes 3% additional waste per year, compared to current accepted tonnages at the MRF and landfill

(281,300 and 275,600 tons per year, respectively) should be considered to have a significant impact on those facilities.

4.11.5-1 Residential and commercial development in the Specific Plan area will increase the waste stream that would be delivered to the MRF and disposed of at the Western Regional Landfill.

Table 4.11-5 illustrates solid waste projected to be generated in the Specific Plan area based on 7.1 pounds of solid waste generated per dwelling unit per day, and 1.0 pound per day for each one hundred square feet of commercial development (Thom Carmichael, Placer County Solid Waste Management Division Planner, pers. comm., November 2005).

Table 4.11-5
Solid Waste Generation

Year	Square Feet/Dwelling Units	Factor	Solid Waste Generated (tons/yr)	Solid Waste Generated (cubic yards/yr)
Commercial (square feet)				
Buildout	3,597,838	1.0 lbs/day/100 sf	6,566	13,132
Residential (dwelling units)				
Buildout	14,132	7.1 lbs/day/d.u.	18,312	36,624
Total Buildout			**24,878**	**49,756**

1. Commercial square footage and dwelling unit projections provided by Placer County Planning Department
2. Waste generation rates provided by Placer County Solid Waste Management Division

At full buildout, development in the Specific Plan area will generate an estimated 24,878 tons per year of Municipal Solid Waste (MSW). Of that amount, 11.9% (2,960 tons) will go directly to the landfill, while the remaining 88.1% (21,918 tons) will go to the MRF for processing. The diversion rate at the MRF is approximately 63.1%; therefore, of the 21,918 tons per year that would be brought to the MRF for processing, 13,830 tons will be disposed of at the landfill.

These projections include sewage sludge (biosolids) and construction debris that will be generated during buildout of the Specific Plan area that will contribute to impacts to the landfill.

A total of 21,918 tons annually will be hauled to the MRF for processing. This represents an increase of approximately 7.8% annually. A total of 16,790 tons annually will be disposed of at the landfill. This represents an increase of approximately 6.1%. The landfill is currently estimated to remain open until 2036 with a remaining net capacity of approximately 13,680,000 tons. The additional solid waste generated by the Specific Plan would have the potential to reduce the life of the landfill by one to two years.

The County is required under AB 939 to prepare and adopt an SRRE, which includes the County's plan to divert solid waste from the landfill for all generated waste. To meet this requirement, the County actively pursues composting, business waste reduction, school recycling, curbside collection, public education and outreach programs to reduce the amount of solid waste generated. Community access to recycling facilities will increase the life of the landfill and reduce the amount of solid waste being separated at the MRF. However, the MRF is

currently operating at approximately 55% of permitted capacity, but activity is expected to intensify as growth in the area continues. The amount of development anticipated in the Specific Plan area would cause existing capacity and plans for future expansion to be exceeded and could hasten the closure of the Western Regional Landfill.

Environmental impacts of the proposed expansion of the landfill on the west side of Fiddyment Road were analyzed in the *Placer County Western Regional Landfill Expansion Draft Supplemental EIR* (SCH# 1985120208). A Final EIR was completed and certified; therefore, no additional analysis is required. The document is available for review at the address appearing in Section 2.9 in Chapter Two of this Revised Draft EIR. There are currently no proposals for expanding the landfill on the east side of Fiddyment Road.

According to Placer County Code Section 8.16.080, all commercial uses and certain residential uses within the Specific Plan area will be required to provide recyclable material storage, loading, and loading areas before building permits may be issued. Specific requirements for these areas and containers are to be determined by the County based on design criteria developed by the Department of Facility Services.

Based on the standards of significance, at buildout, the direct contribution of the Specific Plan area to the volume of solid waste currently accepted at the MRF and the landfill will exceed an additional 3% per year, and will represent a ***significant impact.***

<u>Mitigation Measures</u>

Implementation of the following mitigation measures will lessen impacts, but not to a *less than significant level:*

4.11.5-1a *Contractors shall be required to provide on-site separation of construction debris to assure a minimum 50% diversion of this material from the landfill.*

4.11.5-1b *Projects in the Specific Plan area shall contribute a fair share amount toward expansion of the MRF (including accommodation of a greenwaste program for Placer Vineyards) and landfill to the Western Placer Waste Management Authority. A mechanism for ensuring that this is implemented shall be described in the Development Agreement for the Specific Plan.*

4.11.5-1c *A source-separated greenwaste program shall be implemented within the Specific Plan area, subject to review and approval by the Western Placer Waste management Authority.*

4.11.5-1d *The Specific Plan proponents shall present a plan for County approval that meets the requirements of Placer County Code Section 8.16.080. The plan shall ensure the development and continuous operation and maintenance of recycling centers within the Specific Plan area. Recycling centers shall accept all types of recyclable waste, shall be fenced and screened from view, and shall be located in commercial or*

industrial areas dispersed throughout the Specific Plan area. The first recycling center shall be established upon issuance of the 1500th residential building permit.

OFF-SITE INFRASTRUCTURE

4.II.5-2 There could be solid waste collection and disposal impacts due to installation and maintenance of utilities and roadway widening.

Construction and maintenance of utilities and roadway widening in off-site areas would create only minor amounts of solid waste. Construction activity could temporarily interfere with the collection of solid waste; however, standard traffic control and property access requirements will be implemented by the County or other affected jurisdictions, through the encroachment permit process. Therefore, the impact would be ***less than significant***.

Mitigation Measures

No mitigation measures are required.

4.II.5-3 There could be impacts to roadways and surrounding land uses due to transportation of solid waste to the MRF and Western Regional Landfill.

At buildout, Auburn-Placer Disposal Service could make as many as 20 trips a day to transport solid waste to the MRF and landfill. It is anticipated that trucks would use Baseline Road, Fiddyment Road, Blue Oaks Boulevard, Industrial Avenue, and Athens Avenue when traveling to and from the landfill. Roadways within the City of Roseville are designated as truck routes which means they have been designed to accommodate the anticipated truck traffic. The County does not identify specific truck routes, but the subject roadways contain signage indicating that they are to be used for landfill access and contain no weight-restricted bridges. Fiddyment Road and Blue Oaks Boulevard are "California Legal Routes," while Baseline Road is an "STAA Federal Route" (http://www.roseville.ca.us/civica/filebank/blobdload.asp?BlobID=2144).

Additionally, the County-maintained portion of Fiddyment Road (north of Blue Oaks Boulevard) was recently improved and the 7-ton weight limit was subsequently removed (Rick Dondro, Assistant Director, Placer County Public Works Department, pers. comm., January 2006). Although use of these roadways to transport solid waste could generate noise and roadway maintenance effects, these effects would have been anticipated when the routes were designated as truck routes, and subsequent planning would have taken this designation into consideration when roadways were constructed, sound walls erected, and building orientation and setbacks established. This is a ***less than significant impact***.

Mitigation Measures

No mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.II.5-4 The Specific Plan would contribute to cumulative increases in the waste stream that would be delivered to the MRF and disposed of at the Western Regional Landfill.

The proposed Specific Plan, along with other approved and proposed projects within the service area of the MRF and Western Regional Landfill, will incrementally contribute to the decrease of their service life, thereby creating a ***potentially significant and considerable cumulative impact***. It is estimated that the Specific Plan alone will reduce landfill life by one to two years. Other proposed projects are planning over 30,000 additional dwelling units in Placer County and will have a similar effect, shortening the useful life of the landfill by three to five years.

Mitigation Measure

Implementation of mitigation measures 4.11.5-1a-d will lessen this cumulative impact, *but not to a less than considerable level (i.e., less than significant).* No other feasible mitigation measures are available.

4.II.6 WASTEWATER

This section examines the project proposal for providing wastewater (sanitary sewer) service to the Specific Plan area. Proposed wastewater collection, conveyance and treatment facilities, and on- and off-site infrastructure necessary to serve the area are discussed with regard to their potential environmental effects. The discussion is based, in part, on the *Placer Vineyards Specific Plan Sewer Master Plan*, (MacKay & Somps, Jan. 2006) (Sewer Master Plan) and several memoranda prepared by RMC Water and Environment (RMC). The Sewer Master Plan is available for review at the address appearing in Section 2.9 in Chapter Two of this Revised Draft EIR. The RMC Technical Memoranda appear in Appendix R of this Revised Draft EIR.

ENVIRONMENTAL SETTING

WASTEWATER COLLECTION, TREATMENT AND DISPOSAL

Sewer services in Placer County are provided by the Placer County Facilities Services Department, Special Districts Division. This division maintains sewer lines, cleans sewers, and operates and maintains wastewater treatment plants operated by Placer County. Areas served include North Auburn, Granite Bay, Sabre City, Sunset Industrial area, Sheridan, Applegate and Blue Canyon. Wastewater from Granite Bay, Sunset Industrial area and the Dry Creek communities area (Sabre City) are treated by the City of Roseville under the operations agreement among the participants of the South Placer Wastewater Authority (SPWA).

New development in the Specific Plan area would be served with a wastewater collection and treatment system. The Specific Plan proponents have identified a preferred plan for wastewater collection and treatment that would direct wastewater for the entire Specific Plan area to the Dry Creek Wastewater Treatment Plant (DCWWTP) for treatment and disposal, and an optional plan for the western 4,340 acres of the Specific Plan area that would use the SRCSD. In this case,

wastewater treatment and disposal would occur at the Sacramento Regional Wastewater Treatment Plant (SRWTP) operated by SRCSD. The DCWWTP is owned and operated by the City of Roseville on behalf of the participants of the SPWA, a Joint Powers Authority responsible for funding capital construction of infrastructure. This section discusses the two proposals, and the infrastructure required with regard to each.

Background

The Specific Plan area constitutes the western portion of the Dry Creek/West Placer Community Plan area. According to that Community Plan, approximately 1,900 people lived within the entire Community Plan area in 1989. The Specific Plan area has not experienced substantial population growth in the intervening years; the current population of the Specific Plan area is approximately 500.

Wastewater disposal in the Specific Plan area is currently provided through individual on-site wastewater disposal systems. These on-site sewage disposal systems are either septic tanks with leaching trench systems, or septic tanks with seepage pit systems.

The RWQCB has indicated that the Dry Creek area is under increasing "pollutant load" due to urbanization. An assessment of individual on-site sewage disposal system impacts prepared by the Placer County Health Department for the Dry Creek/West Placer Community Plan area concluded that low soil permeability and cumulative groundwater contamination would contribute to the buildup of nitrates and nitrate-nitrogen concentration in groundwater. The report further concluded that continued groundwater pumping in the area would reduce the amount of water for dilution of nitrates, salts and other mineral constituents and would result in the use of impure groundwater for domestic and waste disposal purposes. Based on the conclusions of this report, the Placer County Health Department has mandated that all development in the Community Plan area on lots smaller than seven acres in size be connected to a public sewer system (*Dry Creek/West Placer Community Plan EIR*, May 1990).

When adopted, the *Dry Creek/West Placer Community Plan* assumed that development would occur initially in the eastern portions of the planning area, developing westward based on market conditions. It was assumed that the large agricultural parcels within the Specific Plan area would continue to receive wastewater service through individual sewage disposal systems.

The *Dry Creek/West Placer Community Plan* contained four planning scenarios with populations ranging from 11,125 to 29,180 residents.

In 1988, the Placer County Planning Department retained the engineering firm Psomas and Associates to prepare a Facilities Plan to study wastewater treatment and disposal, water supply and drainage. The resulting *West Roseville Public Facilities Plan* was incorporated by reference into the *Dry Creek/West Placer Community Plan*. The report analyzed two alternatives: 4,847 dwelling units and 10,767 dwelling units, resulting in population estimates lower than those now proposed in the Specific Plan.

The *West Roseville Public Facilities Plan* identified three wastewater treatment alternatives for the area from the city limits of Roseville west to the Placer/Sutter county line, including the Specific Plan area. The alternatives were:

1. Connection to the SRWTP by the extension of a sewer interceptor into Placer County, with appropriate financial arrangements between Placer County and SRCSD with regard to improvements in the SRCSD conveyance and treatment system.

2. Connection to the DCWWTP, through the construction of new sewer interceptors; the construction of a major sewer lift station and force main to convey the wastewater to the treatment plant; and the enlargement of the treatment plant to handle the proposed wastewater flows.

3. Construction of a new wastewater treatment plant for the area west of Roseville.

Alternative One, connection to the SRCSD wastewater treatment plant, was selected as the most feasible at that time.

The basic approach outlined in Alternative One is the optional service method originally proposed for the western 4,340 acres of the Specific Plan area. Alternative Two, connection to the DCWWTP, through the construction of new sewer interceptors; the construction of a major sewer lift station and force mains to convey the wastewater to the treatment plant; and the enlargement of the DCWWTP to handle the proposed wastewater flows is now the preferred plan.

Wastewater Conveyance Facilities

Sewer service within the Specific Plan area would be collected through a series of on-site sewer trunk lines. The location of sewer trunk lines within the Specific Plan area, design of trunk lines as gravity or force mains, and the need for and location of lift stations could vary depending on final design; however, Figures 3-17A and 3-17B identify the most probable initial on-site core backbone collection systems. The core backbone collection systems will be designed with the intent of providing sewer service to the SPA.

The local collection system would be owned and operated by the County under a new County Service Area, or a new zone of benefit under existing County Service Area #28. The County also proposes to own and operate all off-site sewerage facilities within the unincorporated area of Placer County.

The Specific Plan area consists of two wastewater service areas. As described in the Sewer Master Plan for the project, wastewater flows from the western 4,340 acres (Shed A) of the site would be directed to the DCWWTP by way of a force main. The conveyance to deliver wastewater to the DCWWTP would include construction of a gravity system delivering wastewater to the western end of the Specific Plan area, a lift station, and a force main to pump wastewater easterly to the DCWWTP. This concept is illustrated on Figure 3-17A in Chapter Three of this Revised Draft EIR.

As shown on Figures 3-6 and 3-7, an off-site sewer connection corridor serving Shed A would extend from the Specific Plan area southerly along the alignment of Watt Avenue, then easterly along the alignment of PFE Road and northerly to the DCWWTP by way of one of two proposed alignments. The primary alignment would proceed northerly to the plant, on the easterly segment of Hilltop Circle, through the City of Roseville Corporation Yard (there is also an alternative alignment just east of the City of Roseville Corporation Yard). An alternative alignment would leave PFE Road at Cook Riolo Road, turning easterly to the DCWWTP just north of Dry Creek; however, this alignment could physically impede the northerly expansion of the DCWWTP.

For the easterly 890± acres of the Specific Plan area (Shed B) within the current SPWA regional service area, conveyance facilities were constructed in part with the first phase of the Dry Creek/Western Placer Community Facilities District #1 (CFD) project. A pump station and force main 1,400 feet east of Walerga Road and north of PFE Road have been designed and built to accept flows from Shed B for conveyance to the DCWWTP. A force main will be constructed to extend this source west to a proposed lift station (identified as Lift Station #2 in the *Dry Creek/West Placer CFD #1 Public Facilities Master Plan)* where gravity flows will be received from Shed B. An existing gravity sewer pipeline in Walerga Road was designed to provide capacity to serve approximately 315 of the Shed B dwelling units that are adjacent to Walerga Road.

The 1996 Master Plan estimated anticipated flows to assist with sizing of main trunk infrastructure and to provide insight when treatment plant expansions may be necessary. For the Specific Plan area (Shed B), the CFD projected only 766 equivalent dwelling units (EDUs) to be conveyed to the DCWWTP. Because of this decision, Lift Station #2 (which is not yet built) was planned for a flow of 0.54 MGD, which would serve the proposed Riolo Vineyards Specific Plan area, and a portion of the Specific Plan area (Shed B) (0.212 MGD). These anticipated flows are compared to a projected demand of 0.48 MGD to serve 2,536 dwelling units in Shed B. There is, however, some additional incremental trunk main capacity, depending on buildout of the Dry Creek/West Placer Community Plan area, in the existing trunk system built with the Morgan Creek development. Regardless of how much sewer trunk capacity is ultimately available, project proponents propose to construct new sewer trunk mains to the DCWWTP (as described above) to provide sufficient conveyance and pump station capacity for initial and ultimate flow. This may include the upsizing of proposed facilities at Lift Station #2 and other related facilities.

As an option for Shed A, the SRCSD facilities could be utilized (SRCSD Option). In this event, the utility corridor for connection of the Specific Plan area to SRCSD would extend from the Specific Plan area southerly following the alignment of Sorrento Road to the SRCSD Upper Northwest Interceptor at a point in Elkhorn Boulevard (see Figure 3-6, Alternative A, in Chapter Three of this Revised Draft EIR). An alternative corridor has also been identified for the proposed primary long-term sewer connection to the SRCSD. This alternative corridor would extend south from the Specific Plan area following the alignment of Elwyn Avenue, west along Elverta Road and finally south along the alignment of West 6th Street to the SRCSD Upper Northwest Interceptor at a point in Elkhorn Boulevard (Figure 3-6, Alternative B, in Chapter Three of this Revised Draft EIR).

Conveyance of sewage flows from Shed A to SRCSD's Sacramento Regional Wastewater Treatment Plant (SRWTP) requires the Lower Northwest Interceptor (now under construction) from the SRCSD treatment plant in Freeport through West Sacramento to a major pump station in North Natomas. The Upper Northwest Interceptor will then be completed to a point in Elkhorn Boulevard near Rio Linda Boulevard. Construction of the Lower Northwest Interceptor is slated for completion January 2007. The Upper Northwest Interceptor is planned for completion in 2010.

The applicants have stated that jack and bore construction techniques would be used wherever the proposed utility lines cross Dry Creek, in order to avoid creek disturbance. Jack and bore methods usually employ a horizontal boring machine or auger to bore beneath the creek. A steel casing is typically installed and the sewer pipe is installed inside the casing. Jacking methods involve installing a pipeline by pushing the casing pipe through the ground with large hydraulic jacks situated within a jacking pit located at either end of the crossing. A variation of the jacking method involves jacking the carrier pipe directly into place and completing the installation in a single step.

Wastewater Treatment

Specific Plan proponents propose that wastewater flows from the Specific Plan area be directed to the DCWWTP. Although technically feasible, implementation would require the expansion of capacity at the DCWWTP, the successful negotiation of agreements between members of the SPWA, and the City Of Roseville's ability to obtain the necessary National Pollutant Discharge Elimination System (NPDES) permit to discharge additional flow.

Treating wastewater flows from the westerly portion of the Specific Plan area at the DCWWT P would also require expansion of the current service area for the plant. The 1996 *Roseville Regional Wastewater Treatment Service Area Master Plan* (1996 Master Plan) details wastewater service and operations within the existing service area, establishing flow basin designations, discharge volumes, and infrastructure needs. This document was the basis for the EIR prepared in 1996 analyzing wastewater services in the region. Expansion of the service area would require the following specific actions:

- After certification by Placer County, the review and consideration of this CEQA document by the SPWA as a responsible agency.

- Modification of the Memorandum of Understanding (MOU) between the City of Roseville and the U.S. Fish and Wildlife Service (USFWS) that outlines conditions for the operation of the treatment facilities, and specifically defines the existing service area.

- Modifications to the Funding Agreement and Operations Agreement between the SPWA members, including City of Roseville, the South Placer Municipal Utility District, and Placer County.

The DCWWTP has a constructed and permitted capacity of 18 MGD (NPDES No. CA00164, Order No. 5-00-164). A recent Technical Memorandum prepared for the Regional Wastewater Authority Wastewater and Recycled Water Systems Evaluation Project (*Wet Weather Flow Projection for the Ultimate SPWA Service Area)*, by RMC (see Appendix R) indicates that the 2004 average dry weather flow for the DCWWTP was 10.36 MGD (RMC Table 3).

The 1996 Master Plan EIR analyzed a proposal to expand the plant to as much as 54 MGD. However, the Roseville City Council chose to construct a new plant, the Pleasant Grove Wastewater Treatment Plant (PGWWTP), and to eventually expand the DCWWTP to 24 MGD.

The SPWA is currently preparing technical studies evaluating regional solutions to wastewater and recycled water systems. As described above, RMC has prepared several Technical Memoranda (technical studies), including estimates of flows generated by each land use type, and projected buildout flows within the regional service area. RMC's *Dry Weather Flow Projection for the 2005 Proposed SPWA Service Area* (see Appendix R), provide the calculated wastewater flows for the service area used in the 1996 Master Plan as well as calculated wastewater flows for the 2005 service area. The dry weather flow projection for the 1996 Master Plan service area is 29.0 MGD and the flow projection for the 2005 service area is 30.5 MGD (includes "housekeeping areas"). Each of these scenarios includes 0.85 MGD contributed by the Specific Plan area (Shed B). These flow projections are substantially less than the 45.6 MGD flow projection in the 1996 Master Plan, due primarily to a 27% reduction in flow factors for the residential units and a 20% reduction in overall development densities. The average residential flow factor used by RMC and the SPWA is now 190 gallons per day per dwelling unit rather than the 260 gallons per day used in the 1996 Master Plan.

Although projected Dry Weather Flows for the 2005 service area reflect a demand of 30.5 MGD, treatment is provided at two wastewater treatment plants, DCWWTP and PGWWTP. The 30.5 MGD demand is divided between the two facilities in RMC's work, with 14.8 MGD allocated to DCWWTP and 15.7 MGD allocated to PGWWTP. As described above, DCWWTP has a constructed capacity of 18 MGD and a planned capacity of 24 MGD.

As previously described, the eastern 890 acres of the Specific Plan area (Shed B) is currently within the service area of the DCWWTP. The 1996 Master Plan indicates that planned flows from this area are those contained in the Spink Sewer Master Plan prepared for the *Dry Creek/West Placer Community Plan*, which projected that flows from 766 equivalent dwelling units (EDUs) would be conveyed to the DCWWTP from Shed B. Based on the new Sewer Master Plan (MacKay & Somps) prepared for the Specific Plan, the projected treatment plant demand at buildout is 0.48 MGD, which will accommodate 2,536 dwelling units. The RMC technical studies cited above project a 0.85 treatment demand at buildout of Shed B. This 0.37 MGD difference is attributable to the fact that the RMC work assumes the Blueprint Alternative, while MacKay & Somps assumed the proposed Specific Plan, as described in more detail below.

Another Technical Memorandum (*Dry Weather Flow Projection for the Ultimate SPWA Service Area [Including Urban Growth Areas])* prepared by RMC (Appendix R) provides a buildout (cumulative) wastewater flow scenario for the West Placer area and includes in its analysis the various development projects (Urban Growth Areas) shown on Figure 4.11-3, including the

Specific Plan area. According to the Technical Memorandum, the "Ultimate SPWA Service Area" will generate cumulative dry weather flows of 42.7 MGD. Of that amount 19.3 MGD would flow to the DCWWTP. This exceeds the current constructed capacity of 18 MGD, but is well within the 1996 Master Plan capacity of 24 MGD. At buildout, the Specific Plan area would contribute approximately 2.79 MGD of the 19.3 MGD flowing to the DCWWTP for treatment and discharge.

Note: the RMC Technical Memorandum assumes that the Placer Vineyards Specific Plan would build out in a manner similar to the Blueprint Alternative (see Section 6.3.4 in Chapter Six of this Revised Draft EIR for a description of the Blueprint Alternative), with approximately 21,000 dwelling units, and contribute 3.89 MGD to plant flows. The Placer Vineyards "project" assumes 14,132 dwelling units, and calculations from the Sewer Master Plan are based on this smaller number of dwelling units which would contribute 1.1 MGD less flow than predicted by RMC. In other words, the RMC analysis is "conservative" and, potentially, overstates the magnitude of the Placer Vineyards Specific Plan contribution.

The allocation of capacity at the DCWWTP is based on a first-come, first-served system for property located in the service area. The DCWWTP would need to be expanded to accommodate the additional flows, and the current NPDES waste discharge requirements would need to be amended. DCWWTP discharges treated effluent to Dry Creek. The DCWWTP provides tertiary-level treatment through processes of screening, grit removal, primary clarification, aeration, secondary clarification, filtration, chlorination and dechlorination. Sewage sludge is disposed of at the Western Regional Landfill and treated wastewater is recycled or discharged to Dry Creek.

RMC reports that the DCWWTP was designed for an influent biochemical oxygen demand (BOD) of 160mg/l and total suspended solids (TSS) concentration of 240 mg/l. These concentrations were lower than the average municipal wastewater strength, but reflected the service area characteristics at the time, primarily residential. The characteristics of the service area are changing dramatically. Since 2000, the number of restaurants has increased approximately 50% and there has been a considerable increase in other non-residential land use. Water conservation programs have decreased the volume of wastewater conveyed per capita without decreasing the pounds of organics being introduced to the sewer system, which concentrates the strength of wastewater. This change in wastewater strength could have an effect on water quality in Dry Creek as the plant expands and flows increase. To address this concern, Merritt Smith Consulting was employed to examine potential water quality and aquatic resource effects in Dry Creek. The results of Merritt Smith's work appear in Appendix Q and are reported in detail in Sections 4.3.4 and 4.4 of this Revised Draft EIR.

Sacramento Regional County Sanitation District Service

As noted above, as an option, SRCSD could provide wastewater service to the 4,340 acres (Shed A) generally west of Watt Avenue. SRCSD has completed an update of its *Interceptor Master Plan*. In addition, the District has completed a *2020 Master Plan for the Sacramento Regional Wastewater Treatment Plant*.

The Interceptor Master Plan is intended to update and refine the regional wastewater conveyance facilities identified in the District's 1993-1994 *Sacramento Sewerage Expansion Study*. The Interceptor Master Plan's study area includes most of the areas within the Urban Services Boundary as defined in the *Sacramento County General Plan*, as well as five areas that could have a potential impact on the system, including the Specific Plan area. The Interceptor Master Plan indicates that SRCSD is currently in discussions with Placer County regarding providing sewage conveyance, treatment, and disposal services to the Specific Plan area.

The Interceptor Master Plan indicates that capacity deficiencies exist in the existing interceptor system that affect timing and capacity availability for any services to the Specific Plan area. There is no capacity currently available at the Arden Pump Station and upstream of the Dry Creek Interceptor. To relieve system demands SRCSD is constructing the Lower and Upper Northwest Interceptors. As previously described, the Lower Northwest Interceptor is under construction and slated for completion in 2006. The Upper Northwest Interceptor could reach to Elkhorn Boulevard near central Rio Linda by 2010 where the Specific Plan proponents would receive service by way of one of two optional trunk lines shown on Figure 3-6 in Chapter Three of this Revised Draft EIR. A diagram of the SRCSD interceptor system is included in Appendix O.

To accommodate the additional flows into the Northwest Interceptor (NWI) system, if all the flows projected for the NWI occur and the facility nears capacity, it could become necessary to construct an offline wastewater storage tank near the intersection of Interstate 5 and Interstate 80. Construction of such a storage tank would allow wastewater to be stored until the peak period flow recedes and the pipeline is able to accommodate the flow. Connection to the system would be allowed prior to construction of this storage tank, but the District's Master Plan would need to be amended to incorporate this additional improvement and a fee structure to finance it.

The *2020 Master Plan for the Sacramento Regional Wastewater Treatment Plant* identified the Specific Plan area as a "Potential Future Annexation" area to be served by the facility. However, capacity assumptions for the treatment plant were based on population-based wastewater flow projections for the current service area and the projected annexation of the City of West Sacramento.

The average flow to the SRWTP is 165 MGD. The maximum permitted (peak) dry weather flow to the treatment plant is 181 MGD, and the maximum (peak) average wet weather flow is 400 MGD. According to the SRCSD *Master Plan 2000*, the projected average dry weather flow in the year 2020 will be 218 MGD. The SRWTP capacity would ultimately need to be increased to provide for additional growth in the region, including the impacts of providing services to areas outside their Sphere of Influence, such as Shed A of the Specific Plan.

The Specific Plan area is not within the service area or Sphere of Influence of the SRCSD. If the option to have SRCSD provide wastewater treatment services for territory within Shed A were to be implemented, an interagency agreement between SRCSD and Placer County would be necessary to establish the applicable conditions, rules, regulations and service fee structure under which SRCSD would provide wastewater treatment to Placer County. Neither Sacramento County LAFCo nor Placer County LAFCo is required to approve any such contract.

SRCSD and Placer County would also be required to address several issues, including connection fees per equivalent dwelling unit, rates, timing and details of service delivery, design of required infrastructure, governance, and contractual issues.

Placer Vineyards Wastewater Flow and Treatment

Sewer lines and interceptors are proposed to be sized based on peak transmission flows. The average dry weather flow (ADWF) is calculated using the expected wastewater flow of 190 gallons per day (GPD) per dwelling unit (DU) as per the RMC analysis discussed above. A unit flow factor of 260 GPD was used in the *Roseville Regional Wastewater System Master Plan* (1996). SRCSD has recently revised its representative value for Equivalent Single Family Dwellings (ESDs) to reflect higher densities, and currently uses a unit flow factor of approximately 310 GPD per ESD.

According to the Sewer Master Plan, the project will generate an Average Dry Weather Treatment Plant Flow of 2.79 MGD at buildout. Table 4.11-6 shows anticipated wastewater flows for combined Sheds A and B (entire Specific Plan area). Table 4.11-7 shows projected flows from Shed A and Shed B separately.

Table 4.II-6
Wastewater Flow Summary – Specific Plan Area

Land Use	Area Size (Acres)	Units	Average Transmission Flow (MGD)	Average Treatment Plant Flow (MGD)
LDR – Low Density Residential	727.0	2552	1.02	0.49
LDR – Low Density Residential (Age Restricted)	264.0	903	0.36	0.17
MDR – Medium Density Residential	1196.0	6266	2.51	1.19
HDR – High Density Residential	190.0	2844	0.85	0.37
CMU – Commercial Mixed Use (Residential)	46.9	844	0.25	0.11
CMU – Commercial Mixed Use (Commercial)	20.1		0.03	0.05
COM – Commercial Residential	67.5		0.11	0.06
O – Office	34.5		0.06	0.03
PC – Power Center	60.0		0.10	0.05
BR – Business Park	98.5		0.16	0.08
PUB – Public Facilities and Services	56.5		0.09	0.04
REL – Religious Facilities	89.0	312	0.13	0.06
ES – Elementary Schools	60.0		0.10	0.01
MS – Middle Schools	40.0		0.06	0.01
HS – High School	40.0		0.06	0.01
SPA – Special Planning Area	979.0	411	0.16	0.08
DRY WEATHER FLOW	**3,969.0**	**14,132**	**6.05**	**2.79**

Notes:
1. For transmission flow, reference Standard Drawing No. 2 in the Placer County Land Development.
Source: *Placer Vineyards Specific Plan Sewer Master Plan*, MacKay & Somps, 2006

Table 4.II-7 Wastewater Flow Summary – Sheds A & B				
Land Use	**Area Size (Acres)**	**Units**	**Average Transmission Flow (MGD)**	**Average Treatment Plant Flow (MGD)**
Shed A				
LDR – Low Density Residential	547.5	1924	0.77	0.37
LDR – Low Density Residential (Age Restricted)				
MDR – Medium Density Residential	1071.5	5648	2.26	1.07
HDR – High Density Residential	170.5	2551	0.77	0.33
CMU – Commercial Mixed Use (Residential)	46.9	844	0.25	0.11
CMU – Commercial Mixed Use (Commercial)	20.1		0.03	0.05
COM – Commercial Residential	42.5		0.07	0.04
O – Office	34.5		0.06	0.03
PC – Power Center	60.0		0.10	0.05
BR – Business Park	98.5		0.16	0.08
PUB – Public Facilities and Services	56.5		0.09	0.04
REL – Religious Facilities	62.0	218	0.09	0.04
ES – Elementary Schools	60.0		0.10	0.01
MS – Middle Schools	40.0		0.06	0.01
HS – High School	40.0		0.06	0.01
SPA – Special Planning Area	979.0	411	0.16	0.08
DRY WEATHER FLOW	**3,329.5**	**11,596**	**5.02**	**2.31**
Shed B				
LDR – Low Density Residential	179.5	628	0.25	0.12
LDR – Low Density Residential (Age Restricted)	264.0	903	0.36	0.17
MDR – Medium Density Residential	124.5	618	0.25	0.12
HDR – High Density Residential	19.5	293	0.09	0.04
CMU – Commercial Mixed Use (Residential)				
CMU – Commercial Mixed Use (Commercial)				
COM – Commercial Residential	25.0		0.04	0.02
O – Office				
PC – Power Center				
BR – Business Park				
PUB – Public Facilities and Services				
REL – Religious Facilities	27.0	94	0.04	0.02
ES – Elementary Schools				
MS – Middle Schools				
HS – High School				
SPA – Special Planning Area				
DRY WEATHER FLOW	**639.5**	**2,536**	**1.03**	**0.48**

Notes:
1. For transmission flow, reference Standard Drawing No. 2 in the Placer County Land Development Manual.
   Source: *Placer Vineyards Specific Plan Sewer Master Plan*, MacKay & Somps, 2006

A comparison of wastewater generation rates used to calculate transmission flows and the rates used to calculate treatment plant flows show that transmission rates exceed the treatment plant rates. According to the Sewer Master Plan, the difference in generation rates results from the attenuation of peak flows that occurs as wastewater flows from the outer reaches of the transmission system to the treatment plant.

SPECIFIC PLAN PROPOSED WASTEWATER-RELATED TEXT

The following language related to wastewater is contained in the proposed Specific Plan.

(Note: all figure references in this section are to the Specific Plan)

The Plan Area consists of two wastewater service areas. The approximately 890± acres generally east of Watt Avenue (see Figure 8.4) are within the service area of the DCWWTP, which is operated under a joint powers authority agreement between Placer County, the City of Roseville, and the South Placer Municipal Utility District. The larger remaining portions of the Plan Area west of Watt Avenue are not within the DCWWTP's service area. Two options available to serve the Specific Plan area are described below. Refer also to the *Placer Vineyards Specific Plan Sewer Master Plan* (Sewer Master Plan) (McKay & Somps, January 2006) for more detailed information.

Existing Wastewater Treatment and Disposal

Wastewater treatment and disposal in the Plan Area is currently provided through individual on-site wastewater disposal systems. These on-site disposal systems are either septic tanks with leaching trench systems or seepage pit systems.

Planned Wastewater Collection and Treatment

The preferred option for wastewater service is to treat flows from the entire Plan Area at the DCWWTP. Most of the approximately 890 acres in the eastern portion of the Plan Area, which are already within the current service area of the DCWWTP, would be served by a collection system discharging to a sewage lift station to be located south of Dyer Lane and east of Watt Avenue. From the lift station, wastewater flows would be carried in a force main along the south side of Dry Creek to an existing force main, located east of Walerga Road (see Figure 8.5).

Wastewater from the approximately 4,340 acres (Shed A) in the western portion of the Plan Area, would be directed to the DCWWTP by way of two 16 - 20 inch diameter force main pipelines in the same utility corridor. This corridor would extend from the Specific Plan area, south along Watt Avenue, east along PFE road, and north to the plant by way of one of two proposed alignments. The primary alignment will proceed northerly to the plant on the easterly segment of Hilltop Circle through the Roseville Corporation Yard (there is also an alternative alignment just east of the City of Roseville Corporation Yard). An alternative alignment will leave PFE Road at Cook Riolo Road, turning easterly to the DCWWTP just north of Dry Creek.

Alternative Wastewater Collection and Treatment.

An option for the collection and treatment of wastewater from the Shed A would be to send wastewater to the SRCSD (see Figure 8.6). Under this option, sewage would flow via gravity, following the alignment of Sorrento Road, to the SRCSD Upper Northwest Interceptor at a point on Elkhorn Boulevard (Alternative A), or south from the Specific Plan area, following the alignment of Elwyn Avenue, west along Elverta Road, south along the alignment of West 6th Street, and connecting to the SRCSD Upper Northwest Interceptor at a point on Elkhorn Boulevard (Alternative B) (see Figure 8.4). Wastewater treatment would occur at the Sacramento Regional Wastewater Treatment Plant.

REGULATORY SETTING

FEDERAL AND STATE

Waste Discharge Requirements

The State Water Resources Control Board (SWRCB) adopted Resolution 68-16 regarding a "Statement of Policy with Respect to Maintaining High Quality of Waters in California". The SWRCB declared in this resolution that any activity that produces or could produce a waste or increased volume or concentration of waste will be required to meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to ensure a nuisance will not occur and that high water quality will be maintained for the benefit to the people of the state. These waste discharge requirements apply to any wastewater treatment plant(s) that serve the Specific Plan area.

Sacramento Basin Plan

The RWQCB has established water quality objectives for the Sacramento River Basin in order to protect the beneficial uses of these waters (*The Water Quality Control Plan [Basin Plan] For the California Regional Water Quality Control Board Central Valley Region*, 1998). Covering 27,210 square miles, the Basin includes all watersheds tributary to the Sacramento River that are north of the Cosumnes River watershed, the closed basin of Goose Lake, and the drainage sub-basins of Cache and Putah Creeks.

Principal streams of the Basin are the Sacramento River and its larger tributaries: the Pit, Feather, Yuba, Bear, and American Rivers to the east; and Cottonwood, Stony, Cache, and Putah Creeks to the west. Major reservoirs including Shasta, Oroville, Folsom, Clear Lake, and Lake Berryessa are included in the Basin. Beneficial uses of the surface waters include municipal and domestic supply; agricultural supply; industrial service, process, and power supply; contact and non-contact recreation; freshwater, migration, spawning and wildlife habitat; and navigation.

Basin Plans establish protective standards for ground waters in addition to surface waters. At least 63 ground water basins are in the Sacramento River Basin. Beneficial uses for groundwater include municipal and domestic supply, agricultural supply, and industrial service and process supply.

To protect the beneficial uses, the Basin Plan establishes objectives for both surface and ground waters. Surface water objectives cover the following topics: bacteria, biostimulatory substances, chemical constituents, color, dissolved oxygen, pesticides, radioactivity, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity. Water quality objectives for ground waters cover the topics of bacteria, chemical constituents, radioactivity, tastes and odors, and toxicity.

In addition to protection of beneficial uses, the Basin Plan includes additional resolutions to protect the waters of the Sacramento River Basin. Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Water in California*, states:

> …The policy generally restricts the Regional Water Board and dischargers from reducing the water quality of surface or ground waters even though such a reduction in water quality might still allow the protection of the beneficial uses associated with the water

Resolution 77-1, *Policy and Action Plan for Water Reclamation in California*, requires the State to conduct reclamation surveys and implement reclamation actions so that reclaimed water may be made available to meet the state's growing water requirement.

LOCAL

Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

The SRCSD is a special district serving multiple jurisdictions, but does not currently provide service within Placer County. If the option to have SRCSD provide wastewater treatment services for territory within Shed A were to be implemented, an interagency agreement between SRCSD and Placer County would be necessary to establish the applicable conditions, rules, regulations and service fee structure under which SRCSD would provide wastewater treatment to Placer County. In accordance with Government Code section 56133(e), neither Sacramento County LAFCo nor Placer County LAFCo is required to approve any such contract.

As an alternative to an interagency agreement between SRCSD and Placer County, the territory within Shed A could be annexed to SRCSD. In this case, the sphere of influence for SRCSD would need to be expanded to include the territory within Placer County prior to either Sacramento County LAFCo or Placer County LAFCo considering such an annexation. A municipal service review would likely also be necessary.

Sacramento Regional County Sanitation District Alternative Impact Fee Structure

In early 2002, the SRCSD Board of Directors adopted an alternative impact fee structure for new hook-ups to the sewer system, which became effective April 1, 2002.

SRCSD customers pay two types of fees:

- An "impact fee" when they first connect. This fee generally relates to the cost for constructing facilities.

- A "monthly user rate" each month thereafter, which is intended to cover the cost to operate, maintain, and replace or improve facilities.

Impact fees have generally been the same throughout the District since its formation. The recently approved fee program creates a two-tiered impact fee for the *conveyance* of wastewater; impact fees for the *treatment* facilities will remain uniform within the District. Wastewater conveyance fees are now lower for areas identified as "infill" development, and higher for new growth areas.

The "infill" definitions are as follows:

1. Sewershed is within 1975 SRCSD Boundary, and is 50% built-out based on equivalent single family dwellings (ESDs) or acreage.

2. Sewershed is outside the 1975 SRCSD Boundary, and is 50% built-out based on ESDs.

3. Various specific exceptions to these rules were adopted to recognize unique situations.

As a new growth area, the Specific Plan area would, based on the adopted two-tiered impact fees, be subject to the higher level of connection fees. Effective April 1, 2006, fees for new growth areas will be raised to $7,000 per dwelling unit.

Placer County

The planning goals and policies of the *Placer County General Plan* relating to wastewater issues are listed below.

- **Placer County General Plan.** The following are applicable goals and policies from the Placer County General Plan:

Goal:

4. To ensure adequate wastewater collection and treatment and the safe disposal of liquid and solid waste.

Policies:

4.C.4 The County shall promote the use of reclaimed wastewater to offset the demand for new water supplies.

4.D.1. The County shall limit the expansion of urban communities to areas where community wastewater treatment systems can be provided.

4.D.2. The County shall require proponents of new development within a sewer service area to provide written certification from the service provider that either existing services are available or needed improvements will be made prior to occupancy.

4.D.4. The County shall promote efficient water use and reduced wastewater system demand by:

a. Requiring water-conserving design and equipment in new construction;
b. Encouraging retrofitting with water-conserving devices; and,
c. Designing wastewater systems to minimize inflow and infiltration to the extent economically feasible.

4.D.5. The County shall encourage pretreatment of commercial and industrial wastes prior to their entering community collection and treatment systems.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Exceed wastewater treatment requirements of the applicable RWQCB.
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Violate any water quality standards or waste discharge requirements.
- Be inconsistent with the goals and policies of the adopted *Placer County General Plan.*

4.II.6-1 The proposed Specific Plan would require timely, new and reliable wastewater collection facilities including an on-site collection system and an off-site conveyance system.

The project proposes two options for wastewater collection and conveyance. The preferred wastewater proposal calls for the construction of lift stations and force mains to convey wastewater from the entire project eastward to the DCWWTP.

Lift (pump) stations on- and off-site will be critical to the functioning of the sewer system, particularly if all wastewater is directed to DCWWTP. A major pump station will be required in the western portion of the Specific Plan area. It also appears that CFD planned Lift Station #2 will need to be expanded or an additional second lift station constructed. Lift stations are dependent on continuous power and fully functioning pumps. In the event power or pumps fail (or are removed for maintenance), it is necessary that lift stations have backup plans and storage facilities adequate to contain wastewater until the problem is corrected. The current Sewer Master Plan (MacKay & Somps, 2006) for the project does not address lift station failure and maintenance, or other emergency conditions. This is a ***potentially significant impact***.

Mitigation measures will ensure that an adequate system to convey wastewater flows generated by the proposed project will be identified and constructed. There are, however, substantial agreements that must be reached, and planning, engineering and financing requirements that must be completed successfully in order to utilize one or both of the two wastewater treatment plants as envisioned. There is no assurance that this will occur, however, General Plan policy 4.D.2 requires proponents of new development to provide written certification from a service provider that either existing services are available or needed improvements will be made prior to project occupancy. Although ***potentially significant***, because the County has adopted policy ensuring that service will be provided, impacts associated with constructing conveyance facilities to a suitable wastewater treatment plant can be addressed, even in the absence of such agreements. In the event new and unforeseen circumstances arise during subsequent planning and engineering, supplemental CEQA analysis could be required that would be paid for by project proponents.

<u>Mitigation Measures</u>

Implementation of the following mitigation measures ensuring that an adequate transmission system, lift stations, and lift station backup systems, to convey wastewater flows generated by the proposed project will be identified and constructed would reduce these impacts to a *less than significant level*.

4.11.6-1a *Prior to recordation of any large-lot final subdivision map, all required steps shall be taken to initiate formation of a new County Service Area (CSA, or expansion of CSA #28. Major core backbone infrastructure as shown on Figure 3-17A or Figure 3-17B in Chapter Three of this Revised Draft EIR shall be in place prior to recordation of the first final small lot subdivision map. Other on-site collection and conveyance facilities shall be constructed as necessary to serve actual development (except as required in Mitigation Measure 4.11.6-1g).*

4.11.6-1b *All new commercial, industrial, institutional, and residential subdivisions in the Specific Plan area shall install collection systems and connect to a public wastewater system.*

4.11.6-1c *All new development in the Specific Plan area shall comply with General Plan Policy 4.D.2, which requires written certification from the service provider that either*

existing services are available or needed improvements will be made prior to occupancy to meet wastewater demands of the Specific Plan.

4.11.6-1d *Approval of the Specific Plan shall be premised on concurrent County approval of a financing plan that will provide for funding the necessary wastewater collection facilities needed to serve the Specific Plan area, and implemented through approval for formation of a County Service Area (CSA) or expansion of CSA #28 and a corresponding funding mechanism.*

4.11.6-1e *The Specific Plan proponents shall construct or participate financially in the construction of off-site wastewater conveyance capacity, including lift stations, to accommodate projected wastewater flows that would be generated by development of the Specific Plan.*

4.11.6-1f *Adequately sized on-site collection facilities, including lift stations, shall be installed for each subdivision in the Specific Plan area concurrent with road construction for individual subdivisions. A "backbone" conveyance system sufficient to serve each subdivision shall be installed prior to issuance of building permits for that subdivision.*

4.11.6-1g *The Sewer Master Plan shall be revised prior to submission of any wastewater-related improvement plans to include a detailed description of necessary lift station components on-site as well as off-site. The Master Plan shall include a plan for dealing with power and pump failure, and pump maintenance. The plan shall identify how necessary pumping capacity will be replicated in the event of pump failure or pump maintenance, and shall provide for on-site back-up power sufficient to run pumps and any odor scrubbers, in the event of power failure. Each lift station shall include a wastewater storage component in the form of an enclosed reservoir or tank sufficient to deal with temporary emergency conditions while backup systems are brought on line, in accordance with sizing standards utilized by the County Department of Facility Services.*

4.II.6-2 The proposed Specific Plan would require expansion of existing wastewater treatment facilities.

Table 4.11-6 shows anticipated wastewater flows for the Specific Plan area. According to the Sewer Master Plan, the project will generate an Average Dry Weather Treatment Plant Flow of 2,980,000 gallons per day (ADWF) at buildout.

Table 4.11-7 shows flows broken down by shed. The eastern 890± acres (Shed B) of the Specific Plan area is within the service area of the DCWWTP. The *Roseville Regional Wastewater System Master Plan* indicates that current planned flows for the DCWWTP are based on the *Dry Creek/West Placer Sewer Master Plan*, which planned for a flow of 0.307 MGPD for the 890±-acre area. The projected total flow at buildout under the Specific Plan for Shed B is 0.48 MGD treatment plant flow. The additional flow and conflict with the adopted Sewer Master Plan is considered a ***potentially significant impact***. However, as described in the

"Setting" section, the current DCWWTP may have the capacity to serve additional areas because actual flows have been less than projected due primarily to a 27% reduction in flow factors for the residential units and a 20% overall reduction in the development densities (as compared to the 1996 Master Plan). These reductions are outlined in the Technical Memoranda prepared by RMC (see Appendix R) and described above. In addition, the treatment plant is currently constructed to treat 18 MGD, but can be expanded to treat 24 MGD under the current Master Plan.

Although the western 4,340 acres (Shed A) is not in the present service area, the applicants' preferred plan would be to direct all wastewater flows from the Specific Plan area to the DCWWTP. RMC has determined that the "Ultimate SPWA Service Area" (Figure 4.11-3), which includes all of the Specific Plan area, will generate cumulative dry weather flows of 42.7 MGD (this assumes a Blueprint Alternative for the Specific Plan). Of that amount, 19.3 MGD would flow to the DCWWTP. This exceeds the current constructed capacity of 18 MGD, but is well within the 1996 Master Plan capacity of 24 MGD. At buildout, the Specific Plan project would contribute approximately 2.79 MGD of the 19.3 MGD projected to flow to the DCWWTP for treatment and discharge. Again, RMC assumed buildout of the Blueprint Alternative rather than the applicants' project, which means that flows from the Placer Vineyards Specific Plan area would be 1.1 MGD less than assumed by RMC. Assuming all other assumptions used by RMC remained the same, total flows to the DCWWTP would be reduced to 18.2 MGD under the applicants' project.

The DCWWTP would need to be expanded to accommodate the additional flows, and the current NPDES waste discharge requirements would need to be amended. This is a ***potentially significant impact.***

As described above, the westerly portion of the Specific Plan area is not within the service area of any wastewater treatment entity. Flows from the Specific Plan area have been considered in SRCSD's formal planning efforts and planning documents. However, SRCSD has not taken formal steps to include the Specific Plan area within its service area and SRCSD has made no commitment that existing or future treatment capacity exists. SRCSD staff has held preliminary discussions with Placer County officials, and has advised Placer County that construction of infrastructure could be accelerated to serve the Specific Plan area as long as no extra expense was incurred by the SRCSD. To accommodate these additional flows into the Northwest Interceptor (NWI) system, if all the flows projected for the NWI occur, it may be necessary to construct an offline wastewater storage tank near the intersection of Interstate 5 and Interstate 80. Construction of such a storage tank would allow wastewater to be stored until the peak period flow recedes and the pipeline is able to accommodate the flow. Connection to the system would be allowed prior to construction of the storage tank, but the District's Master Plan would need to be amended to incorporate this additional improvement and a fee structure to finance it.

If Specific Plan area wastewater eventually is accepted and treated by the SRCSD facility, the additional 2.31 MGD (see Table 4.11-7, Shed A) in flow would contribute to the need to expand the capacity of the plant. The Specific Plan area has not been included in formal planning and projections for the future of the SRCSD plant, and the magnitude of the impact is difficult to

determine, but it is clear the impact will be substantial in terms of planning effort, design, construction and maintenance.

Mitigation measures will ensure that an adequate system to treat wastewater flows generated by the proposed Specific Plan will be identified and constructed. There are substantial agreements that must be reached, and planning, engineering and financing requirements that must be completed successfully in order to implement the proposal, and there is no assurance these will occur. However, General Plan policy 4.D.2 requires proponents of new development to provide written certification from a service provider that either existing services are available or needed improvements will be made prior to project occupancy. Although ***potentially significant***, because the County has adopted policy ensuring that service be provided, impacts associated with expansion of treatment capacity can be addressed, even in the absence of such agreements.

Mitigation Measure

Implementation of the following mitigation measures will reduce impacts associated with treatment plant capacity to a *less than significant level*.

4.11.6-2a *Commitments from the wastewater treatment provider to receive anticipated flows from the Specific Plan area at the DCWWTP and/or the SRWTP shall be secured by Placer County prior to County approval of improvement plans for wastewater collection and transmission infrastructure. The County shall comply with General Plan Policy 4.D.2, which requires written certification from the service provider that either existing services are available or needed improvements will be made prior to occupancy to meet wastewater demands of the Specific Plan area.*

4.11.6-2b *Specific Plan proponents shall participate financially through connection fees and other financial mechanisms in the construction of additional wastewater treatment capacity sufficient to accommodate projected flows and treatment at the DCWWTP and/or the SRWTP. In addition, Specific Plan proponents shall prepare, or shall provide a fair share contribution toward the preparation of any additional CEQA analysis that may be required for plant modifications and/or expansions.*

4.11.6-2c *For each increment of new development within the Specific Plan area, the County shall confirm that all necessary permits (e.g., NPDES) are in place for either the DCWWTP or the SRWTP to discharge additional treated effluent in the amounts associated with the new development. This shall include a determination that development timing will not impede other development for which entitlements have been issued. The requirement for such a showing shall be made a condition of any small lot tentative map approval associated with the new development and shall be verified by the County prior to recordation any final map associated with the new development. Where no small lot tentative map and final map are required prior to non-residential development having the potential to increase wastewater flows, the requirement for such verification, to be demonstrated no later than the time of issuance of building permits, shall be made a condition of approval of project-level discretionary approvals analogous to issuance of small-lot tentative maps.*

4.11.6-3 The proposed Specific Plan could result in an accidental discharge to the Dry Creek drainage shed or other drainage sheds within or downstream of the Specific Plan area and adversely affect adjacent ecosystems including plant and animal species and their habitat.

As proposed, sewage conveyance facilities for the 890± acres east of Watt Avenue will flow to the DCWWTP and, depending upon the plan selected, conveyance infrastructure for the entire Specific Plan area may either flow to the SRCSD facility south of Sacramento or the DCWWTP. Conveyance infrastructure would utilize lift stations and would cross the Dry Creek channel, although jack-and-bore construction techniques are proposed by the developers to avoid any direct impact to the creek area. For sections that are not force mains, peak flows in the pipeline could potentially result in pipe surges that could displace manhole covers and allow overland flow of untreated sewage into the creek channel. Lift stations could experience emergency conditions, resulting in the potential for accidental spills.

Depending upon the pipe material used, sewer pipes typically leak at joints when leaks occur. This leakage can be limited by ensuring compliance with construction specifications for trenching, pipe installation and trench backfilling. However, in areas where the groundwater table is close to the pipeline, additional measures may be needed to protect groundwater quality. Impacts on groundwater and surface water quality are ***potentially significant.***

Mitigation Measures

Lift station impacts are addressed by Mitigation Measure 4.11.6-1h and would be *less than significant* with mitigation. Implementation of the following mitigation measures will ensure proper pipeline design and access to pipelines for maintenance and reduce impacts to a level that is *less than significant:*

4.11.6-3a *Design of on- and off-site sewer pipelines shall have watertight joints and be in accordance with design standards adopted by Placer County in order to minimize the potential for accidental discharge.*

4.11.6-3b *Paved access shall be provided to all sewer system access points to allow for pipeline maintenance and repair.*

OFF-SITE INFRASTRUCTURE

4.11.6-4 Impacts due to the construction and maintenance of off-site utilities related to wastewater, including wastewater treatment plant expansions, could cause environmental effects related to Land Use, Visual Quality, disruption of Hydrology and Soils, disruption of Biological and Cultural Resources, Transportation and Circulation, Air Quality, Noise, other Public Services, and Hazards.

All of the above potential effects are considered under other sections of this Revised Draft EIR (see Sections 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, and 4.9), and other topics discussed in Section 4.11. The discussions under Impacts 4.11.6-1 and 4.11.6-3, and Mitigation Measures 4.11.6-1h, 4.11.6-3a and 4.11.6-3b also apply to off-site infrastructure. The construction and maintenance of utilities in off-site areas would not result in additional generation of wastewater. This is a ***less than significant impact.***

Mitigation Measure

With application of the mitigation measures identified in the sections enumerated above, and Mitigation Measures 4.11.6-1h, 4.11.6-3a and 4.11.6-3b, this is a *less than significant impact* and no additional mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.II.6-5 The Placer Vineyards Specific Plan would contribute to the cumulative impact of wastewater conveyance and treatment.

The cumulative context for wastewater services includes service areas of the SPWA, and more particularly the DCWWTP, and the service area of the SRCSD.

On behalf of the SPWA, RMC has prepared a Technical Memorandum (*Dry Weather Flow Projection for the Ultimate SPWA Service Area [Including Urban Growth Areas])* (see Appendix R of this Revised Draft EIR), which establishes the cumulative wastewater condition for western Placer County. The "Ultimate SPWA Service Area" is shown in Figure 4.11-3. Assuming all wastewater is treated in Placer County and none is conveyed to SRCSD at buildout western Placer County would generate cumulative dry weather flows of 42.7 MGD. Of that amount 19.3 MGD would flow to the DCWWTP. At buildout, the Specific Plan area would contribute approximately 2.79 MGD of the 19.3 MGD that RMC predicted would flow to the DCWWTP for treatment and discharge. ***Note: RMC assumed the Blueprint Alternative. Flows are actually 1.1 MGD less under the applicants' proposed project than predicted by RMC.*** Table 4.11-8 shows the contributions to the SPWA system from development within the current (2005) service boundary. Table 4.11-9 shows projected buldout contributions to the "Ultimate SPWA Service Area," including contributions from the 2005 service area. Flows are separated by the two SPWA treatment plants (PGWWTP and DCWWTP).

Table 4.II-8
Buildout Dry Weather Flow Projections Within Proposed 2005 Service Area

Land Use	Unit Flow Factor	PGWWTP[3]		DCWWTP[4]		2005 Service Area	
		Buildout Units (ac or du)	Buildout DWF (MGD)	Buildout Units (ac or du)	Buildout DWF (MGD)	Buildout Units (ac or du)	Buildout DWF (MGD)
Commercial	850 GPD/ac	1,728	1.47	2,890	2.46	4,618	3.93
Heavy Industrial[1]	850 GPD/ac	1,680	1.43	263	0.22	1,934	1.65
Light Industrial[1]	850 GPD/ac	1,2201	1.04	637	0.54	1,858	1.58

Table 4.II-8
Buildout Dry Weather Flow Projections Within Proposed 2005 Service Area

Land Use	Unit Flow Factor	PGWWTP[3]		DCWWTP[4]		2005 Service Area	
		Buildout Units (ac or du)	Buildout DWF (MGD)	Buildout Units (ac or du)	Buildout DWF (MGD)	Buildout Units (ac or du)	Buildout DWF (MGD)
Mixed Use	2,300 GPD/ac	0	0.00	7	0.02	7	0.02
Public/Quasi-Public	660 GPD/ac	282	0.19	851	0.56	1,133	0.75
Schools	170 GPD/ac	258	0.04	540	0.09	798	0.14
Residential 1 DU	190 GPD/ac	26,893	5.11	42,934	8.16	69,827	13.27
Residential 2 DU	190 GPD/ac	2	0.0004	2,122	0.40	2,124	0.40
Residential 3 DU	190 GPD/ac	12	0.002	720	0.14	732	0.14
Residential Multiple DU	2,040 GPD/ac	594	1.21	606	1.24	1,200	2.45
Open Space	0 GPD/ac	6,034	0.00	3,304	0.00	9,338	0.00
Parks >10 Acres	10 GPD/ac	270	0.003	360	0.004	630	0.01
Point Sources	Varies GPD/ac	1,043	2.56	91	0.14	1,134	2.70
Placer Ranch[2]	Varies GPD/ac	1,027	0.90	0	0.00	1,027	0.90
West Roseville[2]	Varies GPD/ac	3,162	1.70	0	0.00	3,162	1.70
Placer Vineyard[2]	Varies GPD/ac	0	0.00	1,079	0.85	1,079	0.85
Total (MGD)			**15.7**		**14.8**		**30.5**

[1] Land use category does not include area of parcels associated with point sources identified in Table 3.
[2] Includes portion of development located within the Proposed 2005 Service Area.
[3] Pleasant Grove WWTP Service Area
[4] Dry Creek WWTP Service Area
Source: Dry Weather Flow Projection for the Ultimate SPWA Service Area (Including Urban Growth Areas) – (TM No.2b) See Appendix R.

Table 4.II-9
Buildout Dry Weather Flow Projections Within Ultimate SPWA Service Area

Description of Area	Buildout DWF (MGD)		Total Buildout DWF (MGD)
	PGWWTP[3]	DCWWTP[4]	
Proposed 2005 Service Area	15.7[1]	14.8[2]	30.5
Curry Creek UGA	2.72	--	2.72
Regional University UGA	1.16	--	1.16
Inviro Tech UGA	0.04	--	0.04
Placer UGA	--	0.01	0.01
Orchard Creek	0.02	--	0.02
Placer Ranch	1.29	--	1.29
Placer Vineyards	--	3.04	3.04
SMD-3	--	0.29	0.29
SPMUD UGA	--	1.09	1.09
Creekview UGA	0.47	--	0.47

Table 4.II-9 Buildout Dry Weather Flow Projections Within Ultimate SPWA Service Area			
Description of Area	**Buildout DWF (MGD)**		**Total Buildout DWF (MGD)**
	PGWWTP[3]	**DCWWTP[4]**	
Sierra Vista UGA	2.04	--	2.04
Total DWF (MGD)	**23.4**	**19.3**	**42.7**

[1] Includes Portion of Placer Ranch UGA within the proposed 2005 service area.
[2] Includes portion of Placer Vineyard UGA within the proposed 2005 service area.
[3] Pleasant Grove WWTP Service Area
[4] Dry Creek WWTP Service Area
Source: Dry Weather Flow Projection for the Ultimate SPWA Service Area (Including Urban Growth Areas) – (TM No.2b) See Appendix R.

The DCWWTP was designed to serve proposed development that would occur in a geographic area that includes the eastern 890± acres of the Specific Plan area (Shed B). Service to this area was planned, and the wastewater facilities designed and constructed in anticipation of such service. However, the *Roseville Regional Wastewater System Master Plan* indicates flows planned in the DCWWTP are based on the *Dry Creek West Placer Sewer Master Plan*, which planned for a flow of 0.307 MGD for the 890±-acre area. The projected average day flow, however, to the DCWWTP (on a permanent basis) at buildout is 0.48 MGD. While, as previously discussed, plant capacity currently exists to accommodate these flows, the increase represents a ***potentially significant cumulative impact*** as the service area builds out. Further, there is uncertainty as to whether planned conveyance facilities (Lift Station #2) will have sufficient capacity to handle Shed B flows at buildout.

The western portion of the Specific Plan area was not included in the service area of the DCWWTP. Extending wastewater treatment service at the DCWWTP to the western portion of the Specific Plan area would require additional capacity to be constructed to meet the cumulative condition in western Placer County. However, the entire Specific Plan area is included in the cumulative buildout condition described by RMC. This is considered a ***potentially significant cumulative impact.***

The project applicants have also identified utilization of the SRCSD interceptor system, with treatment of project wastewater at the SRCSD SRWTP as an alternative to SPWA service for the western 4,330 acres of the Specific Plan area (Shed A). While SRCSD has identified the Specific Plan area as a potential service area, the capacity at the SRCSD facility has not previously included consideration of such service. The Specific Plan area would generate an average day flow of 2.31 MGD to the treatment plant (see Table 4.11-7, Shed A). Treatment at the SRCSD facility would accelerate the need for eventual expansion of treatment facilities, and construction of interceptor infrastructure, as described above. This is considered a ***potentially significant cumulative impact.***

Mitigation Measure

Analysis prepared by RMC has shown that wastewater treatment infrastructure can feasibly be expanded to accommodate projected urban growth areas. Mechanisms are in place for accomplishing the expansion of the SPWA service area, and implementation of mitigation measures 4.11.6-1a-g, and 4.11.6-2a-c above would ensure that the Specific Plan area's

contribution to cumulative impacts would be *less than considerable* (i.e., less than significant.) With proposed mitigation, this is a *less than significant impact*.

4.II.6-6 The Specific Plan would contribute to cumulative water quality degradation due to increased discharge of treated effluent to Dry Creek and/or the Sacramento River.

Development of the Specific Plan area will contribute to increased discharge of treated effluent to Dry Creek and/or the Sacramento River, depending on which wastewater treatment plant or plants ultimately accepts flows from the Specific Plan area. Despite increasingly stringent waste discharge requirements for discharge of treated effluent into surface waters, this represents a ***potentially significant and unavoidable cumulative impact.***

Merritt Smith Consulting has prepared a Technical Memorandum (see Appendix Q of this Revised Draft EIR) to evaluate future anticipated compliance with water quality regulations in Dry Creek, and to assess the future cumulative impacts to water quality and aquatic biological resources in Dry Creek due to the prospect of treating and discharging greater amounts of wastewater from the DCWWTP. The technical memorandum acknowledges the future cumulative assessments included in previous EIRs, which address wastewater flows from within the current DCWWTP service area, and determines whether discharge of additional treated flows from proposed projects (including the Specific Plan) that are outside the current service area would result in any new significant cumulative impacts, not previously identified, or that would be more severe than those previously identified.

The assessment of water quality impacts described in the technical memorandum is intended to contribute to a common basis for the cumulative impacts discussion of the project-specific CEQA documentation being prepared for proposed projects. For a more complete discussion of this topic, see Impact 4.3.4-9 in Section 4.3.4 of this Revised Draft EIR.

Based on the discussion under Impact 4.3.4-9, the following effects on water quality, erosion and sedimentation are ***cumulatively less than significant*** and no mitigation is required: mercury loading, changes in pH, nutrient loading, change in taste or creation of odors, velocity, bank scour, and turbidity. The following effects are ***cumulatively considerable and significant*** but can be mitigated to a less than cumulatively considerable (i.e., less than significant) level by application of mitigation measures set forth in the 1996 Master Plan EIR: temperature change, introduction of trace metals and organics, and changes in dissolved oxygen.

At the time of preparation of the Master Plan for the SRWTP, all impacts related to Sacramento River water quality were found to be less than significant with implementation of proposed mitigation measures. The complete analysis can be found in the *Sacramento Regional Wastewater Treatment Plant Master Plan Draft Environmental Impact Report* (September 1997), which is available for review at the address specified in Section 2.9 in Chapter Two of this Revised Draft EIR. Should expansion of the treatment plant be pursued to serve the Specific Plan area, a Master Plan Update would be required and additional analysis of water quality impacts to the Sacramento River would be needed in a cumulative context. This analysis would be performed in a manner similar to and at the same level of detail as the analysis contained in the

EIR for the current Master Plan. Because the results of that analysis are not currently known, this is a ***potentially significant and unavoidable cumulative impact.***

Mitigation Measure

Implementation of Mitigation Measures 4.3.4-9a-c would reduce impacts related to temperature change, introduction of trace metals and organics, and changes in dissolved oxygen in Dry Creek to a *less than significant level.*

The following mitigation measure will potentially reduce impacts related to water quality and the Sacramento River at the SRWTP, but not to a less than significant level. This impact would remain a *potentially significant and unavoidable cumulative* impact.

4.11.6-6 *Should expansion of the SRWTP treatment plant be pursued to serve the Specific Plan area, a Treatment Plant Master Plan Update will be needed and additional analysis of water quality impacts on the Sacramento River will be required in a cumulative context. This analysis shall be performed in a manner similar to and at the same level of detail as the analysis contained in the EIR for the current Master Plan, and shall be consistent with standards established by RWQCB and SRCSD. All recommendations of the analysis shall be implemented utilizing a fair share funding arrangement with Placer Vineyards project proponents.*

4.II.7 WATER SUPPLY

The water supply section examines the Specific Plan's proposal for providing water service to the Specific Plan area. The adequacy of the water supply, proposed water conveyance system and infrastructure necessary to serve the Specific Plan area are analyzed for potential environmental impact.

ENVIRONMENTAL SETTING

Groundwater resources currently serve to meet water demand within the Specific Plan area. Residential and agricultural users rely on wells, although some surface water from Dry Creek is used for agricultural purposes. In the near term, use of groundwater will continue to support most farming operations.

The Specific Plan area contains a variety of agricultural uses. Crops grown in the area include rice, permanent pasture, strawberries, grapes, corn and alfalfa, along with various varieties of berries and fruit. The total acreage within the Specific Plan area committed to such uses is approximately 950 acres, and the water demand for these agricultural activities is approximately 2,400 acre feet annually (AFA) (assuming 2.5 acre feet per acre) (water usage can vary from as little as 1.5 acre feet per acre to over 3.5 acre feet per acre, depending on crops grown in any one year). The balance of the agricultural land in the Specific Plan area is non-irrigated or fallow, or is used for dry farming, with no groundwater use.

There are approximately 150 dwelling units in the Specific Plan area. A rough estimate of water demand for rural residential uses is 1.5 AFA. Total groundwater usage in the Specific Plan area, therefore, is approximately 2,650 AFA (includes 2,400 AFA committed to agriculture). No industrial uses occur in the Specific Plan area.

While groundwater resources are used for current water supply in the Specific Plan area, much of the groundwater use will be gradually displaced by future surface water as the area builds out. Although the Specific Plan area would not typically rely on groundwater as a water supply, groundwater would serve as a backup supply, in the event surface water supplies are temporarily reduced, as described in Section 4.3.3 of this Revised Draft EIR.

Groundwater use in Placer County by individual homes, farms and businesses is estimated to be about 90,000 AFA, PCWA does not currently use significant amounts of groundwater to meet its customers' demands. Some integrated use of groundwater is appropriate and necessary, however, to ensure the highest level of reliability, particularly in times of drought and for backup in emergency situations.

PCWA has prepared a Water Supply Assessment for the proposed Specific Plan as required by both SB 221 and SB 610 (Chapters 642 and 643, respectively, of the Statutes of 2001). PCWA concluded that their remaining surface water entitlements are adequate to meet the buildout of the General Plans of the cities and unincorporated area in western Placer County in effect in 2006, including the proposed Specific Plan. The Water Supply Assessment is included as Appendix M of this Revised Draft EIR. A portion of the following information is taken from the Water Supply Assessment dated February 3, 2006.

SURFACE WATER SUPPLY

PCWA has several sources of surface water supply entitlements available for use in western Placer County. The first is a surface water supply contract with PG&E for 100,400 AFA of Yuba/Bear River water that is delivered through PG&E's Drum Spaulding hydro system. This has been PCWA's primary source of supply for Zone 1 (to which the Specific Plan area would be annexed) since PCWA began retailing water in 1968. Prior to that PG&E was the retail water purveyor in Zone 1. The term of this contract is to 2013, but PCWA expects the contract to be renewed after the expiration of the present term.

This source of water has a high reliability during normal, single-dry and multiple-dry years. For example, between 1987 and 1992 the state experienced five years of drought, during which many areas in the State had reduced supplies. During that period, PCWA had a full Yuba/Bear River supply each year. 1977 was the only year in which PCWA had to impose drought restrictions on its customers due to reduced PG&E supply. PCWA's 2005 *Urban Water Management Plan* was adopted on December 15, 2005 and contains a water shortage contingency analysis that includes a five-stage rationing plan that would be invoked during a declared water shortage.

PCWA's second source of surface water for consumptive use is its Middle Fork Project (MFP) water rights. The MFP reservoirs have 340,000 AF of storage capacity; however, pursuant to agreements with the United States, PCWA is limited to a maximum consumptive use of 120,000

AFA from this source. PCWA's MFP water right permits provide that this water supply may be diverted from the American River at either Auburn Reservoir or at Folsom Reservoir. PCWA has done extensive modeling of the MFP system to determine its reliability during drought events using California's hydrologic record, which dates back to 1921. The conclusion of that analysis is that the MFP can provide 120,000 AFA, even in dry years as severe as the 1976-1977 hydrologic event.

PCWA's third source of surface water is its federal Central Valley Project (CVP) Municipal and Industrial water supply contract with the U.S. Bureau of Reclamation (Reclamation). This contract is for 35,000 AFA. This supply is subject to 25% deficiencies during single-dry and multiple-dry years. This water was originally to be provided to PCWA at Auburn Reservoir but the contract as amended now provides for its diversion at Folsom Dam or other locations mutually agreed to by the parties. The State Board of Reclamation and PCWA are now studying the feasibility of diverting this supply off of the Sacramento River instead of at Folsom. Under their October 2005 Draft *Integrated Water Resources Plan*, PCWA plans to supplement its CVP contract supply with groundwater in dry years to improve the reliability to the point where the full contract amount can be relied upon to serve urban development needs.

The total surface water supply available to the western Placer County area (Zone 1 & Zone 5) is 255,400 AFA of permanent supply in normal years, plus 5,000 AFA of temporary surplus water. Out of that permanent supply, PCWA has contracted to deliver up to 25,000 AFA to San Juan Water District for use within the Placer County portion of its service area and up to 30,000 AFA to the City of Roseville.

PCWA has also contracted to deliver up to 29,000 AFA to Sacramento Suburban Water District for groundwater stabilization in the district's service area, but only when the supply is surplus to the needs of Placer County. Because of the surplus nature of this contract, it is not a factor in determining water availability for PCWA's service area.

On-going water delivery efficiency efforts and Board policies relating to the PCWA's raw water system have reduced the amount of water that must be committed to meet customers' demand by an estimated 5,000 AF over the past 5 years. Through December 15, 2005, PCWA has committed approximately 113,563 AF to meet the needs of its Zone 1 & 5 customers plus the 55,000 AF committed to Roseville and San Juan Water District. Subtracting these amounts from the Agency's entitlements leaves 86,837 AFA of surface water available in normal years for use in western Placer County to meet future demands.

GROUNDWATER

Although groundwater use in Placer County by individual homes, farms and businesses is estimated to be about 90,000 AFA, PCWA does not currently use significant amounts of groundwater to meet its customers' demands. PCWA has a single well located in the Sunset Industrial area that meets all drinking water standards but has not been used for several years due to customers' concerns regarding water quality (hardness and silica) related to industrial use.

The following findings with regards to the use of groundwater can be concluded from PCWA's October 2005 Draft *Integrated Water Resources Plan*:

- The historic average annual rate of groundwater use within the Placer County portion of the North American River Groundwater Basin is estimated to be about 90,000 AFA (also identified as "safe yield"). The estimated use will be refined during development of the plan.

- According to semi-annual well data collected by the State Department of Water Resources since the 1940s, the subsurface groundwater level in western Placer County in the area west of Roseville has been relatively stable since the early 1980s following decades of steady decline.

- Based upon this information PCWA believes that the current groundwater use and natural recharge rate are in balance and that current average annual groundwater pumping rates within the basin can be sustained indefinitely without a further decline in the subsurface groundwater level.

- Therefore, as urban development replaces historic groundwater irrigated agriculture, there is an opportunity to develop groundwater for use in meeting urban domestic and irrigation demands without adversely affecting groundwater levels or long term groundwater reliability.

PCWA's surface water supplies, particularly its 35,000 AFA CVP contract entitlement and its Yuba Bear 100,400 AFA contract with PG&E, will be subject to shortages in future dry years. To make up for such dry year shortfalls and for backup in the event of emergency or planned outages, PCWA is planning on developing groundwater resources as its service area expands west over the groundwater basin and into the area most likely to be served long term from the Sacramento River using PCWA's CVP contract supply. In order to ensure that there is no adverse long term impact of such dry year groundwater use there must be groundwater banking in normal and wet years to offset the planned dry year use. That banking can most efficiently occur through "in-lieu recharge" which is the reduction of historic groundwater use in normal and wet years allowing the natural recharge flow to accumulate in the aquifer.

PCWA WATER DELIVERY SYSTEMS

PCWA would serve as the water wholesaler for the Specific Plan area, providing treatment and supply. California American Water Company or PCWA could retail the water to customers within the Specific Plan area. The Specific Plan area is within a non-exclusive California American Water Company franchise area. California American Water Company (formerly Citizens' Utilities Company of California) is a private investor-owned water company currently providing services to customers in Sacramento and Placer counties.

PCWA owns, treats, and purveys off-site water supplies to approximately 29,000 metered connections. PCWA serves areas within Placer County, including the communities of Auburn, Loomis, Newcastle, Penryn, Rocklin and Lincoln. The existing water distribution system owned by PCWA does not extend to the boundary of the Specific Plan area.

The only facility that the PCWA currently has to deliver water to its service area from its American River supplies is the temporary American River Pump Station at Auburn. Under an agreement between PCWA and Reclamation, Reclamation is required to install temporary pumps in the American River so that PCWA can access up to 25,000 AFA of its MFP water at a rate of 50 cubic feet per second (cfs). Because of flooding concerns that necessitate the seasonal removal of the temporary pumps, and other technical limitations, PCWA estimates that it can only reliably divert up to 13,000 AFA with the current configuration installed by Reclamation.

As limited by the temporary American River Pump Station, the total current raw water delivery capacity available to Zones 1 & 5 (western Placer County) is 113,400 AFA on a permanent basis and 118,400 AFA on temporary basis in normal/wet years.

Progress by PCWA and Reclamation is being made in completing a new permanent American River Pump Station. On June 13, 2003, Reclamation entered into a contract to construct Phase I of the American River Pump Station. It is anticipated that Phase I will be completed in May of 2006. Phase 2, which includes construction of the diversion facility and rewatering of the river, has been designed and has been bid twice by Reclamation. It is anticipated that the project will be re-bid and a construction contract for Phase II may be awarded in March, 2006 and completion may be in 2008.

Completion of this project will increase PCWA's raw water delivery capacity to Zone 1 and western Placer County to 135,900 AFA on a permanent basis in normal/wet years. Subtracting 113,563 AFA of current and committed demands will leave 22,337 AFA of uncommitted raw water delivery capacity available for new development once the permanent American River pump station is complete in 2008.

Because of environmental concerns, PCWA has agreed in the Water Forum Agreement (WFA) discussed below, to limit PCWA's diversions from the American River to 35,500 AFA, provided PCWA is able to obtain a diversion off the Sacramento River for the remainder of its MFP and/or CVP water not delivered off the American River.

PCWA is studying the feasibility of a project in which a new treatment plant would serve proposed developments in southwest Placer County with water diverted from the Sacramento River north of the Sacramento International Airport. The project would provide an additional 35,000 AFA of raw water supply, and 65 MGD of treatment capacity into the PCWA service area. In 2001, Congress authorized Reclamation to complete a feasibility study and EIS/EIR on the project. If the project is approved, PCWA anticipates construction of the project could be completed by about 2012.

Completion of both the permanent American River Pump Station and the Sacramento River Diversion facilities would increase the amount of surface water available to PCWA in western Placer County to 175,900 AF of and would enable PCWA to meet the projected increase in the raw water delivery needs of its service area in western Placer County until 2030.

Treatment, Transmission and Storage

PCWA completed the most recent expansion of its Foothill Water Treatment Plant (WTP) in Newcastle in 2005. The treatment plant capacity of this facility is 55 MGD. Combined with the

Sunset WTP, which has a capacity of 8 MGD, the Foothill/Sunset system has a treatment capacity of 63 MGD. PCWA reserves capacity for new customers upon payment of PCWA's Water Connection Charge (WCC). There is typically an average time lag of approximately 18 months between the payment of WCC and the full development of demand from the occupied units. At this time, PCWA estimates that this reserved capacity for development that has already paid the WCC to be 3.0 MGD but these demands are not reflected in the 2005 maximum day demand of 49.3 MGD. This leaves 10.7 MGD of unallocated capacity that can serve approximately 9,304 EDUs and which is available on a first-come, first-served basis.

PCWA has completed the design of the Auburn Tunnel Pump Station 2. This pump station is located on Ophir Road in the Ophir area. This pump station will be capable of delivering American River water from the Auburn Tunnel to the existing Foothill WTP, to the proposed Ophir area WTP as well as to the PCWA's canal system. This project has been bid and awarded. The pump station is anticipated to be completed in 2007.

In addition, PCWA is in the design phase for a new water treatment plant that will be located on Ophir Road in the Newcastle/Ophir area. This plant is scheduled for completion in 2008. This plant is being designed with a capacity of 30 MGD. When compete, this facility will be able to serve an additional 26,000 EDUs.

PCWA completed construction of a 42-inch diameter treated water transmission line between Penryn and Lincoln in the fall of 2002. PCWA's transmission capacity is now equal to its treatment capacity in the Foothill/Sunset system serving Loomis, Rocklin, Lincoln and surrounding County jurisdiction areas. A new treated water transmission pipeline is being designed to convey water from the Ophir area plant to the existing Foothill/Sunset system at Penryn and to areas near the City of Lincoln.

PCWA completed a new 10 million gallon (MG) tank near the Sunset WTP in 2001. This increased the storage capacity of the Foothill Sunset system to 30.0 MG. PCWA has a contract with the City of Roseville to wheel up to 10 MGD through Roseville's system to the Baseline Road area. PCWA is currently in the construction phase of the Tinker Road pump station and 10 MG tank. This storage and pump station will be used to pump water into Roseville's system for conveyance to PCWA Zone 1 areas south of Baseline Road. This project is scheduled for completion in June, 2006. According to, PCWA it is currently wheeling an average of 660,000 GPD through Roseville's system to serve the Bianchi Estates and the Morgan Creek areas.

PROJECT WATER SUPPLY

Buildout water demand for the Specific Plan area is approximately 11,500 AFA, based on 14,132 dwelling units proposed in the Specific Plan and water demand factors now in use. For water planning purposes, buildout would be phased over a 20-year period, commencing at approximately 700 AFA. Table 4.11-10 illustrates water demand for the Specific Plan area.

Placer County requires a public water system for any new residential or non-residential development. The Specific Plan indicates that surface water supplies would be used to meet the project's potable water demands.

The on-site distribution system is composed of a core backbone transmission main located in Baseline Road, which serves to provide water to the entire Specific Plan area. A grid of 10-inch, 12-inch, and 16-inch mains located alongside the arterial and collector road system would be connected to the main in Baseline Road, and would distribute water to developments within the Specific Plan area (see Figure 3-14 in Chapter Three of this Revised Draft EIR). As is described below, this system may also have an on-site groundwater component that would require interties with one or more groundwater wells to provide a backup water supply in the event of surface water supply curtailment.

Five water storage tanks will be located throughout the Specific Plan area to provide a total of approximately 15 MG of storage. The proposed locations of these tanks are illustrated in Figure 3-14 in Chapter Three of this Revised Draft EIR. Each tank will be composed of either concrete or steel and will be between 24 and 30 feet tall and 130 to 150 feet in diameter.

Both an initial and a long-term water supply plan are proposed for the Specific Plan area. The initial water supply will be provided through PCWA's Foothill Water Treatment Plant system until the permanent system is completed. Delivery will occur through the City of Roseville's system via a cooperative agreement between PCWA and the City of Roseville. This initial system consists of an extension of existing pipeline in Baseline Road near Fiddyment Road to the northeast corner of the Specific Plan area (see Figure 3-5 in Chapter Three of this Revised Draft EIR).

The long-term water supply plan consists of a pipeline extending along Baseline Road, south to Pleasant Grove Road, west along Elverta Road, finally connecting to the Sacramento River. The diversion structure, pumps and water treatment facilities are not described or evaluated in this Revised Draft EIR, but are being evaluated separately by PCWA and Reclamation in a joint EIS/EIR (SCH #2003082076). The Notice of Preparation for the joint EIS/EIR was issued in the summer of 2003 and public scoping meetings were held during September of the same year (Steve Yaeger, PCWA, pers. comm., January 2006). The Draft EIS/EIR is currently projected for completion during the winter of 2006/2007.

As described above, an initial surface water supply pipeline (24 inches in diameter) would extend from the Specific Plan area easterly along Baseline Road to connect to the City of Roseville pipeline near Fiddyment Road, through which PCWA wheels treated water from its existing Foothill Treatment Plant system. The current agreement between PCWA and the City of Roseville limits the amount of water that can be transmitted through this line to 10 MGD. Other projects would rely on use of this line capacity in addition to Placer Vineyards. PCWA estimates that it is currently using approximately 0.66 MGD of the line's capacity, based on average day demand. Maximum day demand would be approximately 1.32 MGD, leaving unused line capacity of approximately 8.68 MGD on a maximum day demand basis. However on a temporary basis, PCWA has actually been using 2 MGD of the 10 MGD line capacity allocated to it. This is due to a lack of storage for projects now being served. This is currently being corrected and will return maximum day demand necessary to serve the existing projects to 1.32 MGD. Assuming an unused line capacity of 8.68 MGD, and demand of 1,150 gallons per day (GPD) per EDU, there is sufficient capacity remaining in the line to serve an additional 7,547 EDUs (pers. comm., Jim Ray, MacKay & Somps, March 2006).

Table 4.11-10
Estimated Water Demand Matrix

Scenario	Type of Development	Dwelling Units (DU)	DU Factor (gal/du/ay)	DU Demand (gal/day)	Acres (AC)	AC Factor (gal/ac/day)	AC Demand (gal/day)	Total Average Demand (gal/day)	Total Maximum Demand (gal/day)
Year 2015 Absorption	Low –Density	987	713	703,731					
	Low-Density – Age Restricted	490	713	349,370					
	Medium-Density	3,501	608	2,128,608					
	High-Density	1,732	371	642,572					
	CMU Residential	290	371	107,590					
	Commercial				107.5	3,219	346,043		
	Office				5.9	3,219	18,992		
	Public Facilities and Services				9.0	3,219	28,971		
	Religious Facilities				38.5	3,219	123,932		
	Schools				100.00	3,379	337,900		
	Parks (Neighborhood/Community)				118.5	150	17,775		
	Total	**7,000**		**3,931,871**			**873,613**	**4,805,484**	**9,610,968**
Specific Plan Area Buildout	Low-Density	2,552	713	1,819,576					
	Low-Density – Age Restricted	903	713	643,839					
	Medium-Density	6,266	608	3,809,728					
	High-Density	2,844	371	1,055,124					
	CMU Residential	844	371	313,124					
	SPA Residential	411	998	410,178					
	Commercial				221.3	3219	712,365		
	Office				61.3	3,219	197,325		
	Public Facilities and Services				51.5	3379	174,019		
	Religious Facilities	312			92	3,219	296,148		
	Schools				140	3,379	473,060		
	Parks (Neighborhood/Community)				187	150	28,050		
	Parks (Mini)				30	5251	157,530		
	Unaccounted-for-water						172,900		
	Total	**14,132**		**8,051,569**	**783.1**		**2,211,397**	**10,262,966**	**20,525,932**

Notes:
1. Dwelling unit and population projects provided by Placer County Planning Department
2. Average household size is 2.5 persons per dwelling unit
3. Demand factors provided by MacKay & Somps
4. Water treatment plant production rates and supply pipelines used to meet peak day flow rates, assuming a peaking factor of 2.0.

Already committed capacity includes service to development within the Dry Creek/West Placer Community Plan area (e.g., Morgan Creek and Bianchi Estates). Other known projects that could rely on the agreement between the City of Roseville and PCWA for a portion or all of their water supply include the Riolo Vineyards Specific Plan (1.1 MGD) (MacKay & Somps) and the Regional University Specific Plan (5.1 MGD) (West/Yost). The Placer Vineyards Specific Plan could utilize as much as 20.5 MGD at buildout. In the event these known projects were to rely solely on this supply, the 10 MGD agreement capacity would be greatly exceeded. However, in the case of the Placer Vineyards Specific Plan, this is an initial supply that would be supplemented by, or replaced by, the Sacramento River supply as the project builds out.

A secondary initial surface water supply could also be made available by PCWA if the Sacramento River diversion has not begun delivery of water before additional supplies are required. In this case, as shown on Figure 3-5 in Chapter Three of this Revised Draft EIR, a new pipeline extending from the San Juan/Sacramento Suburban cooperative transmission pipeline that currently terminates in Antelope Road near Walerga Road would be constructed westerly along Antelope Road to Watt Avenue and then north to the Specific Plan area. Figure 3-5 in Chapter Three of this Revised Draft EIR also illustrates that this supply could be conveyed in a proposed 16-inch diameter pipeline constructed in PFE Road from Cook Riolo Road to Watt Avenue and northerly to the Specific Plan area. To deliver this secondary initial surface water supply, improvements would also be required at the San Juan Water District's Folsom Lake diversion facility and water treatment plant. This Revised Draft EIR assesses only the water transmission facilities that might be constructed by project proponents. Evaluation of any changes to San Juan Water District's present facilities (including a full CEQA/NEPA assessment) would be handled separately by PCWA, San Juan Water District, and Reclamation, similar to the ongoing process for the Sacramento River diversion.

As previously discussed, PCWA is planning on developing groundwater resources as its service area expands west over the groundwater basin and into the area most likely to be served long term from the Sacramento River using the PCWA's CVP contract supply. An assessment of groundwater use as it relates to the Specific Plan area is included in Section 4.3.3 of this Revised Draft EIR. It is anticipated that sufficient groundwater would be supplied to the Specific Plan area to provide a redundant water source equal to at least 25% of the required water supply on a maximum daily demand basis. This contingency is based on Reclamation's ability to exercise a maximum dry year reduction in Sacramento River CVP water supply of 25%. The groundwater supply component could require the development and operation of groundwater supply wells within the Specific Plan area or elsewhere. If it becomes necessary to construct wells within the Specific Plan area, they would be placed adjacent to other public utility structures, such as the proposed potable water supply storage tanks shown on shown on Figure 3-14 in Chapter Three of this Revised Draft EIR.

It is also proposed to provide recycled water to the project site, in the event the SPWA is the wastewater treatment service provider, for use in parks, schools, publicly landscaped areas, and the landscaping associated with commercial, business professional, light industrial and multi-family uses. The use of recycled water offsets potable water demand and could be an important component of the overall water supply strategy. However, because only the eastern 890 acres of

the Specific Plan area are within the SPWA service area, water demand calculations do not take into consideration use of recycled water.

The annual average recycled water demand for the Specific Plan area has been estimated to be 1.39 MGD by the project's engineer (MacKay & Somps) with peak day demand reaching 3.44 MGD. RMC has prepared a Technical Memorandum containing a Market Assessment for recycled water (see Appendix R of this Revised Draft EIR) and has shown that the SPWA would have the ability to meet a portion of the Specific Plan area's recycled water needs (see Revised Draft EIR Section 4.11.8). However, because it is not yet known if the SPWA will be the wastewater service provider to the entire the Specific Plan area, the water demand analysis does not assume use of recycled water.

A recycled water supply to the portion of the Specific Plan area generally west of Watt Avenue, as shown on Figure 3-18 in Chapter Three of this Revised Draft EIR, would be dependent on the inclusion of the entire Specific Plan area in the SPWA service area, and on eventual extension of a recycled water line from the PGWWTP, as shown on Figure 3-5 in Chapter Three of this Revised Draft EIR. Figure 3-19 in Chapter Three of this Revised Draft EIR shows the current service area for the DCWWTP and the backbone infrastructure necessary to supply the current service area with recycled water. Storage and pumping facilities would be required within the project area along with a backbone of dedicated non-potable water lines within street rights-of-way ranging in size from 6 to 24 inches in diameter. A more detailed discussion of the proposed recycled water supply is provided in Section 4.11.8.

PROPOSED SPECIFIC PLAN WATER SUPPLY-RELATED GOALS AND POLICIES

The following goals and policies related to water supply are contained in the proposed Specific Plan.

Policy 3.3 Sequencing of Development. The construction of a core infrastructure system will permit development to proceed, as the availability of services and infrastructure allow.

Goal 4.8 Reduce water quality impacts within the Plan Area to the maximum extent practicable.

Goal 4.9 Site-specific development projects should incorporate low-impact development design principles into the site layout.

Policy 4.32 Use of low-water-consumption plant materials and irrigation systems will be encouraged by Placer County and the following standards will be met and implemented by site-specific development projects.

1. Where available and feasible, recycled water will be used to irrigate all parks, schools, and public rights-of-way. Irrigation equipment shall be compatible with the use of reclaimed water.

2. Low-volume spray irrigation systems shall be utilized for turf and groundcover areas and drip irrigation systems for shrubs and trees.

3. Where recycled water is available, water-intensive landscaping may be used.

4. Landscaping in improved common areas will incorporate drought-resistant varieties where practical and consistent with Placer County design guidelines.

5. Landscaping within medians should be by subsurface drip irrigation systems.

Policy 4.33 Use of currently available water conservation devices will be encouraged by Placer County in all existing development. To accomplish this, Placer County will meter the use of potable water, and new construction must meet the following standards.

1. Water-conserving design and equipment will be required in all new construction.

2. Recycled water will be used for irrigation where feasible.

Policy 4.32 Use of low-water-consumption plant materials and irrigation systems will be encouraged by Placer County and the following standards will be met and implemented by site-specific development projects.

1. Where available and feasible, recycled water will be used to irrigate all parks, schools, and public rights-of-way. Irrigation equipment shall be compatible with the use of reclaimed water.

2. Low-volume spray irrigation systems shall be utilized for turf and groundcover areas and drip irrigation systems for shrubs and trees.

3. Where recycled water is available, water-intensive landscaping may be used.

4. Landscaping in improved common areas will incorporate drought-resistant varieties where practical and consistent with Placer County design guidelines.

5. Landscaping within medians should be by subsurface drip irrigation systems.

Goal 8.1 Create a comprehensively planned infrastructure system to serve the needs of future residents and allow existing residents to tie into upgraded facilities.

Goal 8.2 Provide public facilities in a timely manner, as required, to serve new development without adversely affecting existing levels of service.

Goal 8.3 Conserve energy and water through the use of recycled water and other designs.

Goal 8.4 Encourage the use of recycled water as one source for the irrigation of site landscaping.

Goal 8.5 Meet the Placer County General Plan requirement to assist in the supply of affordable, agricultural water, including reclaimed water, to surrounding agricultural lands in South Placer County

Policy 8.1 Public Facilities Implementation. The following policies provide the framework for implementation of public facilities:

1. New development and the public facilities to serve new development shall be planned and developed according to the Placer County Land Development Manual.

2. The Development Agreement between Placer Vineyards landowners and the County shall ensure that the project pays for its share of construction costs.
3. All public facilities shall be constructed and publicly dedicated as reflected in this Specific Plan and the Placer County General Plan service requirements, and as specified in the Development Agreement.

4. Reasonable efforts shall be made to facilitate future connections to the system of public utilities and roads.

5. Utility lines shall be placed underground to the extent feasible.

6. Utilities shall be designed and constructed to minimize future operation and maintenance costs to users.

Policy 8.2 Public Utilities and Services to the Special Planning Area. Specific Plan infrastructure (water, sewer, storm drainage, etc.) will be sized for the subsequent extension of these services into the Special Planning Area (SPA). Developers of properties west of Dyer Lane which abut the eastern project boundary of the SPA area shall be required to extend water and sewer mains of a size adequate to serve the SPA area and shall provide any easements necessary to accommodate this infrastructure. The specific number, location and timing of such extensions shall be established at such time as subdivision tentative maps are approved for these properties. Property owners in the SPA area will be responsible for the costs of extending infrastructure to their property, including any plan area or service area fees.

Policy 8.3 Agricultural Water Supply. Development within the Specific Plan Area should assist in the provision of agricultural water to surrounding agricultural lands. Sources of such agricultural water include reclaimed and retained water and newly developed surface water sources. Placer Vineyards shall pay agricultural water development fees to the Placer County Water Agency for improvement projects that will increase the storage and supply of recycled water for agricultural customers in southwest Placer County.

REGULATORY SETTING

Agencies with responsibility for protection of water resources in the vicinity of the Specific Plan area include the United States Environmental Protection Agency (USEPA), the SWRCB, and the Central Valley RWQCB. See Section 4.3.4 of this Revised Draft EIR for a discussion of the various statutes and regulations that concern and regulate water quality. The following section discusses the role of federal, State and local agencies relating to the operation of potable water systems.

FEDERAL

The USEPA has primary responsibility to enforce the Safe Drinking Water Act. The USEPA has delegated its authority for enforcement of the Act to the State Department of Health Services (DHS). The DHS has, in turn, entered into agreements with a majority of counties in the state to enforce the Act's provisions as they relate to community water systems with less than two hundred connections.

STATE

State Department of Health Services (DHS)

The California DHS adopts and enforces primary and secondary drinking water standards consistent with drinking water standards established by the USEPA under the Clean Water Act.

The DHS Division of Drinking Water and Environmental Management endeavors to promote and maintain a physical, chemical, and biological environment that contributes to health, prevents illness, and assures protection of the public. One of the Division's major components is the Drinking Water Program. This program regulates public drinking water systems, oversees water recycling projects, permits water treatment devices, and certifies drinking water treatment and distribution operators.

The Division of Drinking Water and Environmental Management maintains a Northern California Field Operations Branch Office that has regulatory oversight of public water systems. Activities carried out by the Division personnel include: field inspection of public water systems, issuance of operating permits, reviewing plans and specifications for new facilities, taking enforcement actions against public water systems in non-compliance with State laws and regulations, reviewing water quality monitoring conducted by public water systems, carrying out

the State Revolving Fund program to provide low interest loans for public water systems infrastructure improvements, and conducting a Source Water Assessment Program (SWAP) to identify possible sources of contamination of public water systems drinking water supplies.

Division staff is also involved in reviewing proposed projects for utilizing recycled treated wastewater for the purpose of advising the various RWQCBs of the potential public health risks associated with such projects. The Division staff work closely with the RWQCB staff to assure that the public is protected from any potential health risks associated with the use of the recycled wastewater.

LOCAL

Local health departments may enter into primacy agreements with DHS with regard to enforcement of the provisions of the Safe Drinking Water Act. The Department maintains responsibility, however, for systems with over two hundred connections. The proposed project would be subject, therefore, to the oversight of DHS.

California Health and Safety Code Section 116775 et seq. regulates water regeneration units, or water softeners. Under the Safe Drinking Water Act, water softening or conditioning appliances may be installed only if the regeneration of the appliance is performed at a non-residential location, or the regeneration of the system discharges to the community sewer system, and all other conditions set forth in the statute are satisfied. A local agency may, by ordinance, limit the availability, or prohibit the installation, of residential water softening or conditioning appliances that discharge to the community sewer system if it makes the required findings. Placer County has not adopted such an ordinance.

Placer County General Plan

The planning goals and policies of the *Placer County General Plan* relating to water supply are listed below.

Goal 4.C: To ensure the availability of an adequate and safe water supply and the maintenance of high quality water in water bodies and aquifers used as sources of domestic supply.

Policies:

4.C.1. The County shall require proponents of new development to demonstrate the availability of a long-term, reliable water supply. The County shall require written certification from the service provider that either existing services are available or needed improvements will be made prior to occupancy. Where the County will approve groundwater as the domestic water source, test wells, appropriate testing, and/or report(s) from qualified professionals will be required substantiating the long-term availability of suitable groundwater.

4.C.2. The County shall approve new development based on the following guidelines for water supply:

a. Urban and suburban development should rely on public water systems using surface supply.

b. Rural communities should rely on public water systems. In cases where parcels are larger than those defined as suburban and no public water system exists or can be extended to the property, individual wells may be permitted.

c. Agricultural areas should rely on public water systems where available, otherwise individual water wells are acceptable.

4.C.3. The County shall encourage water purveyors to require that all new water services be metered.

4.C.4. The County shall require that water supplies serving new development meet state water quality standards.

4.C.5. The County shall require that new development adjacent to bodies of water used as domestic water sources adequately mitigate potential water quality impacts on these water bodies.

4.C.6. The County shall promote efficient water use and reduced water demand by:

a. Requiring water-conserving design and equipment in new construction;
b. Encouraging water-conserving landscaping and other conservation measures;
c. Encouraging retrofitting existing development with water-conserving devices; and
d. Encouraging water-conserving agricultural irrigation practices.

4.C.7. The County shall promote the use of reclaimed wastewater to offset the demand for new water supplies.

4.C.8. When considering formation of new water service agencies, the County shall favor systems owned and operated by a governmental entity over privately- or mutually-owned systems. The County will continue to authorize new privately- or mutually-owned systems only if system revenues and water supplies are adequate to serve existing and projected growth for the life of the system. The County shall ensure this through agreements or other mechanisms setting aside funds for long-term capital improvements and operation and maintenance.

4.C.9. The County shall support opportunities for groundwater users in problem areas to convert to surface water supplies.

4.C.10. The County shall promote the development of surface water supplies for agricultural use in the western part of the county.

4.C.11. The County shall protect the watersheds of all bodies of water associated with the storage and delivery of domestic water by limiting grading, construction of impervious surfaces, application of fertilizers, and development of septic systems within these watersheds.

4.C.13. In implementation of groundwater use policies, the County will recognize the significant differences between groundwater found in bedrock or 'hard rock' formations of the foothill/mountain region and those groundwater found in the alluvial aquifers of the valley. The County should make distinctions between these water resources in its actions.

Dry Creek/West Placer Community Plan

Applicable goals and policies of the *Dry Creek/West Placer Community Plan* are as follows:

Exhibit 1, Standards:

8. Agricultural water supply: Development within the Specific Plan area should assist in the provision of affordable agricultural water to surrounding agricultural lands. Sources of such agricultural water include reclaimed and retained water and newly developed surface water sources.

Placer County Water Agency

PCWA's policies, improvement standards, technical provisions, and standard drawings are applicable to the proposed Specific Plan water supply.

PCWA's *General Design Criteria* set forth specific requirements for engineering design of water system improvements that are intended to provide a water system that will dependably and safely convey the required amount of high quality water throughout the distribution system at the least cost.

PCWA's improvement standards require that the design of all PCWA facilities comply with the following:

1. Laws and standards of the State of California Department of Public Health pertaining to domestic water supply.

2. Title 17, Chapter V, Sections 7583-7622 of the California Administrative Code (pertaining to cross-connections).

3. Applicable ordinances, rules, and regulations of all other local agencies.

According to PCWA, the Placer Vineyards water supply must meet the following criteria:

- Provide reliable water supply

- Must not adversely impact the Western Placer County Groundwater Basin
- Be technically and economically feasible
- Meet the development schedule of the project
- Meet required water quality standards

Water Forum and Water Forum Agreement

The Sacramento Area Water Forum (Water Forum) is a diverse group of water managers, business and agricultural leaders, environmentalists, citizen groups and local governments. The Water Forum was formed in 1993 to evaluate water resources and future water supply needs of the Sacramento metropolitan region. During its early activities, the Water Forum defined its goals and mission, which are embodied in the coequal objectives:

- Provide a reliable and safe water supply for the region's economic health and planned development through the year 2030; and

- Preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River.

The *Water Forum Agreement* (January, 2000) is intended to provide the framework to allow the region to meet its needs in a balanced way through implementation of seven elements. These elements include detailed understandings among stakeholder organizations on how this region will deal with key issues such as groundwater management, water diversions, dry year water supplies, water conservation, and protection of the Lower American River.

The environmental impacts of the WFA have been analyzed in an EIR. The EIR was a program-level EIR that analyzed the cumulative impacts of all elements of the WFA. The Final EIR was certified in October, 1999 by the City of Sacramento and County of Sacramento as lead agencies.

Individual projects that emanate from the WFA would be required to undergo environmental review pursuant to CEQA (and if required, NEPA). Individual project compliance with the requirements of affected local, State and federal agencies would also be required. State Trustee agencies and other affected State agencies include the California Department of Water Resources (DWR), SWRCB, State Lands Commission, California Department of Fish and Game (CDFG), California Department of Parks and Recreation and the State Historic Preservation Office. Federal agencies that may have separate, subsequent actions related to implementation include Reclamation, USFWS, NOAA, and the Corps.

The seven elements identified in the WFA are:

1. Increased surface water diversions,
2. Actions to meet customers' needs while reducing diversion impacts in drier years,
3. An improved pattern of fishery flow releases from Folsom Reservoir,
4. Lower American River Habitat Management Element, which also addresses recreation in the lower American River,
5. Water Conservation Element,

6. Groundwater Management Element, and
7. Water Forum Successor Effort.

As part of the WFA, each signatory agrees to support the diversions agreed to for each supplier as specified in that purveyor's specific agreement. Each signatory also agrees to support the facilities needed to divert, treat and distribute the water. Support for increased diversions is linked to the supplier's endorsement and, where appropriate, participation in each of the seven elements listed above.

Increased water diversions were identified as a need in order to ensure that sufficient water supplies will be available to customers in dry years as well as wet years, and that suppliers continue to meet their customers' needs to the year 2030. At the same time, the intention is to minimize diversion impacts on the Lower American River in the drier and driest years. The WFA envisions that Lower American River diversions above the H Street Bridge in average and wetter years will increase from the current level of 216,500 AFA to approximately 481,000 AFA. This represents a significant portion of the total annual flow of the American River, which averages approximately 2.6 MAFA, with a range of less than 400,000 AFA to greater than 6.3 MAFA.

Actions to meet customers' needs while reducing diversion impacts on the Lower American River in drier years include conjunctive use of groundwater basins consistent with sustainable yield objectives; using other surface water resources; reoperation of reservoirs on the Middle Fork of the American River; increased conservation during drier and driest years; and reclamation. Some of these actions would also help to reduce impacts outside of the American River watershed.

As described previously, PCWA, a signatory to the WFA, would provide the water supply for the Specific Plan area. The supply required by the Specific Plan, approximately 11,500 AFA, would consist, in the long-term, of CVP water diverted from the Sacramento River. As part of the WFA, PCWA would receive support for an American River diversion of 35,500 AFA in wetter and average years, and a new Sacramento/Feather River diversion of 35,000 AFA. PCWA is willing to exchange 35,000 AFA of its American River water for Sacramento and/or Feather River water, provided the terms of the exchange do not result in any diminution of PCWA's water supply or an increased cost to PCWA (Note 6, 1995 and Proposed Year 2030 Surface Water Diversions, WFA).

The WFA includes the following specific agreements on Sacramento River water supply for north Sacramento County and Placer County:

1. All signatories to the WFA agree that an environmentally upgraded Sacramento River diversion to serve the north Sacramento County area and Placer County as described [in the WFA] would provide important benefits to the region.

2. All signatories to the WFA agree to work in good faith to develop a project consistent with their interests that would:

    a. Consolidate several of Natomas Central Mutual Water Company's diversions;

b. Upgrade fish screens at the consolidated diversion;

c. Accommodate the diversion of 35,000 AF of water by Placer County Water Agency consistent with its Purveyor Specific Agreement;

d. Accommodate the diversion of 29,000 AF of water for delivery to Northridge Water District consistent with its Purveyor Specific Agreement;

e. Subject to additional negotiations among Water Forum signatories, potentially accommodate other diversions (e.g., City of Sacramento diversions);

f. Interconnect that consolidated diversion with the north area pipeline which delivers water from the American River. This interconnection will help meet water needs in northern Sacramento County and Placer County; and

g. Support for this diversion is also subject to all elements of the WFA including the Caveats in Section Four, I, including:

   1) Caveat 3.a., Project-specific compliance with the California Environmental Quality Act, and where applicable, the National Environmental Policy Act, federal Endangered Species Act and California Endangered Species Act.

   2) Caveat 3.f., Adequate progress in addressing the Sacramento River and Bay-Delta conditions associated with implementation of the WFA.

The purveyor specific agreements with PCWA and Northridge Water District (now Sacramento Suburban Water District) are relevant to the proposed Specific Plan water supply. Relevant terms of those respective agreements are described below.

Sacramento Suburban Water District (SSWD) (Formerly Northridge Water District) Agreement for Meeting SSWD's Water Supply Needs to the Year 2030

All signatories will support a project to divert, treat and convey Sacramento River water in a pipeline that would connect to the Northridge pipeline ("Sacramento River Pipeline"). They will support a Warren Act contract with Reclamation for diversion of 29,000 AF of PCWA water from Folsom Reservoir. They will also support the PCWA petition to the SWRCB for change in its place of use for water to be used in north central Sacramento County ("Expanded POU"), with the following conditions included in the SWRCB order:

1. For the first ten years that water is available for diversion by Northridge from Folsom Reservoir under the Northridge-PCWA agreement, but not more than twelve years from the effective date of the WFA, whichever occurs first, Northridge's diversions under the Northridge-PCWA agreement, for its own use or delivery to other purveyors, will be subject to the following restrictions:

a. Northridge will be able to divert PCWA water only in years when the projected March through November unimpaired inflow into Folsom Reservoir is greater than 950,000 acre feet.

b. In December, January and February following a March through November period when the unimpaired inflow into Folsom Reservoir was less than 950,000 acre feet, Northridge will not divert PCWA water until such time as or after water is being released from Folsom Reservoir for flood protection.

c. In addition to the foregoing, Northridge's diversions of PCWA water will be limited during the ten year period pursuant to the water use schedule in the Northridge-PCWA agreement, which allows annually-increasing diversions of up to 24,000 acre feet per year during the first ten years of water deliveries under that agreement.

d. Nothing in this agreement is intended to restrict Northridge's ability to take delivery of Section 215 water from Folsom Reservoir from the U.S. Bureau of Reclamation whenever it may be available.

2. If Northridge is able to take delivery of Sacramento River water through the Sacramento River pipeline, Northridge will thereafter divert water from Folsom Reservoir under the Northridge-PCWA agreement, for its own use or delivery to other purveyors, only in years when the projected March through November unimpaired inflow into Folsom Reservoir is greater than 1,600,000 acre feet (i.e., "above-Hodge").

In addition, the WFA specifies that:

a. With the support of all Water Forum signatories, Northridge will continue to work with other interested parties to pursue a project involving a diversion on the Sacramento River, a new water treatment plant and water conveyance facilities that connect to the Northridge pipeline for use of Sacramento River water within the area served by the Northridge pipeline.

b. In determining the amount of surface water available for growth in the north part of Sacramento County within the ten-year period referred to in this agreement, the parties agree that the long-term annual average yield of water diverted from Folsom Reservoir under the Northridge-PCWA agreement would be not more than 17,400 acre feet, which is the projected average annual water supply that would be available if diversions were restricted to above-Hodge conditions.

Placer County Water Agency Agreement for Meeting PCWA's Water Supply Needs to the Year 2030

1. Most Years: As it applies to the PCWA portion of the agreement, *Most Years* is defined as follows: Years when the projected March through November Unimpaired Inflow to Folsom Reservoir is greater than 950,000 acre feet.

In Most Years, PCWA will divert and use 35,500 AF from the American River.

PCWA will also divert and use 35,000 AF from the Sacramento and/or Feather Rivers if exchanges of equal amounts can be made with others under terms acceptable to PCWA.

If circumstances prevent PCWA from developing the diversion from the Sacramento and/or Feather Rivers referred to above, PCWA and the other members of the Water Forum Successor Effort will enter into negotiations with the objective of finding a mutually agreeable alternative.

2. Drier Years: As it applies to the PCWA portion of the agreement, Drier Years is defined as follows: Years when the projected March through November Unimpaired Inflow to Folsom Reservoir is less than 950,000 acre feet and greater than or equal to 400,000 acre-feet.

During Drier Years PCWA will divert and use 35,500 AF from the American River and will replace water to the River from reoperation of its MFP reservoirs in the following amounts, with the amount of water released to the River for unimpaired inflow quantities between 950,000 AF and 400,000 AF linearly proportional to the amounts shown below:

Unimpaired inflow to Folsom Reservoir

950,000 AF: Amount of Reoperation Water = 0 AF
400,000 AF: Amount of Reoperation Water = 27,000 AF

PCWA would make the releases contingent upon the following conditions:

a. its ability to sell the released water for use below the Lower American River on terms acceptable to PCWA,

b. PG&E's agreement to such reoperation until the present power purchase contract with PG&E expires (presently anticipated by year 2013), and

c. PCWA's determination that it has sufficient water in its reservoirs to make the additional releases to mitigate conditions in dry years without jeopardizing the supply for PCWA's customers. (Note: operational modeling for PCWA based on historical hydrology and projected 2030 requirements as set forth in the WFA has shown that reoperation water should be available for such release and sale without drawing MFP reservoirs below 50,000 acre-feet).

The source of this replacement water in drier years would be water not normally released in those years from the PCWA Middle Fork Project.

PCWA will also divert and use 35,000 AF from the Sacramento and/or Feather River if the exchanges referred to in one above are perfected.

3. Driest Years (i.e. Conference Years): Defined for purposes of the WFA as follows: Years when the projected March through November Unimpaired Inflow to Folsom Reservoir is less than 400,000 acre-feet.

In the Driest Years, PCWA will continue to divert and use 35,500 AF from the American River. Subject to the conditions set forth in 2 above, during the driest years PCWA will replace 27,000 AF of water to the River from reoperation of their MFP reservoirs.

However it is recognized that in years when the projected unimpaired inflow to Folsom Reservoir is less than 400,000 acre feet there may not be sufficient water available to provide the purveyors with the driest year's quantities specified in their agreements and provide the expected driest year's flows to the mouth of the American River. In those years PCWA will participate in a conference with other stakeholders on how the available water should be managed. The conferees will be guided by the Conference Year Principles described in Section Four, I. of the WFA.

PCWA will also divert and use up to 35,000 AF from the Sacramento and/or Feather River if the exchanges referred to in one above are perfected.

In addition, the WFA specifies that:

If circumstances prevent PCWA from selling water to the Northridge Water District for groundwater stabilization, PCWA and the other members of the Water Forum Successor Effort will enter into negotiations with the objective of finding a mutual agreeable use of that water in Placer County by diversion at either Auburn or Folsom Reservoir or by an exchange or sale providing for delivery of it below the mouth of the American River.

During drier years, PCWA will make available for purchase water from its Middle Fork Project (MFP) reservoirs as replacement water for the City of Roseville and possibly for the City of Folsom and Georgetown Divide PUD diversions if the conditions in Section D, 2 above are met.

All signatories will advocate that the SWRCB, FERC, the courts or all other entities taking action under their authority, not affect PCWA's water rights or operation of its Middle Fork Project in a way that would prevent PCWA from meeting its commitments under either the WFA or its Diversion Agreement with the Reclamation or prevent Reclamation's implementation of the AFRP flow releases for the Lower American River. However, if in any year PCWA's supplies are reduced as a result of any action by the SWRCB, FERC, courts, or other entity, the amount by which PCWA's supplies are reduced shall be credited to PCWA and the City of Roseville as reoperation water under Section D, 2 and 3, to the extent it flows into Folsom Reservoir.

This agreement is entered into with recognition that PCWA has water rights for 120,000 acre feet, receives 100,400 acre feet annually from the Yuba/Bear Rivers pursuant to a contract with PG&E, and 35,000 acre feet pursuant to a contract for CVP water. If for any reason those supplies are significantly reduced in amount or duration, other than normal deficiencies imposed

by Reclamation on CVP contractors, it will be considered a changed condition and all Water Forum signatories will work in good faith to renegotiate relevant portions of the WFA.

PCWA's entitlements to water not used before 2030 will remain available for PCWA's use after 2030.

In addition, the WFA includes the following specific agreements with regard to PCWA:

19. All signatories to the Agreement will endorse construction of PCWA's water supply facilities which include diversion, treatment, pumping stations, storage facilities, and transmission piping. They will also provide any endorsements needed for rights-of-way, permits, environmental documentation, and other requirements necessary to enable PCWA to meet its needs to the year 2030. This specifically includes support to divert water from the American River near Auburn with the following conditions:

    a. A wet well including screens and piping to the wet well sized at 225 cfs.

    b. A permanent pumping plant and pipe to the tunnel sized at 100 cfs for PCWA.

20. All signatories to the Agreement will endorse construction of PCWA's water supply facilities from the Sacramento and/or Feather River which include diversion, treatment, pumping stations, storage facilities, and transmission piping rights of way, etc.

21. All signatories to the Agreement will endorse the point of delivery change for PCWA's water from the American River to the Sacramento and/or Feather River.

22. All signatories to the Agreement will endorse PCWA's changes of POU, points of diversion, and sale of MFP water consistent with the WFA.

23. All signatories to the Agreement endorse the release of reoperation water from PCWA's MFP reservoirs as acceptable dry year alternative replacement water.

Under the WFA, in order for water from a Sacramento River diversion to be made available to the Specific Plan area, numerous issues involving agreements and process-related arrangements would need to be addressed, as follows:

- PCWA must first negotiate an exchange of its MFP water with an entity that has rights to divert from the Sacramento River, such as the United States, or an amendment to its CVP contract enabling diversion of that entitlement from the Sacramento River in addition to Folsom Reservoir.

- Diversion and conveyance facilities must be designed and an EIR must be prepared evaluating the potential impacts of such diversion and conveyance facilities.

- Any significant impacts that are identified in the CEQA process must be mitigated, to the extent feasible.

- Various state (e.g., 1601) and federal (e.g., 404) permits must be obtained.

- PCWA, or the entity with which PCWA exchanges the water, must obtain approval for a new point of diversion off the Sacramento River.

- Property rights for the project must be obtained, construction must be advertised and contracted, and financing must be obtained for the project.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

- Have insufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed.

- Substantially deplete groundwater supplies.

- Be inconsistent with the goals and policies of the adopted *Placer County General Plan*.

- Be inconsistent with the applicable terms of the WFA.

Evaluation of impacts related to the source of the proposed surface water supply and hydrologically related impacts are contained in Section 4.3 of this Revised Draft EIR.

4.II.7-I Water demand could exceed water supply available for the Specific Plan area.

Development pursuant to the proposed Specific Plan would result in an increased demand for potable water supplies. Table 4.11-8 illustrates water demand for the Specific Plan area.

Potable water for the Specific Plan area would be furnished by the PCWA. PCWA has concluded that it has sufficient water supply to satisfy the anticipated demand for potable water from projects in western Placer County through 2025, including demand generated by the Specific Plan (see Appendix M of this Revised Draft EIR). There is, however, insufficient existing infrastructure to convey and treat the water required by the Specific Plan. PCWA has identified increased diversion from the Sacramento River, consistent with PCWA's role as a signatory to the WFA, as the long-term source of water to meet Specific Plan buildout needs.

The initial and long-term water supply proposals would use existing water rights for water supply to the proposed project. Exercise of such water rights would be consistent with the

agreements reached as part the WFA. Impacts of the exercise of such rights have been considered in the EIR prepared in conjunction with consideration of the WFA.

An initial water supply would need to be wheeled from the Foothill Water Treatment Plant through the City of Roseville's system. PCWA estimates that it has 10.7 MGD of unallocated capacity from this source that can serve approximately 9,304 EDUs and that is available on a first-come, first-served basis. It is anticipated that the project would rely on this supply until approximately 2012, when the Sacramento River supply would be brought on line (see Appendix M of this Revised Draft EIR). Table 4.11-10 indicates that by 2015, the Specific Plan area could require as much as 9.6 MGD to meet projected demand. Assuming a relatively constant rate of growth, it is apparent that as much as 7 to 8 MGD could be needed by 2012. When taking into consideration other existing and planned projects in western Placer County that could require an additional 7 MGD by 2012 (resulting in 15 MGD total demand with the Placer Vineyards Specific Plan), and the 10 MGD limitation on PCWA's ability to wheel water through Roseville's system (of which approximately 8.68 MGD remains uncommitted), these supply and infrastructure limitations are a ***potentially significant impact*** that could adversely affect the quantity or quality (including water pressure) of water delivered to existing customers served by the infrastructure.

The Specific Plan would generate a demand for approximately 11,500 AFA at buildout. This calculation does not take into consideration use of recycled water that could reduce demand. However, recycled water would only be available to the Specific Plan area in an amount that does not exceed the average dry weather flow sent to the DCWWTP. Unless and until infrastructure for the long-term water supply is completed and implemented, continued development of the Specific Plan area could generate demand for water that exceeds the supply provided by the initial water supply. Should this occur, the Specific Plan has also identified secondary water supply plans that would deliver an additional 6,000 AFA to the Specific Plan area, including: (1) an extension of the existing San Juan Cooperative Pipeline and Northridge Transmission Pipeline (Cooperative Transmission Pipeline) that terminates at Antelope and Walerga Road, west along Antelope Road and north to Watt Avenue into the Specific Plan area.; and (2) a pipeline within PFE Road from Cook Riolo Road to Watt Avenue extending north to the Specific Plan area could also be used to convey this supply. Because a number of actions must occur in order to secure these water supplies, including multi-party agreements, treatment plant improvements, and the extension of an existing pipeline to the Specific Plan area, this impact is considered ***potentially significant.***

<u>Mitigation Measures</u>

The following mitigation measures will reduce impacts related to water supply, including infrastructure capacity, to a *less than significant level:*

4.11.7-1a *Prior to approval of any small lot tentative subdivision map for a proposed residential project of more than five hundred dwelling units, the County shall comply with Government Code Section 66473.7. Prior to approval of any small lot tentative subdivision map for a proposed residential project of 500 or fewer units, the County need not comply with Section 66473.7, or formally consult with PCWA or other*

public water system, but shall nevertheless make a factual showing or impose conditions similar to those required by Section 66473.7 in order to ensure an adequate water supply for development authorized by the map. Prior to recordation of any final small lot subdivision map, or prior to County approval of any similar project-specific discretionary approval or entitlement required for nonresidential uses, the applicant shall demonstrate the availability of a long-term, reliable water supply from a public water system for the amount of development that would be authorized by the final subdivision map or project-specific discretionary non-residential approval or entitlement. Such a demonstration shall consist of a written certification from the water service provider that either existing sources are available or that needed improvements will be in place prior to occupancy.

4.11.7-1b *The Specific Plan proponents shall, comply with PCWA water conservation strategies as described in PCWA's Urban Water Management Plan.*

4.11.7-1c *Prior to approval of any small lot tentative subdivision map or similar project level discretionary approval for land uses that do not require a tentative subdivision map, the Placer County Water Agency (PCWA) shall perform an analysis of the remaining wheeling capacity in the City of Roseville's system. This analysis shall consider all of the previously committed demand to Morgan Creek, Placer Vineyards, Regional University or other projects within southwest Placer County that rely on water conveyed through City of Roseville facilities and/or pursuant to the wheeling agreement between the City of Roseville and PCWA, as amended from time to time. The analysis shall be submitted to both the County and the City of Roseville. The County shall confirm with PCWA that uncommitted capacity remains to wheel the required amount of PCWA-supplied water to the Specific Plan area prior to approval of discretionary actions. In the event sufficient uncommitted capacity does not exist, the County shall not grant the proposed tentative subdivision map or other project level discretionary approval until the County determines that a water supply not dependent on water from PCWA that is wheeled thru the Roseville system becomes available for the area at issue.*

OFF-SITE INFRASTRUCTURE

4.II.7-2 Impacts due to the construction and maintenance of off-site utilities related to water supply could cause environmental effects related to Land use, Visual Quality, disruption of Hydrology and Soils, disruption of Biological and Cultural Resources, Transportation and Circulation, Air Quality, Noise, other Public Services, and Hazards.

All of the above potential effects are considered under other sections of this Revised Draft EIR (see Sections 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, and 4.9), and other topics discussed in Section 4.11. The construction and maintenance of utilities in the off-site areas would not result in additional demand for water, and would not otherwise affect the impacts identified above. This is a ***less than significant impact.***

Mitigation Measure

With implementation of the mitigation measures identified in the sections enumerated above, this is a *less than significant impact* and no additional mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.11.7-3 The proposed project would contribute to the cumulative demand for potable water.

As discussed under Impact 4.11.7-1, PCWA has concluded that it has sufficient water rights to meet the Specific Plan demand at buildout through the year 2025. The long-term supply of 11,500 AFA for the Specific Plan area would be furnished by PCWA via pipeline with diversion of water from the Sacramento River. This diversion is included in the WFA, subject to the successful resolution of outstanding issues and the completion of an EIR/EIS and compliance with relevant federal and State laws such as the Endangered Species Act.

Section 4.3 of this Revised Draft EIR identifies cumulative impacts related to the water supply, including the Sacramento diversion. Included are the following:

- Impact 4.3.3-7 identified an impact on CVP hydropower generation and gross capacity. The cumulative impact is considered to be ***less than significant.***

- Impact 4.3.3-8 indicated that increased diversions under the cumulative conditions would result in lower water surface levels in Folsom Reservoir, with resulting effects on energy use and cost. The proposed long-term water supply for the Specific Plan is not viewed as a factor in these changes, and the cumulative impact was found to be ***less than significant.***

- Impact 4.3.3-9 identified the impact that cumulative conditions would have on State Water Project customers. Under the cumulative condition, reductions in deliveries to State Water Project customers would range from 5% to 45%, relative to existing conditions, in 45 of the 70 years modeled. The proposed Specific Plan long-term water supply would not contribute, in either frequency or magnitude, to any anticipated future long-term State Water Project delivery reductions, and it would have no cumulatively considerable contribution to the impacts that occur under the cumulative condition. The impact is therefore considered ***less than significant.***

- Impact 4.3.3-10 identified the impact that cumulative conditions would have on CVP customers. Under the cumulative condition, CVP water service contractors would experience delivery reductions of 5% to 20%, relative to existing conditions, in 24 of the 70 years modeled. The long-term water supply would not contribute, in either frequency or magnitude, to any reduction in delivery to any CVP contractor, and it would not have a cumulatively considerable contribution to the significant impacts to CVP deliveries that would occur under the cumulative condition. The cumulative impact is considered to be ***less than significant***.

- Impact 4.3.4-11 discusses the cumulative impact of increased diversions and changes in CVP operations that could result from the cumulative conditions. These changes include reduced water storage levels in the Folsom, Shasta and Trinity reservoirs, and substantially reduced flows in the lower American and Sacramento Rivers. The cumulative impact is considered to be ***less than significant.***

- Impact 4.3.4-12 discusses the cumulative impact that the proposed water supply could have on Delta water quality. Reductions in the Delta outflow could result in a possible reduction in Delta water quality. The cumulative impact is considered to be ***less than significant.***

The cumulative impacts of the long-term water supply were also considered and addressed in the *Environmental Impact Report for the Water Forum Agreement*, State Clearinghouse # 95082041. The WFA is to be implemented over the next three decades, and the cumulative analysis considered events that could occur in that time frame. The Water Forum EIR recognized that there is a large degree of speculation and uncertainty when attempting to make such projections, and that the actions of various persons and agencies could have a substantial impact on future events. The Water Forum EIR provided a summary of cumulative impacts at Table 2-3 of the EIR.

As reported above, at buildout, Placer Vineyards will require 11,500 AFA to meet demand. PCWA estimates that 86,837 AFA can be made available in normal years for use in western Placer County, and that this will be more than an adequate amount to meet projected demand over the next 20 years (see Appendix M of this Revised Draft EIR). Some of the other identified projects in western Placer County that could contribute to the cumulative demand for potable water include:

- The proposed *Curry Creek Community Plan*, which at buildout is anticipated to contain 16,200 dwelling units as well as 2,025,000 and 2,124,000 square feet of retail and office space, respectively.

- The *Regional University and Community Specific Plan*, which would encompass a six hundred-acre four-year private university campus, approximately 4,223 dwelling units and 73 acres of retail space at buildout.

- The *Sierra Vista Specific Plan*, which at buildout it would consist of approximately 10,000 dwelling units, along with approximately 77 acres of commercial and 57 acres for office development (3,000,000 square feet of floor area).

- The *West Roseville Specific Plan*, which at buildout would contain approximately 8,500 dwelling units, and 200 acres of commercial/office development.

- The proposed *Creekview Specific Plan*, which at buildout would consist of approximately 2,160 dwelling units, 38 acres of industrial land use, a proposed school.

- The *Placer Ranch Specific Plan*, which at buildout would consist of approximately 6,793 residential dwelling units, 527 acres of business park and light industrial uses, 150 acres of

office professional uses and 99 acres for commercial uses. In addition, the proposed project includes a 300-acre branch campus of California State University Sacramento, with an estimated total enrollment of 25,000 students.

- *Riolo Vineyards Specific Plan*, which at buildout will consist of approximately 805 dwelling units. Southeast from the proposed Riolo Vineyards Specific Plan area is the Morgan Place development, which is proposed to have approximately 91 dwelling units.

- The proposed Morgan Place development area is located on approximately 12 acres southeast of the Placer Vineyards Specific Plan area. Proposed development of this site includes approximately 91 dwelling units.

- The proposed Silver Creek development area is located on approximately 28.6 acres southeast of the Placer Vineyards Specific Plan area. Proposed development of this site includes approximately 79 dwelling units.

Assuming all of the above projects were to be built and supplied water by PCWA, and assuming demand factors for all projects are similar to those used for the Placer Vineyards Specific Plan, demand would be in the general range of 40,000 AFA, which is well within the projected PCWA water availability of 86,837 AFA. In addition, because some of the above projects are or will be within the City of Roseville, it is unlikely that PCWA would actually be the water provider. Cumulative impacts related to long-term supply are, therefore, ***less than significant***; however, infrastructure capacity is constrained, as described under Impact 4.11.7, which could lead to a ***potentially significant cumulative impact*** to which the project's contribution could be ***cumulatively considerable***.

Mitigation Measure

Implementation of Mitigation Measures 4.11.7-1a-c would reduce the projects contribution to cumulative water supply impacts related to infrastructure capacity to a *less than cumulatively considerable (i.e., less than significant) level.*

4.11.8 RECYCLED WATER

The purpose of the recycled water analysis is to assess potential impacts related to availability, delivery and use of recycled water for the Specific Plan area. The analysis will provide background on the planned recycled water supply source and ongoing recycled water supply planning efforts. It is assumed that the City of Roseville be the supplier of recycled water and would operate the recycled water supply system.

ENVIRONMENTAL SETTING

The following discussion focuses on the City of Roseville as the potential recycled water supplier because SRCSD could not practically provide similar service in Placer County. Water recycling is the process of reusing treated wastewater for beneficial purposes such as agricultural and landscape irrigation, industrial processes, toilet flushing, and replenishing a groundwater

basin (referred to as groundwater recharge). Water is sometimes recycled and reused on-site such as when an industrial facility recycles water and uses it for cooling processes (USEPA, EPA 909-F-98-001). The term "water recycling" is generally used synonymously with "water reclamation." The USEPA has documented environmental benefits of water recycling and reuse to include, but no be limited to, the reduction in the volume of water diverted from sensitive ecosystems, the reduction or prevention of pollution, and the creation or enhancement of wetlands and riparian habitats.

The City of Roseville (City) implements methods to encourage recycled water use including rate discounts, no connection fees and public education. The City waives connection fees for connecting to City recycled water facilities and the recycled water rate to customers is 50% of the potable water use rate. It should be noted that rate structures and connection fees charged by the City are subject to change.

EXISTING RECYCLED WATER SUPPLIES

The City currently provides or plans to provide recycled water to several locations on the west side of the City. The *West Roseville Specific Plan* uses a semi-aggressive strategy of recycled water use by irrigating landscaping at parks, schools, commercial, business professional, industrial and multi-family projects as well as publicly landscaped areas (including roadway landscape corridors and medians). The use of recycled water offsets potable water demand and is an important component of the overall project water supply.

The City produces recycled water at both of its wastewater treatment facilities, DCWWTP located on Dry Creek and PGWWTP located on Pleasant Grove Creek. Effluent from Roseville's treatment plants is tertiary treated and meets Title 22 full body contact requirements for use of recycled water. These two facilities comprise the regional recycled water facilities producing water for the City as well as the City's regional partners' service areas.

The City has determined that "Urban Growth Areas" (newly developing areas on the periphery of the city) shall only receive the amount of recycled water they produce in wastewater on an average day in July. For Urban Growth Areas, recycled water demand exceeds projected wastewater flow.

The DCWWTP serves the southern part of the City system's service area and has a capacity rating of 18 MGD. The DCWWTP currently produces disinfected tertiary-treated wastewater, which is supplied to various customers for landscape irrigation purposes. It is planned to deliver wastewater to the DCWWTP plant for treatment and initially recycled water will be supplied from the DCWWTP. Ultimately, recycled water will be delivered from the PGWWTP (see Figure 3-5 in Chapter Three of this Revised Draft EIR for planned infrastructure schematic).

The PGWWTP began treating wastewater in June, 2004. Wastewater from the north and northwest portions of the city, the Sunset Industrial Area of the county, and the Stanford Ranch area of the South Placer Municipal Utility District (SPMUD) service area flows to the PGWWTP for treatment. The facility was designed to treat 12 MG of wastewater per day. The water processed by the PGWWTP will be used to supply cooling water to the Roseville Energy Park

planned for commercial operation in spring of 2007, and will be used for landscape and commercial irrigation in the West Roseville Specific Plan area.

Following monitored treatment at the facilities, wastewater is discharged from the treatment plants into Dry Creek and Pleasant Grove Creek. The residual solids are transported to and disposed at the Western Placer Waste Management Authority sanitary landfill.

PLANNED RECYCLED WATER SUPPLIES

Past and future recycled water planning efforts for the City are described in *the Recycled Water Distribution System Feasibility Study* (April 2000). The study includes an evaluation of the quantity of recycled water available for a recycled water program. The study evaluated the feasibility of expanding its recycled water distribution system in three phases.

Phase I consisted of the existing recycled water distribution system with existing users and a single supply of recycled water from the DCWWTP. Phase II consisted of an expanded recycled water distribution system to include recycled water deliveries to Hewlett-Packard and Diamond Oaks Golf Course to be supplied from a single source, the DCWWTP. Phase III consists of the ultimate recycled water distribution system with deliveries to all feasible users identified in the recycled water market assessment and two supplies of recycled water, one from DCWWTP and the other from PGWWTP.

During spring of 2003, the current average dry weather flow capacity of wastewater treatment in the service area was 30 MGD (18 MGD at DCWWTP and 12 MGD at PGWWTP). Both plants would have the ability to produce "full unrestricted reuse" recycled water to irrigate large turf areas (parks, schools, golf courses) and other landscape areas as needed. Projections for the use of recycled water at buildout are estimated at 4,500 AFA (approximately 4 MGD) (City of Roseville, 2004).

Since the work described in the preceding paragraph was performed, RMC has completed a Technical Memorandum (*Dry Weather Flow Projections for the Ultimate SPWA Service area [Including Urban Growth Areas*], Nov.4, 2005) on behalf of the SPWA that has established new flow projections for the two plants. DCCWTP is now projected to receive 19.3 MGD at "ultimate" buildout and PGWWTP is projected to receive 23.4 MGD, for a total buildout flow of 42.7 MGD.

REGIONAL RECYCLED WATER FACILITIES

The PGWWTP and DCWWTP are owned and operated by the City of Roseville on behalf of the Regional Partners (SPWA) consisting of the City, the SPMUD and portions of unincorporated Placer County (primarily Granite Bay and Sunset Industrial Area).

EXISTING RECYCLED WATER DEMAND

RMC has identified existing recycled water customers based on a review of existing studies and information from City staff. This review identified nine existing recycled water customers.

These customers receive recycled water produced at the DCWWTP, with the exception of the PGWWTP irrigation. The combined demand for these existing customers is approximately 2,045 AFA, or an average daily demand of 1.83 MGD (RMC Technical Memorandum, November 29, 2005, Appendix R of this Revised Draft EIR).

Three of the nine existing customers (Morgan Creek Golf Course, Woodcreek Golf Course, and Diamond Oaks Golf Course) have recycled water storage facilities (ponds) on-site. The Del Webb/Sun City Recycled Water System delivers to the Del Webb Golf Course, Blue Oaks Park, School House Park, and Del Webb streetscape. There is on-site storage available for golf course irrigation. The other five existing customers do not have on-site storage facilities and receive water directly from the DCWWTP (RMC Technical Memorandum, November 29, 2005).

PROPOSED RECYCLED WATER SUPPLY RELATED GOALS AND POLICIES

The following goals and policies related to recycled water use are contained in the proposed Specific Plan.

Policy 4.32 Use of low-water-consumption plant materials and irrigation systems will be encouraged by Placer County and the following standards will be met and implemented by site-specific development projects.

1. Where available and feasible, recycled water will be used to irrigate all parks, schools, and public rights-of-way. Irrigation equipment shall be compatible with the use of reclaimed water.

2. Low-volume spray irrigation systems shall be utilized for turf and groundcover areas and drip irrigation systems for shrubs and trees.

3. Where recycled water is available, water-intensive landscaping may be used.

4. Landscaping in improved common areas will incorporate drought-resistant varieties where practical and consistent with Placer County design guidelines.

5. Landscaping within medians should be by subsurface drip irrigation systems.

Policy 4.33 Use of currently available water conservation devices will be encouraged by Placer County in all existing development. To accomplish this, Placer County will meter the use of potable water, and new construction must meet the following standards.

1. Water-conserving design and equipment will be required in all new construction.

2. Recycled water will be used for irrigation where feasible.

Goal 8.4 Encourage the use of recycled water as one source for the irrigation of site landscaping.

REGULATORY SETTING

Under current state and local regulations, tertiary-treated wastewater, produced at the DCWWTP and the PGWWTP is acceptable for the purposes of landscape irrigation, agricultural irrigation, industrial process water or decorative fountains, toilet flushing in office buildings, construction water, industrial process water or recreational impoundments.

FEDERAL

The USEPA regulates many aspects of wastewater treatment and drinking water quality, and most states have established criteria or guidelines for the beneficial use of recycled water. In addition, in 1992, USEPA developed a technical document entitled "Guidelines for Water Reuse," which contains information as a summary of state requirements, and guidelines for the treatment and uses of recycled water. State and federal regulatory oversight has successfully provided a framework to ensure the safety of the many water recycling projects that have been developed in the United States.

STATE

The RWQCB and the DHS have primary oversight responsibility for implementation of recycled water projects in California. The treatment plants process wastewater in accordance with the RWQCB standards and permit requirements under the NPDES for discharge of treated wastewater and that meet the requirements for "full unrestricted reuse" as determined by the DHS. On June 20, 1997 the Central Valley RWQCB adopted a Master Water Reclamation Permit (Order No. 97-147) to permit the City's existing recycled water distribution system. This permit outlines specific prohibitions on the use of recycled water in the city and place stringent water quality criteria, as well as treatment and disinfectant standards for recycled water use.

CCR, Title 22

Water reclamation criteria are contained in Title 22, Division 4 of the California Code of Regulations (State of California, 1978) under the jurisdiction of the DHS as defined in the California Water Code. These criteria specify the level and degree of treatment for recycled water according to the designated use, and establish acceptable levels of constituents in the water. Title 22 also sets forth means for assuring reliability in the production of recycled water by requiring an Engineering Report that describes the recycled water quality, treatment process and reliability features, distribution and use of recycled water. These criteria, which are currently in the process of revision, are designed to protect public health based on potential exposure and potential public health effects.

Title 22 regulations specify treatment criteria for five categories of recycled water use: irrigation of food crops; irrigation of fodder, fiber and seed crops; landscape irrigation; recreational impoundments; and groundwater recharge. The most effective uses of recycled water require that it be "adequately disinfected, oxidized, coagulated, clarified, filtered wastewater." The tertiary treatment process at PGWWTP and DCWWTP currently produces wastewater that meets these requirements (Roseville, 1993).

LOCAL

Placer County General Plan

The following goals and policies related to recycled water supply and/or use are contained in the *Placer County General Plan.*

Policy 4.C.7. The County shall promote the use of reclaimed wastewater to offset the demand for new water supplies.

Goal 7.D. To maximize the productivity of Placer County's agriculture uses by ensuring adequate supplies of water.

7.D.6. The County shall encourage the use of reclaimed water where appropriate for agricultural production.

City of Roseville General Plan

The following goals and policies related to recycled water supply and/or use are contained in the *Roseville General Plan*.

Goal 3: Actively pursue the use of recycled water where appropriate and expand recycled water distribution system to deliver and meet estimated demands of 4,500 acre-feet/year.

Goal 4: Meet State of California and Environmental Protection Agency (EPA) water quality standards for the discharge of treated wastewater, as well as meet State of California quality standards for the production of recycled water.

Policy1: Expand recycled water distribution system to deliver and meet estimated demands of 4,500 acre feet/year.

Policy 6: Develop, plan, and provide incentives for use of recycled water by the public and private sectors.

City of Roseville Environmental Utilities Department

The City of Roseville Environmental Utilities Department will review and approve the proposed end users of the recycled water or will wholesale the recycled water to the water purveyor who will then implement the conditions of the City of Roseville's master Reclamation Permit.

City of Roseville Municipal Code

The following codes related to recycled water supply and/or uses are contained in the *Roseville Municipal Code 14.17 – Recycled Water*.

Section 14.17.010

A. It is declared to be the policy of the City to require recycled water to be used in a manner that is in compliance with all applicable laws, ordinances and regulations that will achieve the following:

   1. Extend and enhance local water supplies by using recycled water for nonpotable purposes to free up potable supplies for higher uses;

   2. Reduce wastewater flows that would otherwise be lost to the ocean;

   3. Prevent direct human consumption of recycled water; and

   4. Control and limit runoff of recycled water by controlling the installation systems using recycled water.

B. Where the use of recycled water is feasible, appropriate and acceptable to all applicable regulatory agencies for the purposes of landscape irrigation, agricultural irrigation, filling of decorative fountains, in office buildings for toilet flushing, construction water, industrial process water, or recreational/ornamental impoundments or other uses permitted by the regulatory agencies, it is the policy of the City to require the applicant, owner or customer to use recycled water in lieu of potable water. Each such usage of recycled water shall, in addition, be subject to the availability of facilities and the feasibility of making such facilities available now or in the foreseeable future.

The following guiding principle related to recycled water supply and/or uses is contained in the *West Roseville Specific Plan Guiding Principles.*

7. Any development proposal west of Roseville shall secure and provide a new source and supply of surface water and should include reduced water demand through the use of recycled water and other off-sets.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines provides examples of impacts that could be considered significant for utilities and service systems which refer to wastewater treatment and, although not stated, relate to the use of recycled water as it is a part of the utilities and service systems. Placer County has determined that a project could result in a significant impact if it would:

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- Have insufficient recycled water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed; or

- Be inconsistent with the goals and policies of applicable General Plans; and

4.11.8-1 Implementation of the Specific Plan could result in inconsistencies with recycled water treatment requirements and City/County goals, policies and regulations

The recycled water distribution system as identified in the Specific Plan will meet the reclamation criteria contained in Title 22, Division 4 of the California Code of Regulations. These standards set by the DHS and the RWQCB, and would be consistent with City of Roseville Municipal Code, *Roseville General Plan* goals and policies and *Placer County General Plan* goals and policies. This impact is considered ***less than significant***.

Mitigation Measures

No mitigation measures are required.

4.11.8-2 The recycled water demand could exceed available recycled water supply for the Specific Plan area.

The annual average recycled water demand for the Specific Plan area has been estimated by MacKay & Somps to be 1.39 MGD (Memorandum from MacKay & Somps to RMC, March 2005) and was supplied to RMC for use in the *Market Assessment for Recycled Water Distribution System*.

Design flow rates are affected by recycled water demand, the time frame in which it is to be used, as well as the supply. The City has determined that the Specific Plan area will only receive the amount of recycled water that it produces in wastewater on an average day in July. RMC projects that the Specific Plan recycled water demand would be 3.44 MGD on an average day in July. Although RMC reports that the Specific Plan area would generate more wastewater than recycled water demand, this assumes the Blueprint Alternative and projected wastewater flows of 3.89 MGD. Flows for the "project" would be 2.79 MGD, which leaves a .65 MGD deficit when compared to July average day recycled water demand (3.44 MGD). Based on the supply

formula used by the City, the project would be entitled to receive 81% of projected average annual day recycled water demand, or approximately 1.13 MGD. Projected recycled water supply is determined based on a ratio of wastewater to recycled water demand during the peak demand month (July).

The above calculations assume that all of the Specific Plan area is served by the DCWWTP. In the event the western 4,340 acres are directed to SRCSD for wastewater service, the flows to DCWWTP would be significantly reduced (0.48 MGD versus 2.79 MGD).

Although the applicants have proposed that only the eastern 890 acres be supplied with recycled water in the event the balance of the site is directed to SRCSD (see Figure 3-19 in Chapter Three of this Revised Draft EIR), there have been no studies performed similar to the RMC study to document recycled water demand versus supply for this area. In the event the western 4,340 acres of the Specific Plan area receive wastewater service from SRCSD, the absence of a recycled water supply for this area would be a ***potentially significant and unavoidable impact***. Although additional recycled water may be made available by SRCSD in Sacramento County due to the availability of inflow from the Specific Plan, there would be no direct benefit to the Specific Plan water supply or reduction in demand for potable water from PCWA (however, water demand reported in Section 4.11.7 does not assume recycled water). Although recycled water may be available to the eastern 890 acres in the event service is not expanded to the western 4,340 acres, absent a plan demonstrating its feasibility, this would also be a ***potentially significant and unavoidable impact.***

Mitigation Measures

No mitigation measures are available to offset the potential lack of supply, with the exception of a change in the project description to eliminate the potential to bifurcate wastewater treatment. This remains a *potentially significant and unavoidable impact* under a scenario in which the project sends effluent from its western area to SRCSD, although it would be mitigated to a *less than significant level* under a scenario in which all effluent is sent to the DCWWTP.

4.11.8-3 Construction and operation of the recycled water distribution system could lead to adverse environmental effects.

Recycled water would be used in parks, schools, publicly landscaped areas, and the landscaping associated with commercial, business professional, light industrial and multi-family uses. It is proposed to initially provide recycled water to the project site from the DCWWTP and ultimately from the PGWWTP. A connection will be made to an existing 24-inch gravity recycled water line constructed as part of the Dry Creek West Placer Community Facilities District #1. The pipeline currently terminates south of Dry Creek on the east side of Walerga Road. The line will be extended in a northerly direction along Walerga Road to Baseline Road where it will turn west to the project site (see Figure 3-5 in Chapter Three of this Revised Draft EIR). In the future, as the west Placer area builds out, a recycled water line will be constructed from the PGWWTP to serve the Placer Vineyards Specific Plan and other areas. It is currently proposed to extend the future recycled water line westward from PGWWTP along Phillip Road to the alignment of Watt Avenue, and then south to Baseline Road where it would tie into other

recycled water infrastructure. The PGWWTP supply would supplement and/or ultimately replace the DCWWTP supply (Figure 3-5 in Chapter Three of this Revised Draft EIR).

Figures 3-18 and 3-19 show the proposed on-site core backbone infrastructure for recycled water. Storage and pumping facilities would be required within the Specific Plan area, along with a backbone of dedicated non-potable water lines within street rights-of-way ranging in size from 6 to 24 inches in diameter. A proposed recycled water storage tank is to be located near the intersection of 16th Street and Dyer Lane (Figure 3-18 in Chapter Three of this Revised Draft EIR). According to RMC, storage will be a requirement for future projects. In the case of the Placer Vineyards Specific Plan, the tank must be capable of holding peak day demand, or approximately 3.00 MGD.

Exposure to recycled water could occur through drinking water that has been contaminated by recycled water, through contact with plant or soil materials that have been irrigated using recycled water, and inhalation of aerosols generated during spray irrigation with recycled water; however, tertiary treatment would provide an overall effective level of removal of pathogens and other harmful chemicals.

Construction of recycled water distribution pipelines present the possibility of cross-connection with the potable water system, especially in areas where potable water systems are provided as a backup. Any potential for mixing of recycled water with the drinking water supply would pose a concern due to the possibility of ingestion of recycled water.

Title 17 of the California Code of Regulations, implemented by the DHS, provides specifications to avoid any potential for cross-connections with drinking water supplies. This includes identification (purple pipe) and signage of pipe materials, backflow prevention requirements, proper air gaps or cross-connection control design measures, plus minimum separation criteria for recycled water pipelines and water supply pipelines. The DHS Public Water Supply Branch has published the *Guidance Manual for Cross-Connection Control Programs*, which provides detailed information on compliance with the requirements.

The quality of the recycled water would meet Title 22 requirements for all allowable unrestricted non-potable uses and the City of Roseville, with its experience and established protocols, would be the system operator. Because there is no evidence that construction or operation of a system using water treated to Title 22 standards would result in undue risk, and a responsible entity for system operation has been identified, this is a ***less than significant impact***.

There is a potential for spillover of recycled water to occur from planned storage facilities. As noted above, a recycled water storage tank is to be provided. This would be an enclosed steel tank and would not normally permit recycled water to come in contact with the environment in an unplanned manner. However, other smaller scale project specific facilities may be necessary as the recycled water system is built out. This is a ***potentially significant impact***.

Other impacts related to the construction of infrastructure are addressed in each of the other sections of this Revised Draft EIR. Evaluation of impacts with respect to human health issues

related to the treatment and use of recycled water have been evaluated in Section 4.12 of this Revised Draft EIR under Impact 4.12.22.

Mitigation Measures

Potential impacts related to construction of infrastructure are addressed in Sections 4.1 through 4.12 of this Revised Draft EIR. With mitigation provided in those sections for construction-related impacts and the following mitigation measure related to recycled water storage, this impact would be reduced to a *less than significant level*.

4.11.8-3a *Plans for site-specific recycled water storage facilities shall include provisions for emergency storage, including redundant in-ground storage ponds or enclosed tanks capable of holding one day peak demand for the area served. All recycled water storage ponds shall be bermed to prevent inflow from surface sources and shall not be located where a direct discharge to a drainage course or natural waterway could occur if the pond should experience a containment failure. All storage ponds for recycled water shall be fenced to restrict access and posted with warning signs to reduce the potential for direct human contact with recycled water.*

4.11.8-3b *The project applicants shall be responsible for completing the Engineering Report that is required to be submitted to the State for the production, distribution and use of recycled water. Recycled water shall not be used until the Engineering Report is approved by the State.*

4.11.8-3c *Adequate storage and pumping facilities must be provided prior to connection to the recycled water system.*

OFF-SITE INFRASTRUCTURE

Evaluation of impacts with respect to off-site distribution pipelines and wastewater treatment have been evaluated in each of the other topical sections of this Revised Draft EIR (e.g., Section 4.4, Biological Resources, Section 4.5, Cultural Resources).

Off-site infrastructure impacts are addressed in each of the other sections of this Revised Draft EIR, including off-site recycled water line construction. No additional impacts have been identified.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.11.8-4 Placer Vineyards Specific Plan recycled water demand could have an adverse cumulative effect on available recycled water supply.

RMC has examined the cumulative condition with regard to recycled water availability and found that adequate supplies are available to serve existing customers, as well as future customers, including Urban Growth Areas and the Specific Plan area. Table 4.11-11, 4.11-12

and 4.11-13 show total recycled water to be delivered to urban growth areas, annual recycled water demand, and peak day flow rates for the region to be served by the City of Roseville's system. However, the RMC work assumed the Blueprint Alternative for the Placer Vineyards Specific Plan area, which overstates wastewater flows from the project. Wastewater flows for the Placer Vineyards Specific Plan area would actually be 1.1 MGD less than those reported by RMC on Table 4.11.13 and recycled water average day demand, as reported on Table 4.11.12, would be reduced by .26 MGD.

Table 4.11-11
Total Recycled Water to be Delivered to Urban Growth Areas

Customer	Annual Recycled Water Demand (MG)	Annual Wastewater Generation (MG)	Annual Recycled Water Provided (MG)[1]
Urban Growth Areas			
Curry Creek	606 (1,860 AF)	982 (3,013 AF)	393 (1,206 AF)
Regional University	259 (790 AF)	423 (1,298 AF)	168 (515 AF)
Placer Ranch	540 (1,653 AF)	748 (2,296 AF)	302 (926 AF)
Placer Vineyards	507 (1,560 AF)	1,420 (4,357 AF)	507 (1,560 AF)
WRSP MOU Areas (Creekview & Sierra Vista)	354 (1,090 AF)	690 (1,860 AF)	280 (859 AF)
Totals	**2,266 MG**	**4,263 MG**	**1,650 MG**
	(6,953 AF)	**(13,081 AF)**	**(5,066 AF)**

[1] 'Recycled water provided' is determined by the difference in amount of requested recycled water demand from Table 4 of the Technical Memorandum. The amount of customers will be reduced based on the ratio of wastewater generated to recycled water demand during the peak demand month (July). For example, Curry Creek will produce 83 MG of wastewater in July, while the recycled water demand is 128 MG. The ratio of supply to demand is 0.65. The amount of recycled water provided will be 65% of the original recycled water demand, therefore the City will be able to supply recycled water to all the customers throughout the year.

Source: RMC, November 2005

Table 4.11-12
Summary of Annual Recycled Water Demands

Customer	Annual Demand (AFA)	Annual Average Day Demand (MGD)	Annual Irrigation Demand (AFA)	Annual Non-Irrigation Demand (AFA)
Existing Customers	2,045	1.83	2,045	0
Existing Near Future Customers	6,456	5.76	4,536	1,920
Existing Potential Customers	1,713	1.53	0	1,713
Urban Growth Area Customers	5,917	5.28	5,917	0
Total	**16,131**	**14.40**	**12,498**	**3,633**

Source: RMC, November 2005

Table 4.11-13 Summary of Future Conveyance Design (July) Flowrates [a,b]			
Customer	**Daily Volume (gal)**	**Flowrate During Irrigation Period (gpm)**	**Flowrate During Non-Irrigation Period (gpm)**
Dry Creek WWTP			
Existing Customers	4,474,355 (4.5 MGD)	3,462	2,895
Existing Near Future Customers	6,028,349 (6.0 MGD)	5,072	3,656
Existing Potential Customers	1,529,268 (1.5 MGD)	1,062	1,062
Urban Growth Area Customers	0	0	0
Transfer from PGWWTP to Woodcreek Tank [c]	-1,008,000 (-1.0 MGD)	-700	-700
Total Dry Creek WWTP Demand	**11,023,972 (11.0 MGD)**	**8,896 (12.8 MGD)**	**6,913 (9.9 MGD)**
Pleasant Grove WWTP			
Existing Customers	39,733 (0.04 MGD)	74	0
Existing Near Future Customers	5,698,382 (5.7 MGD)	3,873	3,873
Existing Potential Customers	0	0	0
Urban Growth Area Customers	11,233,509 (11.2 MGD)	7,801	7,801
Transfer from PGWWTP to Woodcreek Tank [c]	1,008,000 (1.0 MGD)	700	700
Total Pleasant Grove WWTP Demand	**17,979,624 (17.9 MGD)**	**12,448 (17.9 MGD)**	**12,374 (17.8 MGD)**
Total Recycled Water Demand	**29,003,596 (29.0 MGD)**	**21,569 (31.1 MGD)**	**19,286 (27.8 MGD)**

Notes:
[a] July flowrates are the design flowrates
[b] It is assumed irrigation demand is during the hours of 9:00 PM to 6:00 AM
[c] It is estimated that approximately 700 gpm of recycled water is needed from the Pleasant Grove system to supply the Dry Creek System via the storage tank at Woodcreek Oaks Golf Course. This is listed as Woodcreek Storage Tank Transmission of this recycled water will be done via existing decommissioned sewer force main (after it has been cleaned) and connection to be built during WRSP Phase 1.
Source: RMC, November 2005

The concept proposed by RMC would transfer a small amount (700 gallons per minute) of recycled water from the Woodcreek Oaks Golf Course storage tank to the DCWWTP system in order to meet demand and maintain adequate flows in Dry Creek. A minimum flow of 4 MGD must be maintained in Dry Creek in order to avoid aquatic impacts, which limits the availability of DCWWTP recycled water. As previously described, as Placer Vineyards Specific Plan builds out, it will be necessary to obtain recycled water from the PGWWTP, even though all Placer Vineyards wastewater would be transmitted to DCWWTP. This imbalance is explained by the need to maintain minimum creek flows and the fact that DCWWTP (the older of the two wastewater treatment plants) already serves some areas with recycled water that are now within the PGWWTP service area.

RMC concludes "These preliminary results indicate there will be sufficient recycled water supply to meet the daily demand of 29 MGD shown above [see Revised Draft EIR Table 4.11-13]. The projected wastewater flow of 19.6 MGD ADWF to DCWWTP will be sufficient to meet the recycled water demands and maintain the minimum 4 million gallon discharge to Dry Creek. The projected ADWF of 21.59 MGD to PGWWTP will provide enough supply to supply recycled water demands." As described above, although Placer Vineyards Specific Plan contribution of wastewater will be less than predicted by RMC, its use of recycled water will be commensurately reduced. Therefore, cumulative impacts related to recycled water supply are ***less than considerable, (i.e., less than significant)***.

Mitigation Measures

No mitigation measures are required.

4.11.9 DRAINAGE

Drainage issues directly related to the proposed on-site Specific Plan *Master Project Drainage Study* prepared by Civil Solutions (January, 2006) are addressed in this section. Refer to Section 4.3.2 of this Revised Draft EIR for a discussion of the environmental setting, and local and regional environmental impacts associated with hydrology, runoff and flooding.

ENVIRONMENTAL SETTING

EXISTING DRAINAGE FACILITIES

There are numerous culverts located throughout the Specific Plan area primarily under roadways, for the purpose of conveying natural drainages. However, there is no public drainage infrastructure currently located within the Specific Plan area.

SPECIFIC PLAN DRAINAGE IMPROVEMENTS

The drainage improvements for the Specific Plan area have been designed on a conceptual level. The exact phasing of individual projects will determine the timing of individual improvements.

The *Master Project Drainage Study* is available for review at the address identified in Section 2.9 in Chapter Two of this Revised Draft EIR and provides a detailed analysis of the overall drainage sheds within the Specific Plan area. The Master Plan analysis includes a review of the existing drainage ways, the current floodplain areas, the current flows, the proposed collection systems, detention and retention areas, the projected flows, and the future proposed flood plain areas that will result from the proposed development.

The *Master Project Drainage Study* was prepared based on a current aerial topographic survey that provided detailed ground elevations throughout the site. Field reconnaissance was done to assess the existing culverts in the Specific Plan area as well as at the perimeter boundary conditions. The existing flood plains that are subject to identification under FEMA criteria were

mapped throughout the site. The proposed project flows have been calculated within localized shed areas and then routed into and through the proposed open space drainage corridors. Increased project flows resulting from development within the Specific Plan area are proposed to be mitigated consistent with the Placer County Flood Control and Water Conservation District (Flood Control District) design criteria. All of the analysis and calculations included in the Master Plan were prepared in accordance with the "Preliminary Plan" requirements of the *Storm Water Management Manual* dated September 1, 1990, and the Addendum 1 dated October 1997.

The Placer Vineyards Specific Plan drainage system has been designed to provide detention and retention of increased runoff volumes within the Specific Plan area. In addition to providing detention storage to mitigate the increased rate of runoff, an additional storage component has been added in the detention areas to provide retention of flow volumes for a period of time to allow downstream volumes to drain from the shed. A combination of detention/retention basins will be used in each developed drainage shed except Dry Creek to mitigate the impact of the project storm water runoff. Detention/retention facilities have not been included in the Dry Creek Shed due to the Flood Control District's recommendations that detention/retention not be used in the Dry Creek shed downstream of Roseville.

A hydraulic evaluation was performed for all events of the hydrologic model for the 2-year, 5-year, 10-year, 25-year, 50-year, 100-year, 200-year and 500-year storm events. The results of these analyses are discussed in Section 4.3.2 of this Revised Draft EIR and in the *Master Project Drainage Study*.

The proposed project will collect runoff within drainage systems which would discharge into the channels and detention facilities. Flood control channels within the Specific Plan area will consist of newly constructed complete channel systems and parallel flood control channels where "avoidance" areas are to be maintained in a natural state. Avoidance areas are areas where sensitive species exist pre-project, such as wetlands or critical habitat. New facilities would generally follow or be placed along the natural drainage courses within the project area. The Specific Plan includes provisions to maintain the hydrology of natural drainage courses by preserving the mean annual and peak annual flow rates through them. Flooding limits would be confined within the various channels and existing floodplain areas, generally providing three feet of 100-year freeboard to adjacent proposed structures. The drainage ways will be excavated below the existing grades and designed to converge with the existing grades at the downstream ends of the drainage at the Specific Plan area boundaries.

In areas where detention and retention basins have been proposed as part of the drainage mitigation plan, the drainageways have been widened and deepened to provide for increased storage volume. In all circumstances, the side slopes of the drainageways have been designed to provide gentle slopes that will promote the reestablishment of native vegetation. Figures 4.3-5 and 4.3-6 in Section 4.3 of this Revised Draft EIR identify the major drainage improvements and facility cross sections proposed to serve the ultimate buildout of the Specific Plan area.

Channel improvements through the Specific Plan area will provide the increased capacity necessary to convey urbanized flows and will allow the channel depths to be increased in order to accommodate the piped storm drainage collection systems serving the surrounding

developments. The channels have been designed to the maximum extent practical to utilize topographic variation and meandering characteristics, natural side slope and a varied channel bottom elevations. Channel side slopes will vary between 3:1 and 7:1, and the alignment of the main channel and the low flow channel will meander within the drainage/open space corridors. In addition, landscaping and trail alignments can deviate to further create diversity in these corridors.

In addition to the drainage facilities identified on Figures 4.3-5 and 4.3-6, there will be additional collection facilities located in private developments. The size and location of these facilities will be determined at the time final improvement plans are prepared for individual projects.

STORMWATER TREATMENT

The on-site Specific Plan drainage system is proposed to be designed to provide for the water quality treatment of runoff from paved and other developed areas prior to release into the swales and streams. Given that the specific detailed land use elements have not been designed, the final detailed water quality elements will be added as a part of the final design process. Where drainage outfalls occur at the drainageways, a treatment feature will be added to the final plan. In the past several years, treatment methods have been developed that allow effective and efficient treatment of storm water quality pollutants. Not only have these methods proven to be efficient, they have also provided for the easy removal of the consolidated fines and other debris that are captured and contained in holding structures. In addition to providing effective removal of storm water pollutants, these systems have the added feature of being engineered to hold the pollutants even during large storm water events. This treatment will consist of the following:

- Directing some of the flow to sheet discharge onto grassy areas or open space;
- The installation of “Fossil Filter” or equivalent petroleum absorbing insert assemblies in the project drop inlets;
- The placement of water quality interceptor devices;
- The placement of water quality sediment basins within detention facilities and channels; and
- Use of rock-lined ditches below pipe outlets.

Other BMPs will involve prompt re-vegetation of disturbed areas.

The above-outlined stormwater treatment elements are proposed to be used during construction as well as after construction to ensure the post-construction treatment is maintained within the Specific Plan area.

SPECIFIC PLAN PROPOSED DRAINAGE-RELATED GOALS AND POLICIES

The following goals and policies related to drainage are contained in the Placer Vineyards Specific Plan:

Goal 8.6 Use and preserve existing drainage ways as much as possible and design flood control facilities to preserve significant wetlands and avoidance areas where sensitive features exist.

Policy 4.24 Stormwater Quality Improvements. Stormwater management improvements disbursed through the Plan Area provide treatment to runoff before it enters the natural drainage conveyance systems in open space areas. In addition, by integrating the stormwater management system throughout the Plan Area, individual parcels can provide specific stormwater management elements that respond to the particular site conditions. This will promote the removal of various potential pollutants from each parcel before they are discharged into the drainage system. The following standards will apply to development projects.

1. During construction, BMPs shall be provided to stabilize soils in place and minimize the amount of sediment entering the storm drain system and drainage ways. BMPs shall generally consist of a combination of the following measures: Minimizing soil disturbance, hydroseeding, fiber rolls, inlet protection, stabilized construction access, etc.

2. After construction, regional water quality facilities identified in the Master Project Drainage Report shall be constructed concurrently with the backbone drainage infrastructure for permanent water quality treatment.

3. Development projects shall provide site-specific postconstruction water quality treatment facilities on-site to capture and remove the pollutants before they are discharged from the site. Water quality treatment facilities shall generally consist of a combination of the following measures: Vegetated swales, infiltration trenches/basins, filter strips, sand/oil separators, trench drains, porous pavement, etc.

Policy 4.25 Low-Impact Development Design. Site-specific development projects shall incorporate low-impact development design strategies that may include:

1. Minimizing and reducing impervious surfaces of site development, i.e., roadways, sidewalks, driveways, parking areas, and rooftops

2. Breaking up large areas of impervious surface and directing flows from these areas to stabilized vegetated areas

3. Conserving natural resources and ecosystems by minimizing the impacts of development on sensitive site features, such as streams, floodplains, wetlands, woodlands, and significant on-site vegetation.

4. Maintaining natural drainage courses

5. Providing runoff storage dispersed uniformly throughout the site through the use of a variety of detention, retention, and runoff techniques that may include:

a. Bioretention facilities and swales (shallow vegetated depressions engineered to collect, store and infiltrate runoff)

b. Filter strips (grass or other close-growing vegetation planted between polluting sources and downstream receiving water bodies)

c. Dry wells and infiltration trenches (excavated trenches filled with stone to control rooftop runoff and allow slow release back into the soil)

Policy 4.26 Site grading will be undertaken and controlled so that sediment runoff is minimized. In locations approved by the County detention basins may be located in open space areas so as to minimize increases in peak flows from the site. The basins may facilitate groundwater recharge, but to a limited degree because of the predominance of clay soils in the area. To minimize runoff, paved parking areas will be designed to provide the minimum amount of paving area necessary to meet required parking and circulation standards. The following standards apply to site-specific development projects.

1. Stormwater management plans will be prepared that comply with all standards and requirements of the National Pollutant Discharge Elimination System (NPDES) and the grading, erosion, and improvement standards in the Placer County Stormwater Management Plan.

2. Grading plans submitted for Placer County review and approval will include an erosion and sediment control plan that includes erosion control measures to protect waterways from erosion and debris during and after construction activities.

3. Grading plans will be designed to minimize the area of disturbance by construction activities.

4. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared and implemented for site-specific projects.

5. Concurrent with construction of site improvements, stormwater BMPs will be constructed and maintained in accordance with the SWPPP as approved by the Central Valley Regional Water Quality Control Board.

6. Drainage reports will be prepared for site-specific projects and shall comply with the Placer County Stormwater Management Manual, Land Development Manual, and Placer Vineyards Master Project Drainage Report.

Policy 8.4 Service Standards. All Plan Area improvements shall be designed and constructed in accordance with standards listed in the Placer County Land Development Manual and Storm Water Management Manual.

Policy 8.5 Drainage Standards for Individual Projects. Individual projects shall provide appropriate short- and long-term best management practices and source controls consistent with the land use.

Drainage Design Criteria

- Open space corridors have been created in the Plan Area to convey stormwater flows. All development will occur outside of these corridors so as to provide 100-year flood protection to all residences.

- Piped drainage collection facilities of up to 96 inches in diameter will be used before open channels are chosen to convey urban storm runoff.

- Manage urban runoff through use of stormwater conveyance, detention, and water treatment facilities. Planned channel improvements should include components to mitigate adverse impacts on wetlands.

- When possible, increase the depth of existing drainage courses to accommodate the storm drainage collection.

- Vegetation proposed within the low-flow open channel(s) shall provide treatment of urban stormwater runoff.

REGULATORY SETTING

There are specific State and federal regulations pertaining to flood control and drainage that would reduce environmental impacts associated with the proposed Specific Plan, which are discussed below. Goals and policies of the *Placer County General Plan* and the Placer County Flood Control and Water Conservation District storm water management requirements are also discussed below.

National Pollution Discharge Elimination System (NPDES)

The NPDES program, under Section 402(p) of the Federal Clean Water Act, is administered locally by the Central Valley RWQCB on behalf of the USEPA. The program is designed to reduce pollution from stormwater discharge and may require a permit from parties discharging to lakes, streams and other water bodies.

California Stormwater Best Management Practice Construction Handbook

The California Stormwater Best Management Practice Construction Handbook, prepared by the California Stormwater Quality Association and last updated in September of 2004, provides general guidance for selecting and implementing Best Management Practices (BMPs) that will eliminate or reduce the discharge of pollutants from construction sites to waters of the state and

developing and implementing stormwater pollution prevention plans (SWPPPs) that document the selection and implementation of BMPs for a particular construction project.

Placer County General Plan

The following are applicable goals and policies from the *Placer County General Plan:*

Goal 4.E: To collect and dispose of storm water in a manner that least inconveniences the public, reduces potential water-related damage, and enhances the environment.

Policies:

4.E.1. The County shall encourage the use of natural storm water drainage systems to preserve and enhance natural features.

4.E.2. The County shall support efforts to acquire land or obtain easements for drainage and other public uses of floodplains where it is desirable to maintain drainage channels in a natural state.

4.E.4. The County shall ensure that new storm drainage systems are designed in conformance with the Placer County Flood Control and Water Conservation District's Storm Water Management Manual and the County Land Development Manual.

4.E.5. The County shall continue to implement and enforce its Grading Ordinance and Flood Damage Prevention Ordinance.

4.E.6. The County shall continue to support the programs and policies of the watershed flood control plans developed by the Flood Control and Water Conservation District.

4.E.8. The County shall consider recreational opportunities and aesthetics in the design of storm water ponds and conveyance facilities.

4.E.9. The County shall encourage good soil conservation practices in agricultural and urban areas and carefully examine the impact of proposed urban developments with regard to drainage courses.

4.E.10. The County shall strive to improve the quality of runoff from urban and suburban development through use of appropriate and feasible mitigation measures including, but not limited to artificial wetlands, grassy swales, infiltration/sedimentation basins, riparian setbacks, oil/grit separators, and other best management practices (BMPs).

4.E.11. The County shall require new development to adequately mitigate increases in storm water peak flows and/or volume. Mitigation measures should take into consideration impacts on adjoining lands in the unincorporated area and on properties in jurisdictions within and immediately adjacent to Placer County.

4.E.12. The County shall encourage project designs that minimize drainage concentrations and impervious coverage and maintain, to the extent feasible, natural site drainage conditions.

4.E.13. The County shall require that new development conforms with the applicable programs, policies, recommendations, and plans of the Placer County Flood Control and Water Conservation District.

4.E.14. The County shall require projects that have significant impacts on the quantity and quality of surface water runoff to allocate land as necessary for the purpose of detaining post-project flows and/or for the incorporation of mitigation measures for water quality impacts related to urban runoff.

4.E.15. The County shall identify and coordinate mitigation measures with responsible agencies for the control of storm sewers, monitoring of discharges, and implementation of measures to control pollutant loads in urban storm water runoff (e.g., California Regional Water Quality Control Board, Placer County Division of Environmental Health, Placer County Department of Public Works, Placer County Flood Control and Water Conservation District).

4.E.16. The County shall strive to protect domestic water supply canal systems from contamination resulting from spillage or runoff.

Placer County Storm Water Management Manual Design Criteria

The Placer County Flood Control and Water Conservation District has adopted policies, guidelines and specific criteria for storm water management. All storm drainage collection and conveyance systems in Placer County must be designed as provided in the Flood Control District's *Stormwater Management Manual* dated September 1, 1990 and revised per Addendum 1 dated November 20, 1997.

Dry Creek Watershed Flood Control Plan

The *Dry Creek Watershed Flood Control Plan* was designed to provide coordinated watershed flood control management with other local programs, and to provide a 100-year level of flood protection for buildout conditions of the General Plans of Placer County, Sacramento County, City of Rocklin, City of Roseville, City of Folsom and the Town of Loomis.

The control plan provides for two types of flood control features. *Structural* components include regional detention basins, and bridge and culvert improvements and replacement. *Nonstructural* components include a policy of requiring on-site and local detention, flood plain management, channel maintenance, and a flood warning system.

Placer County Grading Ordinance

The Placer County Grading Ordinance (Article 15.48) regulates grading on property within the unincorporated area of Placer County. The purpose of this ordinance is to safeguard life, limb,

health, property and public welfare and avoid pollution of watercourses with hazardous materials, nutrients, sediments, or other earthen materials generated on or caused by surface runoff on or across the permit area. In the event of conflict between this ordinance and other ordinances and or regulations, the more restrictive ordinance shall prevail. The County Grading Ordinance supplements the Flood Damage Prevention Ordinance by requiring an assessment of potential drainage problems for all development projects. The Grading Ordinance includes requirements for erosion control during the initial phases of development.

Dry Creek Watershed Drainage Improvement Zone

The Dry Creek Watershed Drainage Improvement Zone Ordinance (Article 15.32) was enacted for the purpose of regulating grading on property within the Dry Creek Drainage area of Placer County and to assist with the implementation of the *Dry Creek/West Placer Community Plan* by ensuring that adequate public facilities are provided to serve the community.

This ordinance was adopted to safeguard life, limb, health, property and public welfare; to avoid pollution of watercourses with hazardous materials, nutrients, sediments, or other earthen materials generated on or caused by surface runoff on or across the permit area; and to ensure that the intended use of a graded site is consistent with the *Placer County General Plan*, any specific plans and other applicable local and/or state regulations.

The ordinance calls for new land development projects to form a CSA benefit zone and to provide for the collection of fees to fund the maintenance and construction of improvements.

Flood Damage Prevention Ordinance

The County's Flood Damage Prevention Ordinance implements floodplain management in the county. The ordinance limits construction in areas within the 100-year flood zone to prevent damages to structures and to limit the effect of development on flood elevations.

Stormwater Management Plan 2003-2008

A *Stormwater Management Plan* has been adopted by Placer County that describes a comprehensive program to reduce pollution of stormwater runoff in portions of western Placer County, including the Specific Plan area. The program is designed to comply with the Clean Water Act and meet federal and State NPDES stormwater regulations for small municipal separate stormwater systems. The Central Valley RWQCB issues an NPDES permit to Placer County based on this plan. The permit must be renewed every five years, next occurring in 2008.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that significant environmental impact could occur if the proposed Specific Plan would:

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

- 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.

- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

- Place structures within a 100-year flood hazard area that would impede or redirect flood flows.

- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

- Be inconsistent with the goals and policies of the adopted *Placer County General Plan*.

The hydrologic impacts of the proposed Specific Plan, including the flooding, siltation, erosion, water quality, impacts of drainage facilities downstream and on a cumulative basis, are discussed in Section 4.3.2 of this Revised Draft EIR.

4.11.9-1 Potential lack of compliance of future projects with the *Master Project Drainage Study*, and Placer County policies, standards and ordinances could contribute to inadequate project drainage.

A *Master Project Drainage Study* has been prepared for the proposed Specific Plan. This Drainage Study has been reviewed by the Flood Control District and the Placer County Department of Public Works for compliance with County standards and ordinances. The document was also peer reviewed by WRIME Inc. (WRIME). The WRIME peer review appears as Appendix S of this Revised Draft EIR.

The *Master Project Drainage Study* was revised to reflect peer review comments; however, the documentation remains preliminary until actual projects are submitted that detail lot layout and project specific infrastructure. The County will require that individual drainage reports be submitted with each development project showing compliance with the *Master Project Drainage Study*, and Placer County policies, standards and ordinances. Until this process is completed, this remains a ***potentially significant impact.***

Mitigation Measure

Implementation of the following mitigation measures will assure compliance with the *Master Project Drainage Study*, and County policies, standards and ordinances, and reduce impacts to a *less than significant level:*

4.11.9-1a *The Master Project Drainage Study shall be incorporated as part of Specific Plan approval by reference or other similar means.*

4.11.9-1b *Individual project drainage reports consistent with the County's Stormwater Management Manual and Grading Ordinance shall be submitted for each development project, including installation of backbone infrastructure. Drainage reports shall identify the proposed detention/retention basins that will serve the new development area or submit an interim detention basin design with supporting calculations subject to approval by County staff.*

4.11.9-1c *Drainage reports for development projects within the Specific Plan area shall comply with the current permit requirements of the NPDES Phase II (Attachment 4).*

4.11.9-1d *The Master Project Drainage Study shall be submitted to the Placer County Department of Public Works and reviewed and approved by the Department of Public Works prior to the recordation of the first large lot tentative map.*

4.11.9-1e *Individual project drainage reports shall be consistent with the approved Master Project Drainage Study.*

Impacts of the proposed project related to water quality, flooding and other hydrological effects, and a discussion of BMPs are included in Section 4.3 of this Revised Draft EIR. No impacts in these subject areas beyond those evaluated in Section 4.3 have been identified.

4.11.9-2 Construction of drainage facilities in the Specific Plan area will create an ongoing need for maintenance and repair of the facilities in order to avoid long-term environmental effects.

The area currently contains few drainage facilities for which the County is responsible. This condition will be altered with development of the Specific Plan, potentially placing a significant burden on the County's limited personnel and equipment maintenance resources, which could lead to drainage-related physical impacts on the environment due to lack of maintenance. This is a ***potentially significant impact***.

Mitigation Measure

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

4.11.9-2 *Prior to recordation of the first small lot final subdivision map in the Specific Plan area, a drainage service area under a new County Service Area (CSA), existing CSA #28, or a Community Facilities District (CFD) shall be established for the Specific Plan area in compliance with law. The CSA or CFD shall identify and establish ongoing funding for a continuous drainage facility maintenance program.*

4.11.9-3 Construction of drainage systems within the Specific Plan area could lead to physical impacts on the environment.

Pipelines up to 96 inches in diameter will be installed along with grading of new drainage channels, construction of retention/detention basins, water quality structures and outfall structures. All drainage systems infrastructure is an integral part of the Specific Plan and analysis of impacts related to its construction is included in each of the topical areas contained in this Revised Draft EIR, including the topics of Biological Resources, Geology and Soils, Archaeological and Paleontological Resources, Air Quality, Noise and Hazards. No additional impacts related to construction of drainage infrastructure have been identified. This impact is, therefore, ***less than significant***.

Mitigation Measures

No mitigation measures are required.

OFF-SITE INFRASTRUCTURE

Drainage impacts related to off-site infrastructure are discussed in Section 4.3.2 of this Revised Draft EIR.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Refer to the CUMULATIVE IMPACTS AND MITIGATION MEASURES discussion in Section 4.3.2 of this Revised Draft EIR.

4.11.10 ELECTRICAL AND NATURAL GAS SERVICE

ENVIRONMENTAL SETTING

Electrical service in the majority of the Specific Plan area is provided by PG&E; however, the Sacramento Municipal Utility District (SMUD) serves a small area in the southeast portion of the Specific Plan area. The Specific Plan area includes approximately 635 acres to be served by SMUD, with PG&E serving the rest of the Specific Plan area. The boundaries of each service area are shown on Figure 3-10 in Chapter Three of this Revised Draft EIR. Development of electrical and natural gas infrastructure is regulated by general order of the Public Utilities Commission.

The SMUD Black Eagle-Crystal Ridge Substation is located near the Specific Plan area, one-half mile east of Watt Avenue, north of Center High School. It is fed by a 96KV transmission line

that extends along PFE Road from the tower line easement between Cook Riolo Road and Walerga Road (Ernie Teays, SMUD Real Estate, pers. comm., March, 2002).

PG&E has two substations near the Specific Plan area. The Catlett Substation located on Field Road east of Natomas Road feeds a circuit located on Pleasant Grove Road in Sutter County to the west. The Pleasant Grove Substation on Industrial Boulevard, approximately one-quarter mile north of Sunset Boulevard, feeds the circuit on the corner of Fiddyment Road and Baseline Road.

The Specific Plan area is traversed by three 230KV transmission lines located within easement corridors as shown in Figure 3-10 in Chapter Three of this Revised Draft EIR. These easements and facilities are owned by PG&E, SMUD and Reclamation (Western Area Power Administration). Land use is restricted under transmission lines, including restrictions on buildings and water bodies. Clear and unrestricted access is required for maintenance along these easements. SMUD and PG&E operate 12KV distribution lines, which generally exist along roadway alignments and provide service to existing customers.

Initial development, as proposed in the Specific Plan area, would receive limited electrical service from the existing distribution infrastructure. The existing 12KV circuit along Baseline Road has sufficient capacity available to satisfy initial development needs. As development approaches the limits of available capacity, a new substation will be developed by PG&E.

There is currently no natural gas service within the Specific Plan area. Natural gas service is proposed to be provided to the Specific Plan area by PG&E. According to commonly used factors, each dwelling unit consumes about 1,440 therms per dwelling unit per year. Commercial/business and professional uses consume approximately 63,600 therms per acre per year. One therm equals approximately one hundred cubic feet of natural gas, and varies according to the natural gas BTU content, distance and pressure of the distribution system. PG&E is currently capable of providing natural gas service from existing facilities that are in close proximity to the Specific Plan area. Several natural gas lines terminate near the Sacramento County line and, depending upon engineering results, could be extended. These existing facilities are, however, insufficient to supply the overall Specific Plan demand. A 12-inch high pressure gas transmission main is located six miles west of the Specific Plan area at Del Paso Road and Highway 70 in Sacramento County. Another 12-inch gas line is located on Cook Riolo Road about one mile east of the Specific Plan area (Bill Snyder, PG&E, Land Services, pers. comm., March 2002).

PG&E extends natural gas service lines as demand increases. Engineering for new service lines is normally completed prior to commencement of development. New service line extensions are funded through development. Actual lines to be extended would depend on where development first occurs in the Specific Plan area. Actual hook-up locations and sizing would be determined after engineering is completed (Scott Wilson, PG&E, Senior Land Project Analyst, pers. comm., March 2002).

There are many sources of electrical energy, and it is likely that various sources would be used in the Specific Plan area. It is beyond the scope of this Revised Draft EIR to speculate regarding

the impact of using any particular fuel or source for energy, which may include natural gas, coal, biomass, solar, wind or hydroelectric power.

PROPOSED SUBSTATION

PG&E is proposing to install a 230/21kV distribution substation, to be known as the Placer Vineyards Substation, on an approximately 6-acre site and related distribution facilities within the Specific Plan area. The property selected for the site is located north of the proposed Town Center Drive at the intersection of Palladay Road and Road A, contiguous to and west of the existing PG&E 230kV electric transmission line. The site is next to PG&E's transmission lines, eliminating the need for construction of a new transmission line for this project. The distribution circuits will be located along the proposed streets within the Specific Plan area.

The proposed Placer Vineyards Substation will be a remote-controlled, low profile facility that will require only periodic maintenance. Electric power will enter the substation at 230kV from a tap line off of the existing PG&E 230 kV power lines that traverse the area in a north-south direction. The lines will be tapped by adding wires ("conductors") to the existing towers in order to drop power into the substation. Distribution power will leave the substation property through underground distribution feeder lines at 21 kV, and then interconnect with existing and projected distribution feeders along existing and proposed County roads, providing service to the western Placer County area.

The fenced portion of the substation will include three 45 MVA (megavolt ampere) transformers at full buildout. In addition to the transformers, on-site equipment will include switch-gear, dead-end structures, bus structures, steel take-down structures, other related electrical equipment, and an SPCC (Spill Prevention Control Countermeasures) concrete basin designed for transformer oil containment in the event of an equipment failure.

Other facilities at the substation will include a perimeter fence around the substation itself, interior lighting for the substation, and telecommunications equipment for protection of the substation and power lines in the event of a downed line. The transformers and related electrical equipment will require a footprint approximately 300 feet by 375 feet, including a concrete pad for the transformers and switch gears and a 20-foot-wide paved access road surrounding the electrical structures. In addition, the oil retention pond will include an area sized appropriately. The substation will be landscaped and set back approximately 120 feet from the county road right-of-way (Michael Gunby, PG&E Senior Land Project Analyst, correspondence, November, 2004).

SPECIFIC PLAN PROPOSED ENERGY-RELATED GOALS AND POLICIES AND TEXT

The following goals and policies related to energy conservation are contained in the proposed Specific Plan.

Goal 4.12 Encourage efficient energy use and conservation.

Policy 4.36 All residential units will be developed in compliance with State of California Title 24 energy conservation measures.

Policy 4.37 Use of passive and active solar devices such as solar collectors, solar cells, and solar heating systems, integrated into the building designs, are encouraged.

Policy 4.38 Building and site design should take into account the solar orientation of buildings during design and construction

The proposed Specific Plan states that when demand exceeds the load capacity, new 12 KV or 21 KV electric lines will need to be extended from existing or new substations. The Specific Plan also confirms that a new electrical substation is set aside in the Land Use Diagram.

According to the Specific Plan, gas service will be obtained by the construction of off-site gas-transmission facilities. Extension of four-inch and six-inch gas mains to the individual project sites will be required. Connection to the 12-inch high pressure transmission main at Cook Riolo Road and Baseline Road requires construction of a pressure regulation station at the point of connection. Initial service will be provided by extending a six-inch distribution main along Baseline Road and a four-inch transmission main along PFE Road. The Baseline Road main will function as a backbone main, serving the entire Specific Plan area at buildout. Smaller four-inch distribution mains will be stubbed off this backbone main and looped through the internal street system.

REGULATORY SETTING

The Federal Energy Regulatory Commission (FERC) regulates the transmission and sale of electricity and gas in interstate commerce. The goals and policies of *the Placer County General Plan* and State regulations relating to energy issues are discussed below.

STATE

The California Public Utilities Commission (PUC) sets forth specific rules that relate to the design, installation, and management of California's public utilities. Decisions #177187 and #78500 state that the undergrounding of utilities is mandatory if developable lots are less than three acres in size. Decision #81620 states that lots over three acres in size (large lot subdivisions) are not required to underground utilities.

The Warren-Alquist Act

The Warren-Alquist State Energy Resources Conservation and Development Act (Public Resources Code Section 25000 et seq.) was signed into law in 1974 and has been in effect since 1975. This legislation recognized the importance of energy conservation and created a regulatory framework to address the issue. This act established the California Energy Resources Conservation and Development Commission (CEC). The CEC is the State's primary energy planning and policy agency. The CEC has five major responsibilities:

1. Forecasting future energy needs and keeping historical energy data;
2. Licensing thermal power plants 50 MW or larger;
3. Promoting energy efficiency through appliance and building standards;
4. Developing energy technologies and supporting renewable energy; and
5. Planning for and directing state response to energy emergencies

Energy Restructuring

Energy restructuring in California became law when Governor Wilson signed AB 1890 in 1996. The generation of electricity was opened to competition. Competition through an open market place was among the purposes of the legislation in anticipation that competition would drive down the cost of electricity to the consumer. Under energy restructuring, however, utility companies retained ownership of their transmission and distribution systems. These facilities continue to be regulated by the PUC.

Energy Efficiency Standards

Energy efficiency standards for residential and non-residential buildings were established in 1978 in response to a mandate to reduce California's energy demand. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 1998 standards have an effective date of July 1, 1999.

The California Environmental Quality Act (CEQA)

CEQA directs all State agencies, boards, and commissions to evaluate an EIR's mitigation measures to reduce wasteful, inefficient and unnecessary consumption of energy.

LOCAL

Applicable goals and policies of the *Placer County General Plan* are listed below.

Placer County General Plan

Goal 4.A: To ensure the timely development of public facilities and the maintenance of specified service levels for these facilities.

Policies

4.A.1. Where new development requires the construction of new public facilities, the new development shall fund its fair share of the construction. The County shall require dedication of land within newly developing areas for public facilities, where necessary.

4.A.2. The County shall ensure through the development review process that adequate public facilities and services are available to serve new development. The County shall not approve new development where existing facilities are inadequate unless the following conditions are met:

a. The applicant can demonstrate that all necessary public facilities will be installed or adequately financed (through fees or other means); and

b. The facilities improvements are consistent with applicable facility plans approved by the County or with agency plans where the County is a participant.

4.A.4. The County shall require proposed new development in identified underground conversion districts and along scenic corridors to underground utility lines on and adjacent to the site of proposed development or, when this is infeasible, to contribute funding for future undergrounding.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered facilities, or create a need for new or physically altered facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.

- Use scarce energy resources in a wasteful or inefficient manner.

- Be inconsistent with the adopted *Placer County General Plan.*

4.11.10-1 Development of the Specific Plan area will increase the demand for electricity and natural gas and will result in the need to construct new infrastructure to serve the Specific Plan area.

Extensions of existing electrical facilities by both PG&E and SMUD are necessary to provide adequate electrical service to support the demands of the Specific Plan. SMUD indicates that it has or can develop the necessary capacity to serve its portion of the Specific Plan area. PG&E has the ability to provide electrical service for new development for approximately one year without the construction of new infrastructure. Much of the existing infrastructure capacity is being consumed by other developments in the vicinity of the Placer Vineyards Specific Plan. To serve the project, PG&E will construct a new substation. When new energy infrastructure is needed, there will be short-term construction impacts. To minimize impacts, development of on-site and off-site electrical infrastructure needs to occur concurrently with Specific Plan area development.

In order to provide natural gas service to the Specific Plan area, new gas distribution feeder mains, regulator stations, and distribution and transmission lines will be needed.

Energy supply is surpassed by energy demand during peak usage times in California. Increased energy efficiency and conservation could reduce the need for additional power plants or other energy facilities that could cause undesirable environmental effects, as well as reducing costs for future homeowners and businesses. Energy efficiency measures may be used in the design of subdivisions and the location and design of commercial and residential properties. Title 24 of the California Code of Regulations addresses required energy efficiency measures for construction. These construction practices can reduce costs to homeowners and businesses over the long-term. The Specific Plan specifies that all residential units will be built to Title 24 standards. The Specific Plan also encourages integration of solar orientation and design of buildings.

Energy consumption for natural gas and electricity for uses by geographic area is shown in Table 4.11-14. According to this table, natural gas and electrical consumption for the Specific Plan area will be 38,323,440 therms per year and 182 MW per year, respectively, upon full buildout. Since PG&E and SMUD report that they have the ability to supply the necessary energy to the Specific Plan area, this impact is considered ***less than significant.*** However, impacts related to timing of installation of utilities are ***potentially significant.***

Table 4.II-I4
Natural Gas/Electricity Consumption

Geographic Area	Dwelling Units (DU)	DU Electrical (MW/yr) Factor .0038 MW/du*yr	DU Gas (therms/yr) Factor 1,440 therms/du*yr	School Acres	School Electrical (MW/yr) Factor .0080 MW/acre*yr	Commercial, BP/LI Acres	Com'l, Office BP/LI Electrical (MW/yr) Factor .450 MW/acre*yr	Com'l, BP/LI Gas (therms/yr) Factor 63,600 therms/acre*yr	Total Electrical (MW/yr)	Total Gas (therms/yr)
Specific Plan Area – Buildout	14,132	53.7	20,350,080	140	1.12	282.6	127.2	17,973,360	**182.0**	**38,323,440**

1. Dwelling units and square footage projections provided by Placer County Planning Department
2. Natural gas and electricity consumption factors are taken from the *North Roseville Specific Plan EIR*, 1997.

There are many sources of electrical energy, and it is likely that various sources would be used in the Specific Plan area at buildout. According to PG&E's 2004 Generation Portfolio, the company obtains energy from hydroelectric, nuclear and fossil facilities. According to SMUD's Power Content Label, this company obtains energy from natural gas, hydroelectric, coal, nuclear, geothermal, biomass and waste, wind and solar facilities. It is beyond the scope of this Revised Draft EIR to speculate regarding impacts of using any particular source of energy; however, for informational purposes, common potential environmental impacts from various energy sources are listed below.

- Hydroelectric: Alteration of aquatic ecosystems and hydrologic processes, soil erosion, disruption of natural fish movement.

- Nuclear: Significant water use, discharge of warmed and polluted water into natural water bodies, generation of radioactive waste, soil contamination.

- Coal: Emission of nitrogen oxides, carbon dioxide, sulfur dioxide, mercury and methane into the air; significant water use; discharge of warmed and polluted water into natural water

bodies; generation of solid waste; soil contamination; alteration of wildlife habitat during surface mining.

- Natural Gas: Emission of methane, nitrogen oxides, and carbon dioxide; alteration of habitat during extraction.

- Geothermal: Significant water use, groundwater contamination, land subsidence.

- Biomass and Waste: Emission of nitrogen oxides and sulfur dioxide, significant water use, discharge of warmed and polluted water into natural water bodies, generation of solid waste.

- Wind: Aesthetic impacts, excessive noise, bird and bat mortality; use of large amounts of land.

- Solar: Generation of hazardous materials, use of large amounts of land.

Mitigation Measure

Implementation of the following mitigation measure will reduce energy-related impacts to a *less than significant level:*

4.11.10-1a *The Specific Plan applicants and subsequent developers shall work closely with PG&E and SMUD to ensure that development of electrical and natural gas infrastructure with the capacity to service the entire Specific Plan area is located and provided concurrently with roadway construction and in accordance with PUC regulations. The applicant(s) shall grant all necessary easements for installation of electrical and natural gas facilities, including utility easements along existing and future on-site major arterial roads for the development of area-wide utility corridors. Coordination with SMUD and/or PG&E shall occur, and any required agreements shall be established prior to recordation of the first final subdivision map.*

4.11.10-1b *Implement Mitigation Measures 4.8-3a through 4.8-3g as set forth in Section 4.8 of this Revised Draft EIR .*

4.11.10-2 Development associated with the Specific Plan could have an adverse effect on the ability of PG&E or SMUD to access their facilities and provide adequate service to their customers.

Land uses within the transmission line corridors that traverse the Specific Plan area are restricted. No structures are permitted in these areas, and clear and unrestricted access must be maintained. Some of the utility infrastructure could be located in areas that have the potential to become inaccessible for maintenance and/or for emergency response. In addition parking/storage for a County corporation yard and parking for a religious use are proposed within the easements. A site for a future cemetery is also proposed. Utility easements may be located behind fences or buildings without means of ingress and egress. As development occurs

in the Specific Plan area, the potential to block access to utility infrastructure is increased. This is considered a ***potentially significant impact.***

Mitigation Measures

The following mitigation measures would ensure consistency with the requirements of utility easements identified above and will mitigate the potential for impacts associated with the provision of electrical and natural gas service to the Specific Plan area to a *less than significant level*:

4.11.10-2a *All locations and continuous maintenance access points for natural gas and electrical infrastructure are to be clearly marked or noted on tentative subdivision maps. Dedicated easements for utility maintenance equipment shall be recorded prior to or concurrent with acceptance and recordation of final maps.*

4.11.10-2b *Clear, unrestricted access shall be maintained beneath existing transmission lines that traverse the Specific Plan area. This may include provision for unobstructed access to gates in proposed fences that may surround such uses as the County corporation yard. Any realignment of transmission line paths shall be negotiated with PG&E. Structures shall only be allowed in those areas that do not restrict access and meet the requirements of PG&E.*

OFF-SITE INFRASTRUCTURE

To service the Specific Plan area, PG&E and SMUD will need to make changes to existing utility service infrastructure in the vicinity. It is anticipated that such work will be performed in conjunction with other off-site utility work using common trenches within existing road and utility rights of way. No impacts, not already assessed in conjunction with installation of other utilities, have been identified.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.11.10-3 The proposed Specific Plan, in conjunction with other development in the area, would increase the demand for electricity service, creating a potentially significant cumulative impact.

Thousands of additional acres are approved, or proposed for development in Placer, Sacramento and Sutter counties as shown in Figure 4.1-2 in Section 4.1 of this Revised Draft EIR, including the Elverta Specific Plan, South Sutter County Industrial/Commercial Reserve, Curry Creek Community Plan, the Regional University and Community, West Roseville Specific Plan, Placer Ranch, Lincoln Crossing, Lincoln 270, Sierra Vista Specific Plan, Creekview Specific Plan area, Dry Creek/West Placer Community Plan, Silver Creek, and Riolo Vineyards Specific Plan. The Elverta Specific Plan area consists of 1,734 acres of land located south of the Specific Plan area. The Elverta Specific Plan has a holding capacity of up to 4,950 units and ten acres of commercial. The South Sutter County Industrial/Commercial Reserve includes 3,600 acres of commercial and industrial uses and 2,900 acres of residential development, immediately west of

the Placer Vineyards Specific Plan area. The Curry Creek Community Plan area, located north of the Placer Vineyards Specific Plan area, will contain approximately 16,200 dwelling units at buildout, and the Regional University and Community will contain approximately 4,223 dwelling units. The West Roseville Specific Plan area (located north of the Specific Plan area), consists of 3,150 acres, including approximately 8,500 proposed residential dwelling units, 200 acres of commercial/office uses and 980 acres of public uses including open space. Placer Ranch includes approximately 6,793 residential dwelling units and Lincoln Crossing consists of approximately 2,958 dwelling units at buildout. Sierra Vista Specific Plan consists of approximately 10,617 dwelling units, Creekview Specific Plan includes approximately 2,160 dwelling units, Silver Creek includes 79 dwelling units, Morgan Placer contains 91 dwelling units, and Riolo Vineyards consists of approximately 805 residential units. The West Roseville, Creekview, and Elverta specific plan areas include schools, parks and open space. Elverta Specific Plan area is within the SMUD service area, South Sutter is in the PG&E service area, and West Roseville would be developed in Roseville Electric's service area.

The cumulative context for electricity is the area served by PG&E, Roseville Electric and SMUD. According to PG&E, a new substation will be needed at full buildout of the Specific Plan. Although there are engineering solutions, the need for additional electrical facilities increases as development occurs. PG&E, SMUD and Roseville Electric build and/or contract for additional capacity on a continuing basis as development planning occurs in an area. Therefore, this is considered a ***less than significant impact.***

Mitigation Measures

No mitigation measures are required.

4.11.11 TELECOMMUNICATIONS/CABLE TELEVISION

ENVIRONMENTAL SETTING

The project site is within the SureWest Communications and SBC service areas. SureWest serves about one-third of the Specific Plan area, located east of Tanwood Avenue. SBC serves the remaining two-thirds of the area located west of Tanwood Avenue. Both companies own overhead pole lines within the Specific Plan area. Neither of the utilities has reserve capacity in the Specific Plan area.

The development review process for subsequent development proposals in the Specific Plan area allows service providers, such as the telephone company, the opportunity to review and comment on the proposed development and to plan and engineer the type and size of infrastructure required to service a development or series of developments. Project engineers will provide project engineering. The telephone company will review, make recommendations, and determine what is needed to serve the proposed development. This opportunity allows service providers to assess and plan for potential future demands for services on a case-by-case basis.

On-site trenching is the responsibility of the developer. Costs of materials, labor, and trenching may be reimbursed by the telephone company on a cost-sharing basis. Fiber optic facilities will

be extended into the Specific Plan area as subsequent development occurs. The telephone company is responsible for off-site costs and trenching, and will share costs with other utilities. Funding for telecommunications service is provided through customer billings. The Public Utilities Commission regulates charges for providing telephone infrastructure to commercial facilities.

No cable TV service provider currently exists in the Specific Plan area. Comcast has fiber optic infrastructure and provides cable services in the vicinity of the Specific Plan area. Placer County has non-exclusive franchises for cable TV service within its jurisdiction. Although Comcast serves the surrounding area, this does not preclude another cable provider from serving the same area, if that provider is willing to seek a non-exclusive franchise and develop the necessary infrastructure. Franchises need to be activated within one year of receipt. Typically, a cable franchise company will build capacity when the demand occurs.

PROPOSED PLACER VINEYARDS SPECIFIC PLAN

The following text related to communications is contained in the proposed Specific Plan.

The Plan Area is currently served by Sure West Communications and AT&T/SBC.

Existing Telephone Facilities

Both AT&T/SBC and Sure West own and maintain pole lines in the Plan Area; however, none of the existing facilities have reserve capacity available. Therefore, these facilities will need to be upgraded and placed underground.

New Telephone Facilities

Fiber optic facilities owned by Sure West, approximately one-half mile east of the Plan Area, on Crowder Lane and Baseline Road will be extended into the Plan Area as development occurs. AT&T/SBC also plans to extend its facilities into the Plan Area as development occurs. Within the Specific Plan area all telephone services will be constructed underground along road corridors.

REGULATORY SETTING

FEDERAL AND STATE

There are no specific federal regulations pertaining to telephone service and cable services that address environmental impacts associated with the proposed Specific Plan.

The California Public Utilities Commission (PUC) regulates privately owned telecommunications companies. The PUC sets forth specific rules that relate to the design, installation, and management of California's public utilities. Decisions #177187 and #78500 state that the undergrounding of utilities is mandatory if developable lots are less than three acres

in size. Decision #81620 states that lots over three acres in size (large lot subdivisions) are not required to underground utilities.

LOCAL

Goals and polices of the *Placer County General Plan* relating to public facilities are discussed below.

Placer County General Plan

Goal 4.A: To ensure the timely development of public facilities and the maintenance of specified service levels for these facilities.

Policies:

4.A.1. Where new development requires the construction of new public facilities, the new development shall fund its fair share of the construction. The County shall require dedication of land within newly developing areas for public facilities, where necessary.

4.A.2. The County shall ensure, through the development review process, that adequate public facilities and services are available to serve new development. The County shall not approve new development where existing facilities are inadequate unless the following conditions are met:

a. The applicant can demonstrate that all necessary public facilities will be installed or adequately financed (through fees or other means); and

b. The facilities improvements are consistent with applicable facility plans approved by the County or with agency plans where the County is a participant.

4.A.3. The County shall require that new urban development is planned and developed according to urban facility standards.

4.A.4. The County shall require proposed new development in identified underground conversion districts and along scenic corridors to underground utility lines on and adjacent to the site of proposed development or, when this is infeasible, to contribute funding for future undergrounding.

County Franchise Ordinance

Part 5 of Article 13.40 of the Placer County Code regulates franchises within Placer County. This Article generally defines franchise areas, terms, application requirements, rights, rules, and regulations for franchises. Sections 13.40.430 through 13.40.590 contain specific rules related to cable television franchises within Placer County.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered telecommunications/cable television facilities.

- Result in the need for new or physically altered telecommunications/cable television facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service or other performance objectives.

- Be inconsistent with the goals and policies adopted in the *Placer County General Plan*.

4.11.11-1 Buildout of the Specific Plan area would result in increased demand for cable television and telephone services and installation of new cable and telephone lines.

The development of the Specific Plan area would create an additional demand for cable television and telephone services. Assuming each residence had one connection each for cable television and one telephone connection, at full buildout a minimum of 28,264 residential connections would eventually be needed. Assuming that each acre of commercial land would require one cable television and one telephone connection, a minimum of 566 additional connections would eventually be needed, for a total of 28,830 connections. The cable TV needs in the Specific Plan area would be served by Comcast and/or other franchised cable service providers. Telephone service to the area east of Tanwood Avenue will be provided by SureWest Communications, and the area west of Tanwood Avenue will be served by SBC.

As previously stated, additional services would be provided by private utility companies and/or Placer County franchise holders, and would be funded through customer user fees. In addition, the utility companies would be given the opportunity to review and comment on any proposed development requiring new service. Since the service providers are able to provide the service, the impacts of these services are ***less than significant.***

Installation of new cable and television lines is an integral part of Specific Plan buildout. An analysis of the physical impacts related to construction within the Specific Plan area is included in each of the topical areas contained in this Revised Draft EIR. No additional impacts related to placement of telephone and cable utility lines have been identified. This impact is, therefore, ***less than significant***.

Mitigation Measure

No mitigation measures are required.

OFF-SITE INFRASTRUCTURE

To service the Specific Plan area, telecommunications and cable television service providers will need to make changes to existing utility service infrastructure in the vicinity. The engineering solution selected will determine how that is accomplished. Wireless and/or satellite service may be part of the solution. Telephone and cable lines will be placed underground in joint trenches utilized by other utilities, or hung from existing joint poles. No new or additional impacts have been identified.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.11.11-2 The Specific Plan would contribute to cumulative demand for telecommunications and cable television service.

The cumulative context for telephone and cable television services is the western Placer County area, which is served by AT&T/SBC and SureWest Communications. Both these companies will build new infrastructure as part of the subdivision process, in compliance with PUC regulations, for new development in the Specific Plan area as well as in the vicinity. Placer County allows non-exclusive franchises for cable TV services. Typically, a cable franchise company will build in capacity when the demand occurs. Since telephone and cable companies build in capacity when needed, cumulative impacts are considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.11.12 LIBRARY SERVICES

ENVIRONMENTAL SETTING

Library services in the Specific Plan area are provided by the Auburn-Placer County Library District, which was formed in 1967 with the consolidation of Auburn Public Library and the Placer County Library. This system of libraries serves all of Placer County, with the exception of the Cities of Roseville and Lincoln, which own and operate their own municipal library systems. The specific powers of the Library District are to disseminate knowledge of the arts, sciences, and general literature. The Auburn-Placer County Library District operates a main branch in the City of Auburn, a law library, nine branch libraries and a bookmobile that serves many areas throughout rural Placer County. The nearest branch library to the Specific Plan area is located in the City of Rocklin at 5460 5th Street. The City of Roseville operates libraries at 225 Taylor Street approximately, 3.5 miles east of Walerga Road, and at 1530 Maidu Drive. Since use of library facilities is typically by County residents, it is assumed that growth in the library service population is driven by new development in Placer County.

PROPOSED LIBRARY-RELATED SPECIFIC PLAN TEXT

Libraries for the Plan Area are currently administered by the Auburn Placer County Library Department. Current residents of the Plan Area are served by a bookmobile that visits the area an average of twice a month. The closest existing library facility is the City of Roseville main library, located at 225 Taylor Street, off Walerga Road, approximately 3.5 miles away. A new community library of approximately 25,500 square feet is proposed to be located in the Town Center. Placer Vineyards will pay for its fair share of the costs for the construction of the library facility.

REGULATORY SETTING

There are no specific State or federal regulations pertaining to libraries that would address environmental impacts associated with the proposed Specific Plan. The policies of the *Placer County General Plan* and the *Auburn-Placer Library Long-Range Plan* relating to libraries are discussed below.

LOCAL

Placer County General Plan

The following are applicable goals and policies from the *Placer County General Plan*:

Goal 4.A: To ensure the timely development of public facilities and the maintenance of specified service levels for these facilities.

Policy 4.A.5 The County shall ensure that library facilities are provided to current and future residents in the unincorporated area. The County shall also require new development to fund its fair share of library facilities.

Auburn-Placer County Library Long-Range Plan

The *Auburn-Placer County Library Long-Range Plan*, adopted in 2002, projects facilities needed to serve the existing and future population. The Long-Range Plan identifies the current facility standard as .40 square feet of library space and 2.2 volumes of library materials per capita. The Long-Range Plan was recently updated to provide for new space requirements necessitated by the passage of the Americans with Disabilities Act and the use of computer work stations in the library.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based, in part, on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities.

- Result in the need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.

- Be inconsistent with the *Placer County General Plan* or the *Auburn-Placer County Library Long-Range Plan.*

In addition to the facility standards adopted by the Placer County Board of Supervisors as part of the Auburn-Placer County Library Facilities Master Plan, other common standards used by library professionals include one computer per one thousand residents, three reading seats per one thousand residents, and two meeting room seats per one thousand residents.

4.11.12-1 Development of the Specific Plan area could result in inadequate library facilities.

According to the existing *Auburn-Placer County Library Long-Range Plan*, a population of 34,762 will generate a demand for an additional 13,905 square feet of library space at full buildout. Table 4.11-15 shows library demand based on population at full buildout.

Table 4.11-15
Library Demand Based on Population

Year	Dwelling Units (DU)	Population	Facility Space Demand Factor 0.40 sq ft per capita	Collection Demand Factor 2.2 volumes per capita	Computer Station Demand Factor 1 computer per 1,000 pop.	Reader Seats Demand Factor 3 seats per 1,000 pop.	Meeting Room Seats Demand Factor 2 seats per 1,000 pop.
Buildout	14,132	34,762	13,905	76,476	34.8	104.3	70.0

1. Dwelling unit projections provided by Placer County Planning Department
2. Population projections provided by *Placer Vineyards Specific Plan*, Draft March 2006
3. Level of service standards provided by the *Auburn-Placer County Library Long-Range Plan* and the Placer County Executive Office

The Specific Plan proposes that an approximate 25,500 square-foot branch library be located in the Town Center. The applicants propose to pay their fair share of the costs for the construction of the library facility. As noted above, fair share for the Specific Plan area would be a 13,905 square-foot facility. However, Placer County has, requested that one 25,500 square-foot regional library be constructed to serve the Specific Plan area as well as the Regional University and Placer Ranch developments, and the applicants have accommodated this request. Alternatively, Placer County has suggested that two libraries could be constructed: (1) a 15,000 square-foot library located in or near the Specific Plan area between 2010 and 2020 and (2) a 10,500 square-foot library located in or near the Placer Ranch development between 2030 and 2040. Occupation of the Specific Plan area is not anticipated before 2010.

The City of Roseville operates the nearest library to the Specific Plan area. This City's library could be affected until the proposed permanent facility is developed on the site. The City has requested that construction of the first library begin no later than 2010 and the second by 2015, if the County plans to build two smaller library facilities rather than one larger one. If the County plans only one library facility, construction of that facility should begin no later than 2010.

Residents of the area will not have access to a full range of library services until a permanent facility is located in the Specific Plan area and is operational. This is considered a ***significant impact.***

Mitigation Measure

The following mitigation measures would reduce the impacts on the City of Roseville's library system and the Auburn-Placer County Library District to a *less than significant level:*

4.11.12-1a *Formation of a County Service Area (CSA), Community Facilities District (CFD), or expansion of CSA #28, or other financing mechanism acceptable to the County shall be required prior to recordation of the first final small lot subdivision map to ensure that immediate funding for adequate library infrastructure consistent with County standards is in place. The Specific Plan developers shall enter into a Development Agreement to ensure a fair share contribution to adequate library facilities, and that such facilities are available prior to demonstrated need.*

4.11.12-1b *Completion of one or more branch libraries to provide a minimum of 0.4 square feet per capita, dedication of land, and stocking with books and other materials necessary for a functioning library with a minimum of 2.2 volumes per capita and otherwise meeting the standards of the Auburn-Placer County Library Long-Range Plan, including any subsequent amendments, shall occur concurrent with demand.*

4.11.12-1c *Project developers shall be required to establish a special benefit assessment district or other funding mechanism to ensure adequate funding of the Specific Plan's fair share for the ongoing operation and maintenance of library facilities. Such funding mechanism shall be established prior to recordation of the first final subdivision map to ensure that immediate funding for adequate library operations and maintenance is in place.*

4.11.12-2 Construction of a library and related facilities within the Specific Plan area could lead to physical impacts on the environment.

A branch library is an integral part of the Specific Plan and is to be constructed in the Town Center. Analysis of impacts related to construction within the Specific Plan area is included in each of the topical areas contained in this Revised Draft EIR. No additional impacts related to construction of the branch library have been identified. This impact is, therefore, ***less than significant***.

Mitigation Measure

No mitigation measures are required.

OFF-SITE INFRASTRUCTURE

No library related impacts or mitigation measures have been identified with regard to off-site infrastructure.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.11.12-3 The Specific Plan would contribute to cumulative demand for library services.

Placer County has adopted a Capital Facilities Fee for library services (see Section 4.11.2) that is applicable to any development in the unincorporated area of Placer County. As discussed above, the impact addressed in Impact 4.11.12-1 would be reduced to a level of insignificance with adoption of mitigation measures, thereby reducing the cumulative impacts related to the provision of library services to a level that is ***less than considerable, (i.e., less than significant).***

Mitigation Measure

No additional mitigation measures are required.

4.11.13 PARKS AND RECREATION

ENVIRONMENTAL SETTING

PARKS AND RECREATIONAL FACILITIES

The Specific Plan area is located within the Sacramento metropolitan region. A number of recreational opportunities exist close to the Specific Plan area. These opportunities include the Gibson Ranch Regional Park located south of the Specific Plan area in Sacramento County, the Dry Creek Parkway south of the Specific Plan area, and the Sabre City Park east of the Specific Plan area, as well as parks located within the City of Roseville to the east. Sabre City Park is a Placer County facility containing five acres with a community hall, grassy area and basketball court.

The largest park in the Placer Vineyards vicinity is the Gibson Ranch Regional Park. This 300-acre regional park, owned and operated by Sacramento County, is located on Elverta Road near Watt Avenue. The park is a working ranch with farm animals, equestrian services and includes fishing opportunities.

The Cherry Island Regional Park, located south of Elverta Road, includes a golf course and soccer complex. This park, also owned and operated by Sacramento County, is located at the confluence of Sierra Creek and Dry Creek and contains riparian forest, native grasslands and vernal pools. This area is designated a habitat restoration-site in the *Sacramento County General Plan*. There are also several smaller community and neighborhood parks and park sites associated with new development to the south and east of the Specific Plan area. The proposed *Elverta Specific Plan*, to be located south of the Specific Plan area, will contain several neighborhood and community parks when developed.

The Dry Creek Regional Parkway connects the southeast portion of the Specific Plan area to the Gibson Ranch Regional Park and the Cherry Island Regional Park in Sacramento County. The Dry Creek Regional Parkway, once completed, will form a link in a regional trail system that will be a continuous system of public parks, trails and facilities, including Folsom Lake State Park and the American River Parkway.

The City of Roseville has 50 developed parks (842 developed park acres), 16 park/school joint-use facilities, two golf courses, six special use facilities, 3,236 acres of open space and over 12 miles of bike trails through open space areas.

Placer County park development and maintenance services are provided by the Placer County Department of Facilities Services, Parks Division. The goals and policies of the 1994 *Placer County General Plan* set forth a framework for development and management of the County's park system. The County does not provide recreation programs and encourages the establishment of independent parks and recreation districts to perform this function.

The Parks Division maintains a variety of active and passive facilities including campgrounds, historic sites, swimming pools, open space areas, trails, neighborhood and community parks, tot lots, nature preserves and beaches. The Division is funded by General Fund dollars, transient occupancy tax revenues (Lake Tahoe Area), and County Service Areas (CSA).

Park maintenance costs for older parks in the Placer County parks system are funded by the County General Fund. Since new General Fund dollars are scarce, maintenance of new parks is typically funded by a CSA or the establishment of a zone of benefit within a CSA. Maintenance costs formerly were determined by the County and an annual fee was levied upon the residents of the CSA. Since Proposition 218, establishment of new fees or increases in existing maintenance fees generated for a CSA requires voter approval.

Placer County has established a per-lot, parks impact fee in the *Dry Creek/West Placer Community Plan* area to be used for park acquisition and development. Park impact fees are paid prior to the approval and recordation of final maps, and parks are to be acquired and constructed concurrently with the construction of adjacent homes, with installation of facilities available to and based on the needs of the residents inhabiting the adjacent homes. Any park fees or taxes for on-going maintenance must meet the provisions of Proposition 218.

A Development Agreement may be secured that would permit the developer to dedicate and develop parks in accordance with County park development standards in lieu of payment of fees. The amount of park land required for dedication and improvement for new development is set forth in General Plan Policy 5.A.3. If the Board of Supervisors accepts land for dedication, the property is transferred when the final subdivision map is recorded. As proposed by the Specific Plan, the developers will be building the parks so there will be no fees for acquisition and development collected by the County.

Surface Water Supply Setting

Numerous recreational opportunities in the vicinity of the Specific Plan occur on or near natural water bodies such as the Sacramento and American Rivers and their reservoirs. This section describes the existing water-related recreational resources within the study area of the Specific Plan's water supply, including the regional and project settings. This section also presents an analysis of potential effects to these resources due to implementation of the proposed Specific Plan water supply.

The setting descriptions contained in the *PCWA American River Pump Station Project EIS/EIR* are incorporated by reference in their entirety (PCWA and Reclamation, 2001) and the *American River Basin Cumulative Report* prepared by Reclamation as part of the referenced EIS/EIR (September 2002). The discussions of the various setting components contained in this section are, for the most part, taken directly from those documents.

The first impact analysis conducted is to evaluate the effects of the proposed Specific Plan initial surface water supply of 6,000 AFA to be provided by PCWA, compared to the existing condition. While the established buildup schedule of water use for the project predicts that approximately 6,000 AFA would be needed by the year 2012, the modeling assumed that the project supplies would be immediately required. For analytical purposes, this means that the results of the proposed initial surface water supply evaluation (using the 6,000 AFA) under existing conditions were conservative (i.e., tended to overemphasize any real present day effects).

The second impact analysis conducted is to evaluate any cumulative effects, as well as the incremental contribution of the proposed Specific Plan long-term water supply of 11,500 AFA required to meet the needs of the Specific Plan buildout (for a further description of the cumulative analysis, see Section 4.3.3 of this Revised Draft EIR). This 11,500 AFA water supply, which would be diverted from the Sacramento River, is part of the PCWA's pending amendatory CVP contract with Reclamation for 35,000 AFA. The entire 35,000 AFA of the PCWA CVP contract water was modeled to evaluate the project's incremental contribution to the cumulative condition.

The impact assessment focuses on water-dependent and water-enhanced recreation opportunities, excluding sport fishing. The Specific Plan water supply effects on fisheries resources, including those species of interest for sport fishing, are discussed in Section 4.4.4 of this Revised Draft EIR.

REGIONAL SETTING

STATE

Upper Sacramento River and Upstream Reservoirs

The upper Sacramento River and its upstream reservoirs are important recreation resources for the Sacramento Valley. The major reservoirs are Shasta, Keswick, Whiskeytown, and Trinity.

These resources support a broad range of water-dependent and water-enhanced recreation opportunities, including facilities for boating, fishing, swimming, and camping.

Primary recreation areas along the northernmost reach of the Sacramento River (Shasta Dam to Red Bluff) are Caldwell Memorial Park, Turtle Bay Recreation Area, Kutras Park, Anderson River Park, Ball's Ferry Bridge, Jelly's Ferry river access, Bend Bridge, Ide Adobe State Historic Monument, Red Bluff Marina and Park, and Red Bluff Diversion Dam recreation access. Major river access areas south of Red Bluff are located mostly around Woodson Bridge, Hamilton City, Princeton, and Colusa. Facilities include the Mill Creek Recreation Area, Woodson Bridge State Recreation Area, Tehama County River Park, Irving Finch River Access, Pine Creek Landing, Bidwell River Park State Recreation Area, Scotty's Boat Landing, Big Chico Creek Day Use Area, Butte City Launch Facilities, Colusa Weir Recreation Access, Colusa-Sacramento State Recreation Area, Colusa Levee Scenic Park, and Ward's Boat Landing.

Water-dependent activities (swimming, boating, fishing) account for approximately 52% of the recreation uses on the upper Sacramento River (Sacramento County and Reclamation, 1997). Fishing, rafting, canoeing, and kayaking are popular activities on the northern reach of the river. Fishing, canoeing, rafting, swimming, and power boating opportunities are available along most of the upper Sacramento River. Boating, rafting, and swimming use takes place primarily in summer months when air temperatures are high, and fishing is a year-round activity.

Shasta, Keswick, and Trinity reservoirs are administered by the U.S. Forest Service and Whiskeytown Reservoir is administered by the National Park Service. All are a part of the Whiskeytown-Shasta-Trinity National Recreation Area (NRA). The NRA was established by Congress in 1965 with a total of 203,500 acres. Fishing, boating, sightseeing, picnicking, hiking, sailing, and swimming are popular recreation activities on these reservoirs.

Shasta Lake is California's largest reservoir with 29,500 surface acres at full pool. Recreation facilities on Shasta Reservoir include 7 public boat ramps, 22 developed campsites, 4 picnic areas, and numerous private marina resorts. The boat ramp facilities, operated by the U.S. Forest Service, are located at Antlers, Sugarloaf, Bailey Cove, Hirz Bay, Packers Bay, Centimundi, and Jones Valley. Some facilities have multiple ramps that are put in operation as the lake level declines. The four large arms of the lake are the Pit River, Squaw Creek, McCloud River, and Sacramento River arms. When at the full elevation of 1,067 feet msl, the lake has 370 miles of shoreline that provide scenic resources, fishing opportunity, and shoreline boat-in camping sites (Dirksen and Reeves, 1993). Boat-in camping is dispersed at many locations along the shoreline. Private marinas are designed to be moveable as the lake level decreases, and some may move multiple times in the course of a summer boating season (Stevens, pers. comm., 1997).

Trinity Reservoir has 17,000 surface-acres of water when full at elevation 2,370 feet msl. Many public and private recreation facilities are on the lake, including 21 public and private campgrounds, four picnic areas, six resorts, and four marinas (Dirksen and Reeves, 1993). Major boat ramps operated by the U.S. Forest Service include Minersville on the Stuart's Fork Arm, Trinity Center on the Main Arm, and Fairview near Trinity Dam.

Whiskeytown and Keswick Reservoirs are regulating reservoirs for Shasta Reservoir and Trinity/Lewiston Reservoir. Facilities at Whiskeytown Reservoir include two boat ramps, three campgrounds, and two picnic areas. One boat ramp is available, but no campgrounds are located around Keswick Reservoir. Recreation activities on this lake are primarily related to boating and fishing (Sacramento County and Reclamation, 1997).

Sacramento-San Joaquin River Delta and Lower Sacramento River

As a complex of waterways affected by both fresh water inflows and tidal action, the Delta is a very important recreation resource that provides a variety of water-dependent and water-enhanced recreation opportunities, including fishing, boating, picnicking, and camping. It contains over 50,000 acres of water surface and nearly 1,100 miles of levied shoreline (DWR and Reclamation, 1996). Sources of Delta inflows that provide water for recreation and other beneficial uses include the Sacramento River basin (including the American River watershed), east side streams (such as the Mokelumne River), and the San Joaquin River basin. Total average annual Delta inflow is over 27 million AF (DWR, 1995). Water movement in Delta waterways used for recreation is also substantially influenced by tidal action, with the greatest influence in the western waterways (e.g., 330,000 cubic feet/second [cfs] typical summer incoming tide near Pittsburg) and lesser influence in the central and eastern waterways (e.g., 71,000 cfs typical summer incoming tide at Rio Vista on the Sacramento River or 58,000 cfs typical incoming tide near Venice Island on the San Joaquin River) (DWR, 1995).

Boating and related facilities are located throughout the Delta and include launch ramps, marinas, boat rentals, swimming areas, camping sites, dining and lodging facilities, and marine supply stores. Most recreation facilities are privately owned and operated commercially. In 1991, the State Lands Commission (SLC) estimated that approximately one hundred marinas provided 12,700 berths in the Delta (SLC, 1991). Public recreation resources include fishing access sites, parks, camping sites, and boat launch ramps in 22 areas (DWR and Reclamation, 1996).

Recreation visits exceed 12 million user-days per year (DWR, 1995). Boating is the most popular activity in the Delta region, accounting for approximately 17%of the visitation, with other popular uses including fishing (15%), relaxing (12%), sightseeing (11%), and camping (8%). Peak use periods are summer weekends; however, recreation use occurs over extended summer periods for vacationing visitors, and some boating and sport fishing are year-round activities (DWR and Reclamation, 1996).

The lower Sacramento River is the reach between the American River confluence and the Delta. As a recreation resource, its use is closely associated with recreational use of Delta waterways. This section of the river, influenced by tidal action similar to the Delta, is an important boating and fishing area with extensive boat traffic, particularly in summer months. Several private marinas are located on the river. Between Colusa and Sacramento major recreation facilities are located at Colusa-Sacramento River Recreation Area, Colusa Weir access, Tisdale Weir access, River Bend Boating Facility, Knights Landing, Sacramento Bypass, and Elkhorn Boating Facility.

AREA SETTING

Folsom Reservoir

Folsom Reservoir lies within the Folsom Reservoir State Recreation Area (Folsom Reservoir SRA), which is managed by the California Department of Parks and Recreation (CPDR). The Folsom Reservoir SRA is one of the most heavily used recreational facilities in the State park system due to its proximity to the heavily populated greater Sacramento area and the diminishing open space in the region. Folsom Reservoir SRA's significance as a recreational resource will continue to increase as these trends continue. The greatest increased demand is expected to come from local users for day-use activities such as picnicking, swimming trail use and passive enjoyment of an outdoor setting. Both regional and local demand for motor boating and camping is also expected to increase; however, alternative resources are available (albeit at some distance) to support these users.

When full, Folsom Reservoir consists of approximately 11,900 surface-acres of water and extends nearly 15 miles up the north fork and 10.5 miles up the south fork of the American River (CDPR, undated; Water Education Foundation). When full, Folsom Reservoir has 75 miles of undeveloped shoreline, including many areas available for swimming. Summer surface water temperatures become warm enough for comfortable swimming, and are warmer than inflowing water or water released downstream to Lake Natoma. The elevation of reservoir levels can vary considerably from 466 feet msl when its gross pool is full to less than 375 feet msl after several dry years.

Folsom Reservoir has recreation facilities for boat launching, mooring, swimming, hiking, bicycling, picnicking, camping, fishing, and nature study. CDPR operates the facilities as part of the Folsom Reservoir SRA. Folsom Reservoir has approximately 80 miles of trails available for hiking and horseback riding; an eight-mile paved bicycle trail, which connects with the American River Parkway's 26-mile Jedediah Smith bicycle trail; and the Darrington Mountain Bike Trail (SAFCA and Reclamation, 1994). The Darrington Mountain Bike Trail is a 7.7-mile trail that follows the Folsom Reservoir shoreline from the South Fork of the American River to the Peninsula Campground.

Facilities within major recreation areas located at Folsom Reservoir are shown in Table 4.11-16. As indicated, water-enhanced and water-dependent recreation facilities are provided throughout the Folsom Reservoir area. A majority of the water-dependent recreation facilities are located at Beal's Point, Granite Bay, Peninsula Campground, Brown's Ravine, and Folsom Point (formerly Dike 8).

Table 4.11-16
Recreation Facilities Located at Folsom Reservoir

Recreation Area	Water Enhanced				Water Dependent		
	Picnicking	Camping	Equestrian Staging	Trails	Swimming & Wading	Boat Launching	Marina
Beal's Point	✓	N		✓	✓	CT-B	
Granite Bay	✓		✓	✓	✓	CT-B	
Horseshoe Bar				✓			

Table 4.11-16
Recreation Facilities Located at Folsom Reservoir

Recreation Area	Water Enhanced				Water Dependent		
	Picnicking	Camping	Equestrian Staging	Trails	Swimming & Wading	Boat Launching	Marina
Rattlesnake Bar		✓	✓	✓			
Peninsula		N		✓	ND	CT-B	
Brown's Ravine	✓		✓	✓	ND	CT-B	✓
Dyke 8	✓			✓	ND	CT-B	

Note: Table does not present all available recreational facilities. In general, recreation facilities are for day use; overnight use is permitted where indicated. The following designations apply: CT = Cart top boat and raft launching areas; N = Overnight use by permit only; B = Trailered boat launching ramps; ND = Non-designated swimming area.
Sources: Sacramento County 1985; SAFCA and Reclamation 1994; SMWA and Reclamation 1996; and EDAW 1998.

The primary commercial recreation facility on Folsom Reservoir is the Folsom Reservoir Marina in Brown's Ravine. The only marina on the lake, Folsom Reservoir Marina provides approximately 685 wet slips and 45 dry slips for both sailboats and power boats. The wet slips are operable when the lake level is at least 412 feet msl elevation (Christensen, pers. comm., 1997). The slips can accommodate boats up to 28 feet in length. Small craft rental and supplies are also available at the marina. In addition, concessionaires operate snack bars and recreational equipment rentals at the Beal's Point and Granite Bay swimming beaches during the peak summer season.

The six major-use areas are further described below:

- **Granite Bay:** Located on the western shore of the lake, Granite Bay is the most heavily used area in the Folsom Lake SRA. Facilities include boat launch ramps, a formal beach, picnic sites, concessions and an activity center.

- **Beal's Point:** Located south of Granite Bay and north of the dam, Beal's Point has concessions, camping and picnic areas, equestrian and cycling trails and a formal beach.

- **Folsom Point:** Located on the southeast shore, adjacent to the town of Folsom, Folsom Point is primarily used as a boat launch and picnic area. Observation Point is located on the east end of Folsom Dam in close proximity to Folsom Point.

- **Brown's Ravine:** Located at the main entrance to Folsom Lake SRA, on the eastern side of the lake, Brown's Ravine has a marina, berthing slips and launch ramps, picnic areas, and equestrian staging areas and trails.

- **Peninsula:** Located on the eastern shore of the lake, Peninsula has the largest developed campground at Folsom Lake SRA as well as boat launch ramps, picnic sites and cycling and hiking trails.

- **Rattlesnake Bar:** Located on the lake's northern shore on the north fork, Rattlesnake Bar is primarily used as a boat launch area.

Folsom Reservoir averages nearly 2.6 million visitors annually. The average annual attendance at Folsom Lake SRA for the period between 1980 and 1997 was 2,076,028, with a high of 2,861,742 in 1986 and a low of 1,755,278 in 1997 (JSA April 2000). Visitation primarily depends on air and water temperatures and on water surface elevation in the reservoir. As previously mentioned, the primary recreation season (April through September) coincides with the warmer spring and summer months when the daily high air temperatures average 90°F to 100°F. Approximately 75% of the annual visitation for the SRA occurs during the spring and summer seasons.

During these months, the reservoir experiences relatively high surface water temperature. Existing reservoir water has little movement and the newer (colder) water tends to sink to the bottom of the reservoir, resulting in noticeably warmer surface temperatures. Surface water temperatures during the peak visitation period (June through August) range from 68°F to 76°F.

The predominant recreational activities at Folsom Reservoir are water-dependent uses such as boating, water-skiing, personal watercraft use, swimming, and fishing. The upper (easternmost) arms of the lake are designated as slow zones for quiet cruising, fishing, and nature appreciation. Folsom Reservoir is also an important source of scenic, natural, and cultural resources for water-enhanced recreational activities. Water-enhanced activities provided at the reservoir include camping, trail use, picnicking, and nature study.

The water surface elevation in Folsom Reservoir directly affects the availability of boat ramps, beaches, berth sites and other facilities that depend largely on water depth or surface area. When these facilities become unavailable to users, use patterns and visitation at Folsom Lake SRA are altered (Sacramento Area Flood Control Agency, 1998). When reservoir water elevations drop below sufficient levels, boat facilities become inoperable and, as a result, recreationists are discouraged from visiting the reservoir during these times. Critical elevations for boat ramp operability are shown in Table 4.11-17. The main swimming beaches are usable at an elevation range of 420 to 455 ft msl; 435 ft msl is the optimal elevation.

Table 4.II-I7
Elevations for Boat Ramp Operability

Granite Bay	Unavailable below 360 feet msl
Hobie's Cove	Unavailable below 375 feet msl
Brown's Ravine	Unavailable below 395 feet msl
Folsom Point (Dike 8)	Unavailable below 405 feet msl
Beal's Point	Unavailable below 420 feet msl
Source: Folsom Reservoir 1998	

Visitation by recreational use type for the Folsom Reservoir recreation area is presented in Table 4.11-18. As shown, the water-enhanced activities account for approximately 15% of the total recreational demand at the reservoir, and water-dependent recreational activities account for nearly 85%. Of the recreation uses listed, the most popular is boating (trailer and non-trailer launched), which accounts for approximately 30% of the total recreation demand. Other recreation uses, such as swimming and wading (designated and non-designated areas), account for approximately 27%; fishing accounts for nearly 20% of the recreation demand at Folsom

Reservoir. The remaining approximately 23% of the recreation demand consists of picnicking, camping, and miscellaneous water-dependent activities.

Table 4.11-18
Recreation Activities by Percentage of Use – Folsom Reservoir

Use Type	Percentage of Use
Water Enhanced Activities	
Picnicking and relaxing	8.7
Camping	3.1
Trail Use (equestrian, hiking, etc.)	3.5
Subtotal	15.3
Water-Dependent Activities	
Windsurfing	1.9
Swimming and wading (designated areas)	14.0
Swimming and wading (non-designated areas)	13.0
Personal watercraft	2.7
Boating (trailer launched)	27.9
Rafting and boating (non-trailer launched)	1.8
Berthing	2.6
Boat camping	0.9
Fishing	19.9
Subtotal	84.7
Total	**100.0**

Source: SAFCA and US Bureau of Reclamation, 1994

Local users and regional users comprise the vast majority of visitors to the Folsom Reservoir SRA. The typical regional user travels more than an hour to use Folsom Reservoir SRA, many from places as far away as the San Francisco Bay Area. Although regional users have comparable recreational facilities as alternative destinations, they still represent a significant user base at Folsom Lake SRA. Because of the distance they travel, this user group is usually found at the lake on weekends and/or for a week's vacation in the summer. The local user, including the population of the Sacramento metropolitan area, drives less than one hour to reach Folsom Reservoir SRA. Local users also visit the lake primarily on weekends. However, the proportion of local users versus regional users increases during the non-summer months.

The neighborhood user represents a sub-class of the local user group. Neighborhood users are recreationists who live less than a 15-minute drive from the lake and consider Folsom Reservoir their "backyard" park. Many neighborhood users run out to the lake casually at any time, or on any day of the year; they may actually avoid the lake on weekends when it is more crowded. For example, a neighborhood user may go out to the lake to fish or walk for an hour after dinner on a warm summer night. These users are predominantly residents of Folsom, El Dorado Hills, Roseville, Granite Bay, and the other suburban and semi-rural towns surrounding the lake. Several of these communities are among the fastest growing in the state.

Lower American River Resource Description

The lower American River extends approximately 23 miles from Nimbus Dam downstream to its confluence with the Sacramento River. The river has a drainage area of approximately 120 square miles and supports of a wide variety of vegetative and aquatic communities. The upper reaches of the river are bordered by upland terraces and bluffs, and the lower reaches are bordered primarily by flood control levees. Most of the lower American River supports an extensive riparian woodland corridor dominated by cottonwoods and willows. Urban development surrounds the riparian corridor and several arterial streets and highways cross the river (Hazel Avenue, Sunrise Boulevard, Watt Avenue, Howe Avenue, H Street, Capitol City Freeway, S.R. 160, and I-5). Land areas in the river corridor include several large gravel bars within the river meanders, including Sailor Bar, Sacramento Bar, Rossmoor Bar, and Arden Bar, and the floodway inside the levees of the lower reach of the river.

Lower American River Recreation Facilities

Recreation facilities on the lower American River are generally located in the American River Parkway (Parkway). The lower American River is the central focus of the Parkway and extends from Nimbus Dam on the east to Discovery Park on the west. The Parkway consists of 14 interconnected parks, a continuous trail system, and approximately five thousand total acres of land.

Owned and managed by the County of Sacramento, the Parkway is linked to additional park lands, from Nimbus Dam to Folsom Reservoir, which are managed by the California Department of Parks and Recreation (CDPR).

The American River Parkway is recognized as one of the nation's premiere urban parkways. The most popular feature of the Parkway is the Jedediah Smith Memorial Bicycle Trail, which extends approximately 32 miles from Discovery Park on the lower American River to Beal's Point at Folsom Reservoir. Additional recreation facilities, including pedestrian and equestrian trails, and picnic areas are located throughout the Parkway. No commercial recreation facilities are located within the Parkway, although raft rental outfitters are located near the parkway at Sunrise Boulevard.

Recreation facilities located within the Parkway are presented in Table 4.11-19. As indicated, water-enhanced and water-dependent recreation facilities are provided throughout the Parkway. Water-dependent facilities consist primarily of trailered-boat and car-top boat launching facilities. Trailered-boat launching ramps are located at Discovery Park, Howe Avenue, and Sunrise Boulevard recreation areas, and car-top boat launching is permitted at various areas within the Parkway, including Watt Avenue and downstream of Sunrise Boulevard. Water-enhanced facilities consist primarily of picnic areas and bicycle, equestrian, and pedestrian trails, which are dispersed throughout the Parkway.

Table 4.11-19 Recreation Facilities Located Within the American River Parkway					
Recreation Area	Water Enhanced				Water Dependent
	Picnicking	Camping	Equestrian Staging	Bicycle & Pedestrian Trails	Boat Launching
Discovery Park	✓	✓	✓	✓	CT-B
Woodlake Area	✓			✓	
Cal Expo Area	✓			✓	
Paradise Beach				✓	
Campus Commons	✓			✓	
Howe Avenue Area	✓			✓	CT-B
Watt Avenue Area	✓			✓	CT
Sara Park				✓	
Arden Bar Area	✓			✓	CT
C.M. Goethe Park	✓	N	✓	✓	CT
Ancil Hoffman Park	✓			✓	CT
Rossmoor Bar				✓	CT
Sacramento Bar	✓			✓	CT
Sunrise Blvd.	✓	✓		✓	CT-B
Sailor Bar	✓	✓	✓	✓	CT

Note: Table does not present all available recreational facilities. In general, recreation facilities are for day use; overnight use is permitted where indicated. The following designations apply: CT = Cart top boat and raft launching areas; N = Overnight use by permit only; B = Trailered boat launching ramps; ND = Non-designated swimming area.
Sources: Sacramento County 1985; SAFCA and Reclamation 1994; SMWA and Reclamation 1996; and EDAW 1998.

Recreation Use and Activities of the Lower American River

In 1997, the Parkway had more than six million visitor-days of use. Visits are projected to increase to 9.6 million visitor-days by 2020, assuming stable river flows (Sacramento County and Reclamation, 1997). The Department of Water Resources (1994) estimates that approximately 460,000 people use the lower American River for rafting activities each year.

Annual public use and visitation at the Parkway is presented in Table 4.11-20. As shown, peak use of the Parkway is from June through September. Public use and visitation are influenced not only by the season of the year, but also by air temperature and river flows, which are dependent on releases from Folsom Dam. Recreational use decreases during periods when the ambient air temperatures and flow rates decline.

The recreational activities within the Parkway are presented in Table 4.11-21 according to percentage of use. As indicated, water-enhanced activities account for approximately 69% of all recreation activities, and water-dependent activities account for approximately 31%. The most popular activity in the American River Parkway is nature study and sightseeing, accounting for approximately 30% of the total recreation demand. Of the remaining recreational uses listed, trail use (jogging, bicycling, hiking and equestrian) accounts for approximately 27%, picnicking accounts for about 12%, boating accounts for about 11%, and swimming and fishing-related activities each account for about 10% of the total recreation demand in the Parkway.

Table 4.II-20 Seasonal Public Use and Visitation – American River Parkway	
Period	**Percentage of Use**
January 1-March 5	17.5
March 6-June 9	26.3
June 10-September 25	29.6
September 26-December 31	26.6
Source: SAFCA and Reclamation, 1994.	

Table 4.II-2I Recreation Activities by Percentage of Use – American River Parkway	
Use Type	**Percentage of Use**
Water Enhanced Activities	
Picnicking and relaxing	12.0
Nature study and sightseeing	30.0
Trail Use	27.0
Subtotal	69.0
Water-Dependent Activities	
Swimming and wading	10.0
Rafting and boating	11.0
Fishing	10.0
Subtotal	31.0
Total	**100.0**
Source: SAFCA and Reclamation, 1994.	

A majority of the recreation activities listed (including swimming/wading, picnicking, and trail use) are allowed throughout the Parkway. Boating and rafting activities occur most frequently between Sunrise Boulevard and Goethe Park/William Pond areas. Fishing is permitted year-round within the Parkway, except during fall and early winter when the river is closed from Ancil Hoffman Park on the west to the Hazel Avenue Bridge on the east to protect spawning fish.

Rafting on the lower American River is supported by commercial outfitters who provide services such as daily tours, shuttle buses, instructional services, and rental equipment for rafting, boating, and fishing activities. Two major outfitters, both located near Sunrise Boulevard, put-in rafts just downstream of Sunrise Boulevard, and use either Goethe Park and/or the Harrington Drive access as the primary take-out points. The boating and rafting season is generally between April and October, with peak raft rentals occurring in June, July (highest use month), and August (Gardner, pers. comm., 1997).

PROPOSED GENERAL PLAN AMENDMENT

Two General Plan amendments related to the County's involvement in activity-oriented recreation programs are proposed as part of Specific Plan consideration. Specifically, the General Plan would be amended to allow the County to be involved in such programs when provided in an approved Specific Plan. To implement this change, additions to General Plan

Policies 5.A.16 and 5.A.25 are proposed as follows (language to be added is shown in underline; language to be deleted is shown in strikethrough):

> Policy 5.A.16 Except as otherwise provided in an approved Specific Plan, t~~T~~he County should not become involved in the operation of organized, activity-oriented recreation programs, especially where a local park or recreation district has been established.
>
> Policy 5.A.25 The County shall encourage the establishment of activity-oriented recreation programs for all urban and suburban areas of the County. Except as otherwise provided in an approved Specific Plan, s~~S~~uch programs shall be provided by jurisdictions other than Placer County including special districts, recreation districts or public utility districts.

PROPOSED PARKS AND RECREATION-RELATED SPECIFIC PLAN GOALS, POLICIES AND TEXT

The following descriptions, goals and policies related to parks and recreation are contained in the proposed Specific Plan.

The Specific Plan proposes 217.0 acres designated as parks and 714 acres designated as open space dedicated for both active and passive recreation (see Figure 4.11-4). Proposed park facilities would be constructed at the locations shown on Figure 4.11-4.

Two community parks are proposed: Community Park #1, Community Park #2 totaling 66.0 acres. Community Park #1 is a 32.0-acre park located in the eastern portion of the Plan area southwest of the intersection of Dyer Lane and Watt Avenue adjacent to the Dry Creek Open Space Corridor. The park will incorporate parking, staging, and access to Dry Creek for bicyclists, pedestrians and equestrians. Community Park #2 is a 34.0-acre park site located in the western portion of the Specific Plan area, near the Riego area and the east-west power line open space corridor. Additionally, the Specific Plan includes a community-wide recreation facility labeled Recreation Center (RC) on the Land Use Diagram. This facility is located in the Town Center on 5 acres and may contain indoor meeting rooms, fitness rooms, equipment and associated offices as well as an outdoor pool, plaza, gazebo and gathering areas. Community parks are proposed to be phased independently of adjacent development.

The Specific Plan includes a total of 108 acres of neighborhood parks including 48 acres of joint-use neighborhood parks located adjacent to school sites, 18.5 acres of private neighborhood parks located in the age-restricted portion of the Plan area and an additional 39 acres of public neighborhood parks located elsewhere in the Plan area. These parks are located to afford accessibility for residents. Neighborhood parks are typically 5 to 15 acres and are sized to contain ball fields, playgrounds and picnic areas.

The Town Center Community Green proposed by the Specific Plan, also labeled Neighborhood Park (NP) on the Land Use Diagram, is a 3.5-acre park centrally located in the Town Center. This civic park will provide play areas, picnic areas, an outdoor amphitheater for performances,

open areas for farmer's markets or other informal uses and a landmark feature/distinctive gathering point.

The Specific Plan includes 34.5 acres of public mini-parks located through the Plan area and an additional 3.5 acres of private mini-parks located in the age-restricted portion of the Plan area. The location of these public and private mini-parks are shown on Figure 4.11-4. Mini-parks are typically one to two acres or three to four acres in size. The smaller "mini-parks" will accommodate tot-lots, playgrounds and/or picnic areas and the larger "mini-parks" will accommodate small practice fields, picnic areas, tot-lots and/or playgrounds.

A total of 18.5 acres of neighborhood parks and 3.5 acres of mini-parks are proposed to be private parks located in the age-restricted portion of the Plan area. According to Placer County Code, private parks receive 50% credit toward the required parkland. Therefore, the actual total parkland credit for the entire Plan area is 206 acres. This total still exceeds the active parkland acreage required by General Plan policy (approximately 178 acres).

The Specific Plan proposes the open space areas to be improved with trails and landscaping to qualify as "greenways" under Policy 5.A.4 of the *Placer County General Plan*. According to the Specific Plan, proposed open space will contain natural features such as wetlands, riparian and wildlife corridors, creeks, drainage ways, or utility easements for power lines. Open space corridors and easements within the Specific Plan area provide trails, storm water conveyance and flood detention, opportunities for wetland mitigation, and buffers between different types of land uses. Recreation facilities in open space corridors are proposed to include passive uses such as walking, jogging, bird watching, picnic areas, interpretive signs and teaching areas, rest areas and overlooks. Open space corridors along some creek segments will have a paved bicycle/pedestrian trail on one side of the creek and a decomposed granite pedestrian/hiking trail on the other side of the creek. Specific design features and functions of each corridor will be determined when detailed plans (tentative subdivision maps) are prepared and submitted. Where open space lands meet the criteria as defined in Policy 5.A.4 of the General Plan and are determined to qualify as a passive park of community or regional benefit, they may be dedicated to Placer County and maintained by a County Service Area or similar mechanism.

The Specific Plan proposes 24 miles of landscape corridor along all arterial roadways with separated meandering walkways. Where landscape corridors are adjacent to parks or open space, they are to be blended into these facilities and included as part of the park or open space acreage. According to the Specific Plan, 209 acres of landscaped area will be provided along streets. However, these areas do not qualify or "count" as parks or open space required to be dedicated in accordance with Placer County policies and standards.

The Specific Plan proposes to provide linkage and access to the Dry Creek open space corridor, which will ultimately provide linkages to the American River Parkway and downtown Sacramento regional open space corridors.

The Specific Plan proponents are proposing that a County Service Area (CSA) or similar mechanism be used for the entire Specific Plan area to pay for maintenance and on-going recreational services.

The following are proposed *Placer Vineyards Specific Plan* goals and policies related to parks and recreation:

Goals and Policies: (Note, all figure and table references that follow in this section are to the Specific Plan)

Goal 3.13 Create an interconnected parks and open space system within Placer Vineyards that provides for the preservation and enhancement of natural resources and offers a variety of recreational opportunities for the community.

Goal 3.14 Provide parks sized for a variety of recreational uses.

Policy 3.11 Parks. A variety of large, medium, and small parks shall be distributed throughout the Plan Area and shall provide recreational opportunities for residents of all ages and abilities.

1. Eight neighborhood parks shall be located adjacent to school facilities to allow for shared use and maintenance of public facilities. (See Chapter VII, "Parks and Open Space," for additional park policies and guidelines, and Chapter VIII, "Public Facilities," for additional school policies and guidelines. See the Development Agreement for the timing and details related to construction of these neighborhood parks.)

2. Neighborhood Parks shall generally be located no farther than one-quarter mile from the farthest residence.

3. Neighborhood developments are encouraged to provide mini parks, image landscape features, and tot lots.

4. Parks shall be provided at a minimum standard of 5 acres per 1,000 population.

Goal 4.7 Preserve oak trees and riparian woodlands.

Policy 4.15 Oaks and other native trees with trunk diameters 6 inches or greater, measured at 4 feet above grade, will be preserved wherever feasible.

Policy 4.16 Location and preservation of oaks and other native trees will be indicated on site-specific, tentative maps.

Policy 4.18 Site-specific design and tree preservation, removal, and mitigation will be identified on an individual project basis and shall conform to the requirements developed in the Open Space Mitigation and Management Plan.

Goal 5.7 Provide a system of on- and off-street trails that connect to destinations within the Plan Area and to the regional trail network.

Policy 5.21 Trail System. Trails shall be provided as identified by Figure 5.6, "Off-Street Trails Diagram."

Policy 5.22 Types of Trails. Trails shall be provided within the Plan Area that offer a variety of experiences, including trails within and between parks and other public open space lands or to schools, and trails that connect to regional trails and transit facilities within and outside of the Plan Area.

Policy 5.23 Provision of Trails. Private developers shall incorporate trail routes that are within their proposed tentative maps as identified in the trails diagram (see Figure 5.6). Placer Vineyards trails shall conform to the following standards.

1. In the Dry Creek corridor only, Class I bicycle trails shall be 12-foot-wide, asphalt concrete paving with 2-foot-wide decomposed granite trails on both sides of the asphalt concrete paving.

2. In all other areas, Class 1 bicycle trails (10-foot wide, asphalt concrete paving) will be provided with 2-foot-wide decomposed granite jogging paths provided on both sides of the asphalt concrete paving.

3. In open space areas, natural surface multi-use trails may be set a minimum of 10 feet off the asphalt concrete paving trail (for activities such as equestrian riding and mountain biking).

4. Informational signs will be placed throughout the trail system (e.g., "2.4 miles to Town Center").

5. Trails will be set back a minimum of 10 feet from residences.

6. Trails will be set back a minimum of 25 feet from preserved or reconstructed wetlands.

7. Collapsible bollards will be placed at entries to restrict vehicular access where trails and streets intersect.

8. Trail crossings of drainage ways will occur at appropriate intervals.

9. Traffic calming methods and signage shall be used to enhance the safety of the trail systems where they cross major or collector streets.

10. A Class I trail crossing shall be provided under the Watt Avenue bridge within the Dry Creek corridor.

11. A Class I trail shall also be provided on the east side of the Dry Creek bridge and along Watt Avenue, extending to the Placer/Sacramento County line. The Class I trail on the east side of the bridge will be separated from traffic by a concrete railing.

Policy 5.24 Construction of Bike Trail Improvements. Bike trail improvements are planned to connect Morgan Creek to Gibson Ranch Park. Landowners shall design and construct bike trail improvements within the open space portions of their property. according to the following standards and provisions of the Development Agreement.

1. In conjunction with the construction of a core backbone roadway system, a set of core backbone trails adjacent to these roadways, as described in Section 9.3 and the Public Facilities Financing Plan, shall be constructed at the same time that the core backbone roadways are constructed.

2. Landowners shall install sections of the trail when it installs subdivision improvements within the parcels adjacent to the open space. Trail connections to the core backbone trails shall be included as part of the subdivision improvements.

3. Bike trail sections shall be constructed and improved according to Figure 5.6, "Off-Street Trails Diagram." Bike trails shall be designed in accordance with the County's design standards for off-street bike trails and the guidelines provided in the Specific Plan.

4. Landowners shall proceed to complete the construction of bike trail improvements at the same time that they install and complete the balance of the subdivision improvements for the parcel(s) adjacent to the open space.

5. Landowners shall be responsible for all costs associated with the design and construction of bike trail improvements, including the costs of preparing required plans and drawings and obtaining all required permits.

6. Upon completion of bike trail improvements by the landowner, the County shall accept the dedication of the bike trail and applicable open space area and assume ownership and maintenance of these facilities, provided that the cost of maintenance shall be funded by the County Service Area.

Policy 5.25 Fire Trails/Access through Open Space. Fire access routes shall be integrated into the open space trails system and shall comply with Placer County Fire Department standards.

1. Open space trails shall include design features that minimize barriers to emergency response, such as knock-down bollards for emergency access at trailheads.

2. Rolled curb access points shall be provided in open space areas. Open space access points shall be provided at each cul-de-sac that abuts an open space and spaced every 1,000 feet along roads adjacent to open space areas. These access points to be identified with signage and red curbed. Emergency access easements shall be provided for each emergency access area.

Policy 5.26 Roadway Crossings in Utility Corridors. Roadway crossings shall be minimized through utility corridors to reduce the fragmentation of trails and open space.

Goal 6.3 Provide for views from the road to community features such as creeks, wetlands, major tree groves, and other open space on the site.

Policy 6.3 Natural Resource Preservation. Where possible, open space areas shall interconnect with the oak woodlands, grasslands, wetlands and other natural resources in the Plan Area.

Policy 6.4 Recommended Plant Palette. Appendix B of this Specific Plan contains a list of plants recommended for use in Placer Vineyards. This list should be used when designing open space, landscape buffer corridors, streetscapes, gateways and parks. Plants similar to those listed in the table may also be used.

Goal 7.1 Satisfy the Placer County General Plan requirement to provide a minimum of 5 acres of active or improved parkland and 5 acres of passive recreation area or open space for every 1,000 new residents.

Policy 7.1 Park Recreational Facilities. Recreational facilities required by the General Plan are listed in Table 7-1, "Summary of Required Park and School Facilities." Facility needs identified in the table will be met on either public and private park sites or public school sites within the Specific Plan area. The Parks and Recreation Master Plan described in Policy 7.2 below may refine and modify this list.

Policy 7.2 Parks and Recreation Master Plan. Property owners and the County shall, as a priority project, develop a Parks and Recreation Master Plan to guide planning and design of individual park facilities. The master plan shall be guided by the design and programming sections of this Specific Plan chapter and identified in the Public Facilities Financing Plan. The Parks and Recreation Master Plan sha1l address the need for specific types of active and/or passive recreational facilities. When designing park facilities adjacent to schools, the location and type of planned school facilities should be considered.

The plan shall also refine the trails design/plan, establish a design "theme" for the parks, and provide specific development plans (for the types of equipment, materials, and cost estimate) for each park site.

Policy 7.3 Dedication of Parks and Open Space. Landowners shall offer for dedication the areas within their property planned for parks and open space, including both active and passive use parks. The location and size of parks and open space are indicated in Figure 7.1; they will be refined in the Parks and Recreation Master Plan and finally located on tentative maps for individual projects. The timing for the development of parks and open space for individual projects and details regarding park fees, land dedications, and on-site park development shall be described in the Public Facilities Financing Plan and defined in the Development Agreement. See Chapter IX, "Implementation," for additional information.

Policy 7.4 Park Maintenance. Maintenance of parks shall be provided by the County. A County service area (CSA) or other special district will fund maintenance and recreation programs, assessed through property taxes

Policy 7.5 Construction of Community Parks. The design and construction of community park facilities will be shared by Placer Vineyards property owners and the County. Property owners will initially construct and fund a portion of community park facilities and the County will construct the remaining portions of community parks and regional recreational facilities, as defined by the Development Agreement.

Policy 7.6 Neighborhood Park Design. Neighborhood parks shall be located and designed according to the following specifications.

1. Designated neighborhood parks within the Plan Area shall be developed in the locations indicated in Figure 7.1, "Parks and Open Space Plan Diagram."

2. 108 total acres of neighborhood parks are designated in the Specific Plan.

3. A total of 48 acres of neighborhood parks shall be joint-use parks, shared with and located adjacent to schools. These parks shall be a minimum of 6 acres in size.

4. Neighborhood parks shall be sited and designed to maximize their visibility along streets and thereby enhance the public right-of-way and neighborhood character.

5. Neighborhood parks shall generally have street frontage on all sides, except where they abut open space or public uses. Streets surrounding neighborhood parks should be collector or resident streets, fronted by at

most one collector street (See Figure 7.8). Neighborhood parks should avoid fronting on to arterial and thoroughfare streets.

6. Neighborhood parks should be designed with different character or themes, landscape treatment, and uses, as defined in the Parks and Recreation Master Plan, to encourage variety between residential neighborhoods.

7. Parking for neighborhood parks shall be provided on nearby streets, at adjacent schools, or on-site as required by the needs of the park as determined by the County.

8. Joint-use parks shall be designed to operate independently of adjacent school facilities.

Private Parks:

A total of 22 acres of private parks are located in the active-adult community (property #1A), as indicated in Figure 7.1.

Policy 7.7 Private Parks. Private parks shall qualify for up to 50% toward the community recreation requirement subject to the provisions of Section 16.08.100-I of the Zoning Code and the following requirements:

1. The park and its facilities are in agreement with the requirements of this Specific Plan.

2. The facilities shall be privately owned and maintained by future residents of the development.

3. The facilities are restricted for park and recreational uses by covenants, conditions, and restrictions.

4. Residents are not charged additional fees for use of the park and its facilities.

Policy 7.8 Construction of Neighborhood and Mini Parks. Landowners shall design and install park improvements for neighborhood and/or mini park site(s) planned for the property, according to the funding and timing mechanism identified in the Public Facilities Financing Plan and the following provisions in the Development Agreement.

1. The number, size, and location requirements for neighborhood and mini park sites shall be satisfied. In addition, when more than one park site is proposed for the property, tentative subdivision maps shall identify the

appropriate neighborhoods responsible for the construction of the park sites.

2. Each park site shall be improved at the time of development of the applicable neighborhood assigned to the development of the park site. Park facilities will, therefore, be constructed and improved according to a plan for the site prepared by the landowner and approved by the County.

3. Park facilities will be designed in accordance to the guidelines of the Specific Plan, the Parks and Recreation Master Plan, and the standards for facility improvements provided by the County.

4. Landowners are responsible for all costs associated with the approval of the park improvement plan as defined by the Development Agreement.

5. Upon satisfactory completion of neighborhood or mini park improvements, the County shall accept the dedication of improved neighborhood or mini park sites and assume the ownership and maintenance, provided that the cost of such maintenance is funded by the CSA.

Policy 7.9 Park Design. Park site layouts should be designed consistent with the following standards and guidelines.

1. Parks should be sited to provide a public focus and should be located next to collector streets, residential areas, schools, and open space. Community parks should provide site access from local collector streets.

2. A village green or small public plaza should be integrated into the site design of each Town Center and Village Center.

3. Locating parks adjacent to open space is encouraged. Site design of residential neighborhoods should avoid large areas with lots backing onto parks.

4. Parks should be shaped and sized to accommodate park uses and should not be odd or leftover spaces.

5. Parks should be designed to engage the natural vegetation, wetlands, and topography of the site.

6. Parks should be linked by a system of greenways and parkways with paths separated from vehicular traffic.

7. Parks should be centrally located in neighborhoods.

8. Parks should be located adjacent to streets for public access and visibility.

9. Streets that cut through or bisect parks should be avoided.

10. Parking for neighborhood parks should be provided on street or shared with school lots. Parking for community parks should be adequately sized to avoid spillover parking into adjacent residential communities.

11. Refer also to Policy 6.18 for lighting of athletic fields.

Goal 7.2 Create an interconnected system of open space that encompasses the preservation and enhancement of natural habitat areas for the use, appreciation, and enjoyment of the community.

Goal 7.3 Locate open space accessible to residents and link these lands to community activity areas and recreation areas.

Goal 7.4 Use landscape buffers to protect the natural environment from the built environment, to separate incompatible land uses, and to provide transitions from higher intensity urban development to more rural developments around the Placer Vineyards Plan Area.

Policy 7.10 Types of Open Space Land. The following types of open space will be considered passive parks and count toward meeting the passive park requirement of 5 acres per 1,000 residents:

- Floodways
- Site protected wildlife corridors
- Greenways with potential for trail development
- Open water (ponds, lakes, and reservoirs)
- Protected woodland areas
- Protected sensitive habitat area, provided that interpretive displays are provided (i.e., wetlands and habitat for rare, threatened, or endangered species)

Policy 7.11 Dedication of Open Space Land. Where open space is determined to qualify as passive park, such land shall be dedicated to Placer County and maintained by a CSA or similar mechanism. Trails and open space may also be dedicated or restricted with public-access easements as each adjacent parcel develops, provided that there is a funding mechanism to address maintenance and liability.

Policy 7.12 Maintenance of Open Space Land. Maintenance of open space corridors that qualify as passive park land will be provided by the County and funded by a community-wide assessment fee or similar mechanism. A community-wide fee will be charged as determined by the Public Facilities Financing Plan. This does not include drainage fees that may be assessed for acquisition and improvement of

detention facilities and the cost to revegetate or hydro-seed drainageways. Certain trails, such as the Dry Creek Trail, that provide a communitywide or regional benefit may also be constructed from this community-wide fee.

Policy 7.13 Facilities in Open Space Corridors. Specific design features and functions of open space corridors shall be defined by the Landscape Master Plan and will be finalized when detailed plans (i.e., tentative maps) are prepared and submitted to the County.

Policy 7.14 Facilities in Open Space Areas. Recreation facilities in open space and buffer areas may accommodate passive uses such as walking, jogging, bird watching, picnics, interpretative signage and teaching areas, rest stops, and overlooks. These improvements will be located and described by the Landscape Master Plan and installed by the owners of the adjacent parcels when those parcels are developed.

Policy 7.15 Design of Open Space and Buffer Areas. Open space and buffer areas should be designed consistent with the following guidelines:

1. Trails and park amenities should be carefully sited to avoid disturbance of sensitive natural resources on-site. Sensitive preserve areas, wetland areas, or stands of oak trees may be protected using fences to discourage access and help establish plantings.

2. Within open space areas, grading, realignment, and excavation will be required for flood protection, stormwater drainage, or retention ponds.

3. Fences, 4 feet in height and open in character, shall be used to protect sensitive habitat and other preservation areas or to restrict vehicular access at streets.

4. Within open space areas, landscaping will be low-water-use grasses, ground covers, California native trees, and the plants recommended for use in open space areas in Appendix B, "Recommended Plant List."

5. Within buffer areas landscaping will consist of plants, including evergreen and deciduous trees, shrubs, and ground cover.

6. See Figure 7.1 for the locations of open space buffers and Figure 7.11 for their respective cross sections.

Policy 7.16 Buffer Areas Adjacent to the Special Planning Area. Open space buffers shall be provided along the entire edge of the Special Planning Area. Except adjacent to the railroad right-of-way, which will serve as an open space buffer, open space buffers shall be provided as indicated in Figure 7.10.

Policy 7.17 Buffers along the County Line. A 200-foot buffer shall be designed along the Sacramento County line from Tanwood Road to Palladay Road. A 50-foot-wide buffer is provided along the Sacramento County border, adjacent to Gibson Ranch Park (see Figures 7.11 and 7.12).

Policy 7.18 Oak Grove Open Space Areas. Concentrations of significant oak trees on the site shall be preserved in two large oak grove open space areas-,one located at the northwest corner of Dyer Lane and 12th Street and the other on the east side of the Plan Area along the Dry Creek Corridor (see Figure 7.1). These open spaces shall preserve the existing stands of oak trees and serve as passive open space areas that provide a visual and educational resource to the community.

Policy 7.19 Open Space Character. Open space areas should complement the character of the existing site (which is predominantly Valley oak or savanna). These areas can integrate wildlife habitat enhancement and restoration while providing local residents with opportunities for passive recreation, ecological observation and education, and gardening. A brief description of what the open space design concept can be is provided below and a recommended plant palette is provided in Appendix B.

Goal 8.8 Locate neighborhood facilities (neighborhood parks and elementary schools) generally central to each neighborhood so that such facilities are within one-half mile or less of a majority of neighborhood residents.

REGULATORY SETTING

Regional, State and federal regulations and plans pertaining to recreation are described below. There are no federal regulations pertaining to locally-directed parks and recreation activities that would reduce environmental impacts associated with the proposed project.

STATE

Quimby Act

Passed in 1975, the Quimby Act (California Government Code Section 66477) authorizes local agencies to establish an ordinance requiring new development to pay an in-lieu fee or dedicate land for park and recreation facilities to serve the subdivision.

Article XIIID of the California Constitution

Added by the voters in 1997, Proposition 218 contains both substantive limitations and procedural requirements regulating the imposition of assessments. Certain sections of the Government and Elections Codes were amended by SB 919 and approved by the Governor on July 1, 1997. These amendments changed the manner in which property related fees may be levied and increased. Article XIIID generally requires that assessment fees and charges be

submitted to property owners for approval or rejection after the provision of written notice and the holding of a hearing.

LOCAL

Policies of the *Placer County General Plan* and the *Dry Creek/West Placer Community Plan* relating to parks and recreation are listed below.

Placer County General Plan

Goal 5.A: To develop and maintain a system of conveniently located, properly designed parks and recreational facilities to serve the needs of present and future residents, employees, and visitors.

Policies:

5.A.1. The County shall strive to achieve and maintain a standard of five acres of improved parkland and five acres of passive recreation area or open space per 1,000 population.

5.A.2. The County shall strive to achieve the following park facility standards:

a. One tot lot per 2,000 residents
b. One playground per 3,000 residents
c. One tennis court per 6,000 residents
d. One basketball court per 6,000 residents
e. One hardball diamond per 3,000 residents
f. One softball/little league diamond per 3,000 residents
g. One mile of recreation trail per 1,000 residents
h. One youth soccer field per 2,000 residents
i. One adult field per 2,000 residents
j. One golf course per 50,000 residents
k. One swimming pool per 35,314 residents

5.A.3. The County shall require new development to provide a minimum of five acres of improved parkland and five acres of passive recreation area or open space for every 1,000 new residents of the area covered by the development.

The park classification system shown in Table 5-1 (Table 4.11-22 in this Revised Draft EIR) should be used as a guide to the type of the facilities to be developed in achieving these standards.

Table 4.II-22 Park Classification System		
Park Type	**Use Description**	**Desirable Site Characteristics**
Mini-Park (2 acres or less)	Specialized facilities that serve a concentrated or limited population or specific group, such as children or senior citizens.	Within neighborhoods and close to high-density housing or housing for the elderly.
Neighborhood Park (2 to 15 acres)	Area for intense recreational activities, such as field games, court games, playground apparatus, skating, picnicking.	Easily-accessible to neighborhood population (geographically centered with safe walking and bike access).
Community Park (15or more acres)	Area of diverse environmental quality. May include areas suited for intense recreational activities. May be an area of natural quality for outdoor recreation, such as walking, viewing, and picnicking. May be any combination of the above, depending on site suitability and community need.	May include natural features, such as water bodies. Easily-accessible to neighborhood served.
Linear Park	Area developed for one or more modes of travel, such as hiking, biking, horseback riding or cross-country skiing.	Built or natural corridors, such as utility rights-of-way, that link other elements of the recreation system or community facilities, such as school, libraries, commercial areas, and other park areas.
Special Use	Areas for specialized or single-purpose recreational activities such as golf courses, nature centers, marinas, arenas, outdoor theaters, downhill ski areas, or areas that preserve, maintain, and interpret buildings, sites, and objects of archaeological significance. Also boulevards and parkways.	
Conservancy Areas	Protection and management of the natural/cultural environment with recreation use as a secondary objective.	Variable, depending on the resource being protected.
Source: *Placer County General Plan*, August 1994.		

5.A.4. The County shall consider the use of the following open space areas as passive parks to be applied to the requirement for five acres of passive park area for every 1,000 residents.

a. Floodways
b. Protected riparian corridors and stream environment zones
c. Protected wildlife corridors
d. Greenways with the potential for trail development
e. Open water (e.g., ponds, lakes, and reservoirs)
f. Protected woodland areas.
g. Protected sensitive habitat areas providing that interpretive displays are provided (e.g., wetlands and habitat for rare, threatened or endangered species.)

Buffer areas are not considered as passive park areas if such areas are delineated by setbacks within private property. Where such areas are delineated by public easements or are held as

common areas with homeowner/property owner access or public access, they will be considered as passive park areas provided that there are opportunities for passive recreational use.

5.A.5. The County shall require the dedication of land and/or payment of fees in accordance with State law (Quimby Act) to ensure funding for the acquisition and development of public recreation facilities. The fees are to be set and adjusted as necessary to provide for a level of funding that meets the actual cost to provide for all of the public parkland and park development needs generated by new development.

5.A.6. The County shall coordinate funding and programs administered by the County and other agencies, where appropriate, to obtain optimum recreation facilities development.

5.A.7. The County shall consider the creation of assessment districts, county service areas, community facilities districts, or other types of districts to generate funds for the acquisition and development, maintenance and administration of parkland and/or historical properties as development occurs in the county.

5.A.8. The County shall strive to maintain a well-balanced distribution of local parks, considering the character and intensity of present and planned development and future recreation needs.

5.A.9. The County shall give priority to early acquisition of park sites in newly developing areas through many means including the use of public financing or land dedication.

5.A.10. The County shall ensure that park design is appropriate to the recreational needs and, where feasible, access capabilities of all residents, employees, and visitors of Placer County.

5.A.11. Regional and local recreation facilities should reflect the character of the area and the existing and anticipated demand for such facilities.

5.A.12. The County shall encourage recreational development that complements the natural features of the area, including the topography, waterways, vegetation, and soil characteristics.

5.A.13. The County shall ensure that recreational activity is distributed and managed according to an area's carrying capacity, with special emphasis on controlling adverse environmental impacts, conflict between uses, and trespass. At the same time, the regional importance of each area's recreation resources shall be recognized.

5.A.14. The County shall encourage federal, state, and local agencies currently providing recreation facilities to maintain, at a minimum, and improve, if possible, their current levels of service.

5.A.15. The County shall promote the provision of non-membership-restricted hunting areas on public and private land in the western part of the county.

5.A.16. The County should not become involved in the operation of organized, activity oriented recreation programs, especially where a local park or recreation district has been established.

5.A.17. The County should be directly involved in the development and operation of community and neighborhood park facilities. These include outdoor recreation facilities to support traditional pursuits such as baseball, soccer, basketball, hiking, walking, riding and picnicking. Where appropriate, the County should consider cooperative agreements with a local park or recreation district to operate County facilities where this would enhance the efficient delivery of parks and recreation services to county residents.

5.A.18. The County shall encourage local special purpose agencies in areas not served by a recreation district which are not currently supplying recreation services to examine the feasibility of supplying such services.

5.A.19. The County shall encourage the development of parks near public facilities such as schools, community halls, libraries, museums, prehistoric or historic sites, and open space areas and shall encourage joint-use agreements whenever possible.

5.A.20. The County shall promote cooperation between agencies to ensure flexibility in the development of park areas and recreational services to respond to changing trends in recreation activities.

5.A.21. The County shall encourage the development of public and private campgrounds and recreational vehicle parks where environmentally appropriate. The intensity of such development should not exceed the environmental carrying capacity of the site and its surroundings.

5.A.22. The County shall encourage compatible recreational use of riparian areas along streams and creeks where public access can be balanced with environmental values and private property rights.

5.A.23. The County shall require that park and recreation facilities required in conjunction with new development be developed in a timely manner so that such facilities are available concurrently with new development.

5.A.24. The County shall encourage public and private park and recreation agencies to acknowledge the natural resource values present at park sites during the design of a new facility.

5.A.25. The County shall encourage the establishment of activity oriented recreation programs for all urban and suburban areas of the County. Such programs shall be provided by jurisdictions other than Placer County including special districts, recreation districts or public utility districts.

Dry Creek/West Placer Community Plan

The following are the applicable goals and policies of the *Dry Creek/West Placer Community Plan*:

On August 16, 1994, the Community Plan was amended as part of the countywide General Plan Update to include the West Placer Specific Plan area. The amendment, referred to as "Exhibit 1," includes standards for the development of the Specific Plan area. Standards related to parks and recreation include:

1. Open space: Open space shall be provided for drainage ways, floodplains, recreation areas, parks, undeveloped buffers, trail corridors, and natural areas.

6. Urban design: Development within the West Placer Specific Plan area shall be planned and designed to comply with the following standards:

    e. Community open space areas – Each village area should contain a village green to be located adjacent to, or integrated into, the village core area. Community parks should be located adjacent to major open space and roadway corridors (see items i. and j. below). Community parks may serve as buffer areas between conflicting land uses (see the standards for Land Use Buffer Zones in the Placer County General Plan in Part I, page 19), within or adjacent to the Specific Plan area. All developed and undeveloped park areas should be linked by a system of greenways and parkways containing pedestrian and bicycle paths separated from vehicular traffic.

    i. Open space corridors. Existing and proposed linear open space corridors should be developed as a pedestrian, equestrian, and/or bicycle trail system. Existing corridors include, but area not limited to, stream and riparian areas (e.g., the Dry Creek corridor), power line easements, abandoned rail rights-of-way, existing public trails, and existing public roads and bridges that may be ultimately abandoned. The Dry Creek corridor shall be designed to provide bicycle/equestrian/pedestrian connections to similar facilities in Sacramento County near Gibson Ranch Park.

    j. Roadway corridors. Collector and arterial roads shall be designed as landscaped corridors, including separated bicycle and pedestrian facilities within landscaped or native open space corridors and landscaped berms and medians.

SURFACE WATER SUPPLY

Federal

- **Lower American River "Recreational River" Designation - National Wild and Scenic Rivers Act.** The National Wild and Scenic Rivers System was established in 1968 with the enactment of Public Law 90-542 (16 USC 1271 et seq.). Under this system, rivers possessing

"outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values" can be protected as wild, scenic, or recreational. The lower American River from Nimbus Dam to its confluence with the Sacramento River was added to the National Wild and Scenic Rivers System based on the State's petition in 1981 and is designated a "recreational river." Recreational rivers are ones "that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past" (16 USC 1273[6][3]).

As a result of its designation under the Act, federally assisted projects affecting the lower American River are subject to the Secretary of the Interior's determination that the project "will not invade the area or unreasonably diminish" the river's recreational value (16 USC 1278[a]; see also *Swanson Mining Corporation v. FERC*, 790 F.2d 96 [D.C. Cir. 1986]; the American River Parkway Plan). When seeking authorization or appropriations for a project which affects the protected values of the lower American River, the relevant federal agency must notify the Secretary of the Interior of its intent, and report to Congress on the project's conformity with the Act and its effect on the protected values of the river (16 USC 1278[a]).

State

- **Lower American River "Recreational River" Designation - State Wild and Scenic Rivers Act.** The State Wild and Scenic Rivers Act was passed by the California Legislature in 1972 (Public Resources Code Section 5093.50 et seq.). The Legislature declared that it was the State's intent that "certain rivers which possess extraordinary scenic, recreation, fishery, or wildlife values shall be preserved in their free-flowing state, together with their immediate environments, for the benefit and enjoyment of the people of the state." The Act restricts the construction of dams, reservoirs, diversions, and other water impoundments. A diversion facility may be authorized if the Secretary of the Resources Agency determines that (a) it is needed to supply domestic water to the residents of the county through which the designated river flows, and (b) it will not adversely affect the natural character of the river (PRC Section 5093.55[a]; DWR, 1994). The lower American River was included in the State Wild and Scenic River System and was given the classification of "recreational river" (PRC Sections 5093.54[e], 5093.545 [h]). The State defines a recreational river as a river "readily accessible by road or railroad, that may have some development along [its] shorelines, and that may have undergone some impoundment or diversion in the past" (PRC Section 5093.53[c]).

Regional

The local plan that identifies recreation policies for the lower American River is the County of Sacramento's *American River Parkway Plan*. Also, designation of the Lower American River as a recreational river under the federal and State Wild and Scenic Rivers Acts establishes certain policy considerations. Policies related to recreation resources are summarized below.

- **American River Parkway Plan.** The *American River Parkway Plan* was adopted by the County of Sacramento in 1985 (Sacramento County, 1985). The plan is an element of the *Sacramento County General Plan.* It establishes goals and policies for the Parkway, presents

a description of Parkway resources, and provides Area Plans to guide resource protection and development.

Chapter Four of the *American River Parkway Plan* explains that Decision 1400 flows (e.g., 1,500 cfs for recreation) are inadequate and that the decision has no legal effect without the completion of the then-proposed Auburn Dam. The Plan recognizes that research is ongoing to establish adequate flows for the lower American River, including recreation flows. When required flows are determined, the Plan states that "those flows will be incorporated into the policies of this Plan."

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities.
- Result in the need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or park standards.
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Include recreational facilities or require the construction or expansion of recreation facilities which might have an adverse physical effect on the environment.
- Be inconsistent with the adopted *Dry Creek/West Placer Community Plan* Exhibit 1 or the *Placer County General Plan* policies and standards.

STANDARDS OF SIGNIFICANCE FOR THE PROVISION OF PARKS

The *Placer County Recreation and Park Development Project Final Report* (Citygate Associates, LLC, 2005) describes proposed County guidelines and standards for active and passive parkland as well as for various types of recreational facilities. These guidelines are shown in Table 4.11-23 below.

Table 4.II-23
Recreation Level of Service Standards

Recreational Facility	Level of Service Standard
Tot Lot	1 per 2,000 people
Playground	1 per 3,000 people
Tennis Court	1 per 6,000 people

Table 4.11-23 Recreation Level of Service Standards	
Recreational Facility	**Level of Service Standard**
Basketball Court	1 per 6,000 people
Hardball Diamond	1 per 3,000 people
Softball/Little League Diamond	1 per 3,000 people
1 Mile Recreation Trail	1 per 1,000 people
Youth Soccer Field	1 per 2,000 people
Adult Soccer Field	1 per 2,000 people
Golf Course	1 per 50,000 people
5 Acres Active Park	1 per 1,000 people
5 Acres Passive Park	1 per 1,000 people
Swimming Pool	1 per 40,000 people
Source: *Placer County Recreation and Park Development Project Final Report*, Citygate Associates, LLC, 2005	

STANDARDS OF SIGNIFICANCE FOR SURFACE WATER SUPPLY RELATED RECREATION

The significance criteria used for recreational use of Folsom, Shasta, and Trinity reservoirs, the lower American River, and the upper and lower Sacramento River and Delta are based on the *Water Forum Proposal Final EIR* (CCOMWP 1999). The *Water Forum Proposal Final EIR* presents an extensive review of sources that suggest minimum, maximum, and optimum flows for common recreational activities at each of the water bodies in the regional study area. These discussions and evaluations are incorporated herein by reference. The results of these evaluations and the thresholds of significance that were developed from them in the *Water Forum Proposal Final EIR* are used in this Revised Draft EIR to evaluate regional recreational impacts. Significance criteria for each of the potentially affected water bodies are presented in Table 4.11-24 along with other recreational criteria.

Table 4.11-24 Recreation Impact Indicators and Significance Criteria	
Impact Indicators	**Significance Criteria**
Accessibility of recreational trails.	Permanent closure of recreation trails through the project site.
Recreational safety hazards.	A substantial increase in exposure to hazards for recreationists, for either land-or water-based activities.
American River public access and river conditions that contribute to water-based recreational activities.	A substantial change in river access or channel conditions that contribute to water-based recreational activities, relative to the existing condition, with sufficient frequency to adversely affect recreation.
Consistency with applicable regulations and planning documents, guiding recreation in the study area.	A conflict or inconsistency with relevant policies, plan goals, or objectives relative to the basis of comparison such that recreation would be adversely affected.
River flows that determine whitewater rafting and other boating opportunities.	A substantial decrease in the duration of Middle Fork flows below the 850 cfs threshold for whitewater boating, relative to the existing condition, sufficient to adversely affect recreation.

Table 4.11-24 Recreation Impact Indicators and Significance Criteria	
Impact Indicators	**Significance Criteria**
	A substantial change in lower American River flows above or below the 1,750 to 6,000 cfs minimum to maximum range of recreational flow, relative to the existing condition, with sufficient frequency to adversely affect recreation (CCOMWP 1999).
	A substantial change in lower American River flows above or below the 3,000 to 6,000 cfs optimum range of recreational flows, relative to the existing condition, with sufficient frequency to adversely affect recreation (CCOMWP 1999).
	A substantial decrease in upper or lower Sacramento River flows below 5,000 cfs or a substantial decrease in flows, relative to the existing condition with sufficient frequency to adversely affect recreation (CCOMWP 1999).
	A substantial decrease in the contribution of lower Sacramento River flows to the Delta, relative to the existing condition, with sufficient frequency to adversely affect recreation.
Folsom Reservoir water surface elevations that determine boat ramp availability.	A change in Folsom Reservoir elevation that would result in a substantial decrease in availability or optimum use of boat ramps, wet slips, or swimming beaches, relative to the existing condition, with sufficient frequency to adversely affect recreation (CCOMWP 1999): • When all boat ramps are useable (420 feet msl or higher) • When the marina wet slips are useable (412 feet msl or higher) • When the swimming beaches are useable (420 to 455 feet msl).
	When at least one of the low-water ramps is useable on both the east and west sides of the lake (375 feet msl or higher).
	When the lake level is within its optimum range for high quality recreation activities (435 to 455 feet msl).
Shasta and Trinity reservoir water surface elevations that determine boat ramp availability.	A change in Shasta Reservoir elevation that would result in a substantial increase in boat ramp closures, relative to the existing condition, with sufficient frequency to adversely affect recreation (CCOMWP 1999): • When all boat ramps are useable (1,020 feet msl or higher) • When at least one boat ramp is useable on each arm of the lake (941 feet msl or higher) • When recreational use of shoreline areas begins to decline (1,007 feet msl).

Table 4.11-24 Recreation Impact Indicators and Significance Criteria	
Impact Indicators	**Significance Criteria**
	A change in Trinity Reservoir elevation that would result in a substantial increase in boat ramp closures relative to the existing condition, with sufficient frequency to adversely affect recreation (UWFWS et al. 1999): • When only one major boat ramp is useable (2,170 feet msl to <2,295 feet msl).
Feather River flows below Oroville Dam for all months of the year.	A substantial change in Feather River flows, relative to the existing condition, with sufficient magnitude and frequency to adversely affect recreation in the Feather River.
Oroville Reservoir water surface elevation	A substantial change in Oroville Reservoir elevation, relative to the existing condition, with sufficient magnitude and frequency to adversely affect recreation in Oroville Reservoir.
Source: Water Forum EIR (CCOMWP 1999); Trinity River Mainstream Fishery Restoration Draft EIS/EIR (USFWS et.al. 1999)	

4.11.13-1 Development of the Specific Plan area could result in an inadequate amount of developed passive and active parkland and related facilities.

Based on a buildout population of 34,762, there will be a need for a minimum of 174 acres of improved parkland and 174 acres of passive parkland in the Specific Plan area to meet the parkland dedication and improvement requirements set forth in Table 4.11-25. The developers are proposing to incorporate 217 acres of parks and 714 acres of open space dedicated for active and passive recreation.

Table 4.11-25
Required Park Dedication

Geographic Area	Population	Tot Lot	Playground	Tennis Court	Basketball Court	Hardball Diamond	Softball/Little League Diamond	1 Mile Recreation Trail	Youth Soccer Field	Adult Soccer Field	Golf Course	5 acres Improved Park	5 acres Passive Park	Swimming Pool
Factors		1/2,000 people	1/3,000 people	1/6,000 people	1/6,000 people	1/3,000 people	1/3,000 people	1/1,000 people	1/2,000 people	1/2,000 people	1/50,000 people	1/1,000 people	1/1,000 people	1/40,000 people
Specific Plan Area – Buildout	34,762	17.4	11.6	5.8	5.8	11.6	11.6	34.8	17.4	17.4	0.70	34.8	34.8	0.9

1. Population projections provided by the *Placer Vineyards Specific Plan* Administrative Draft, January 2006
2. Level of service standards provided by Placer County Executive Office

Provision of an inadequate amount of dedicated passive and active parkland and related facilities is a ***potentially significant impact.***

Mitigation Measure

The following mitigation measure would reduce potential impacts of inadequate parkland dedication to a *less than significant level:*

4.11.13-1 *Project developers in the Specific Plan area shall comply with the requirements of the General Plan by dedication and improvement of a minimum of 174 acres of active parkland and 174 acres of passive parkland. Project developers shall be responsible for dedicating and fully developing parks and or portions thereof, concurrent with demand in accordance with County levels of service. The County may require oversizing of neighborhood and larger type recreation parks, trails and facilities on a subdivision basis when it is deemed necessary and practical to serve the needs of future residents. In such cases, the County will enter into reimbursement agreements whereby future developments will pay initial developers for oversizing.*

Concurrent with the construction of the community parks, project developers shall construct a park maintenance building and yard and provide maintenance equipment. The design and building materials, location and quantity of equipment shall be subject to the approval of the Department of Facility Services.

All plans and specifications shall be approved by the Department of Facility Services and/or the managing agency prior to the recordation of each final small lot subdivision map. A procedure or agreement to govern the acquisition of parklands and completed park improvements acceptable to the County and/or managing agency, and in compliance with applicable General Plan standards and policies, shall be in place prior to recordation of the first final small lot subdivision map.

The specific park plans shall be submitted to the County for approval prior to the final decision as to the number and location of facilities.

4.11.13-2 Additional population in the Specific Plan area may result in increased reliance upon park facilities and services in neighboring jurisdictions.

At full buildout, the Specific Plan area will have 14,132 residences and an estimated population of 34,762 living in the Specific Plan area. Based on this population, the County requires a minimum 174 acres of improved parkland and 174 acres of passive parkland.

The proposed Specific Plan includes 217 acres of active parkland and 714 acres of open space dedicated for active and passive recreation, which meets the County's standard. Although it cannot be guaranteed that County residents will not utilize facilities in Roseville and Sacramento County (or vice versa), the project is proposing to contribute its fair share toward park and recreational demand. In addition, sharing of facilities is viewed as desirable in some respects, and is the reason trail networks in Sacramento County, Placer County and Roseville are to be connected. This is a ***less than significant impact.***

Mitigation Measure

No mitigation measures are required.

4.11.13-3 Parks within the Specific Plan area have the potential to be poorly maintained if an adequate funding source is not identified.

Existing park fees pay for park dedication and infrastructure only. Maintenance dollars will need to be provided to pay for maintenance costs. The Specific Plan proponents are proposing that a County Service Area or other special district be formed to fund and maintain passive and active parks in the area.

As noted under Regulatory Setting, Article XIIID of the California Constitution was added by the voters in 1997 (Proposition 218). Article XIIID generally requires that assessment fees and charges be submitted to property owners for approval or rejection after the provision of written notice and the holding of a hearing.

Lack of adequate funding for park maintenance is a ***potentially significant impact.***

Mitigation Measure

The following mitigation measure would reduce the impact of inadequate funding for park maintenance to a *less than significant level:*

4.11.13-3 *Project developers shall cause a new County Service Area (CSA) or Community Facilities District (CFD) to be formed, or expand CSA #28 for sustainable park maintenance and recreation programs for the Specific Plan area prior to recordation of the first final small-lot subdivision map. A procedure or agreement to govern park maintenance and local recreation programs shall also be finalized prior to recordation of the first final small-lot subdivision map within the Specific Plan area. This entity would thus have the ability to participate in design, inspection and acceptance of facilities, and determination of appropriate funding levels necessary to maintain these facilities and operate recreational programs. A park maintenance special tax or special assessment with a provision for increases indexed to the CPI shall be approved by the landowners (voters) of the Specific Plan area, to be developed prior to recordation of the first final subdivision map in the Specific Plan area. An indexing formula for maintenance and operation of recreational facilities and programs shall be in place prior to recordation of the first final subdivision map.*

4.11.13-4 Development of the Specific Plan area will create a demand for community recreation facilities.

Based on a Specific Plan buildout population of 34,762, there will be a demand for community recreation facilities, including one community swimming pool, one gymnasium, a community center/recreation services facility, maintenance facilities, and administrative offices. These facilities should be located in each phase of the Specific Plan area to serve the residents as

demand is created. Lack of community recreation facilities to serve the Specific Plan area population could have an impact on similar facilities in Roseville and Sacramento County, and would be a ***significant impact.***

Mitigation Measure

Implementation of the following mitigation measure would reduce impacts related to community recreation facilities to a *less than significant level:*

4.11.13-4 *As a condition of Specific Plan approval, proponents shall submit a phased schedule for providing community recreation facilities for approval by the County Parks Division. This phasing plan shall comply with County levels of service for parks and recreational facilities. Funding for construction, operation and maintenance of these improvements shall be provided in accordance with Mitigation Measures 4.11.13-1 and 4.11.13-3.*

OFF-SITE INFRASTRUCTURE

The installation of off-site utility lines, wastewater treatment plant expansion, and roadway widening will have no impact on present or future park and recreational facilities or demand for services; however, as previously described, an initial surface water supply is proposed to serve the Specific Plan area. This water would be diverted from the American River system. The American River has an annual runoff of approximately 2.6 million AF and is a major tributary to the Sacramento River (PCWA 1998). The Sacramento River has an annual runoff of approximately 18 million AF (PCWA 2001). The following analysis discusses potential effects of the diversion of the proposed Specific Plan initial surface water supply.

4.11.13-5 Development of the Specific Plan could impact public recreation trail access.

Under the proposed Specific Plan initial water supply, there would be no effect on public recreation trails beyond that which currently occurs. As the Specific Plan initial water supply does not purport to alter or change public recreation trail access from existing conditions, there would be a ***less than significant impact*** to trails throughout the riverine (i.e., lower American River) area.

Mitigation Measure

No mitigation measures are required.

4.11.13-6 Development of the Specific Plan could impact public safety.

The proposed Specific Plan initial water supply would not increase hazards to land or water-based recreational activities beyond those currently experienced. As the Specific Plan initial water supply does not purport to structurally alter recreational facilities or access points, the potential hazards to recreationists would not change from existing conditions. This is therefore considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.11.13-7 Development of the Specific Plan could impact lower American River recreation.

Water-dependent and water-enhanced recreation use on the lower American River is higher in May through September than in other months because of the warm, sunny weather. Therefore, the focus of this evaluation was on the effect of changes on lower American River hydrology during May through September.

When compared to the existing condition, the proposed Specific Plan initial water supply would result in, at times, less frequent occurrences (i.e., one month) of lower American River flows within the optimal and maximum and minimum ranges for recreation, relative to the existing condition (Template Output B-44). However, neither the frequency nor the magnitude of these changes is sufficient to adversely impact recreation.

Table 4.11-26 presents a summary of the number of years over the 70-year simulation period in which the monthly mean flows below Nimbus Dam would remain within the optimal range for river recreation (3,000 to 6,000 cfs) and within the minimum to maximum range for adequate river recreation flow (1,750 to 6,000 cfs) under both the existing condition and the proposed Specific Plan initial water supply. The data show that over the course of the 70-year simulation, implementation of the proposed Specific Plan initial water supply would result in monthly mean flows within the optimal flow range for recreation that would be unchanged, relative to the existing condition (Template Output B-44). For the entire May through September recreation season, there is no change in the total number of months in which the flows would be outside the optimal range, when compared to existing conditions. In addition, the data show that over the course of the 70-year simulation, implementation of the proposed Specific Plan initial water supply would result in one less year (i.e., during August) in which flows in the lower American River at Nimbus Dam would not be within the minimum to maximum flow range suitable for recreation. However, this reduction would not be of sufficient frequency to constitute a significant impact to lower American River recreation opportunities.

Table 4.11-26
Flow Ranges Suitable for Recreation in the Lower American River at Nimbus Dam Under Existing and Project Conditions

	# Years in Specified Flow Range[1]					
	1,750-6,000 cfs (minimum to maximum)			3,000-6,000 cfs (optimal)		
Month	Existing	Project	Difference	Existing	Project	Difference
May	51	51	0	35	35	0
June	52	52	0	39	39	0
July	58	58	0	43	43	0
August	49	48	-1	26	26	0
September	45	45	0	22	22	0
Total	255	254	-1	165	165	0

Table 4.11-26 Flow Ranges Suitable for Recreation in the Lower American River at Nimbus Dam Under Existing and Project Conditions						
	# Years in Specified Flow Range[1]					
	1,750-6,000 cfs (minimum to maximum)			3,000-6,000 cfs (optimal)		
Month	Existing	Project	Difference	Existing	Project	Difference

[1] Based on 70 years modeled.
Source: SWRI, 2002

Based on the above assessment, the proposed Specific Plan initial water supply would have a ***less than significant impact*** on water-dependent and water-enhanced recreation use on the lower American River.

Mitigation Measure

No mitigation measures are required.

4.11.13-8 Development of the Specific Plan could impact boating at Folsom Reservoir.

The primary boating season at Folsom Reservoir encompasses the months March through September, with peak use occurring in May, June, July, and August. Therefore, the focus of this assessment is the effect of changes in reservoir water surface elevation associated with the proposed Specific Plan initial water supply during the boating season. As boating opportunities are heavily influenced by boaters' access to the launching ramps and marina, the relationship of expected lake levels to the usability of these facilities is evaluated.

When compared to the existing condition, the proposed Specific Plan initial water supply would result in slightly less occurrences (i.e., three months) when the reservoir surface elevation would be above the minimum required for boaters' access to launching ramps and marinas, relative to the existing condition (Template Output B-47). However, this effect is not sufficient in either frequency or magnitude to adversely impact boating opportunities at Folsom Reservoir.

Table 4.11-27 compares the reservoir elevation and usability of boat launching facilities under the existing and proposed Specific Plan initial water supply conditions. For the months of March - September, Folsom Reservoir levels would fall below the 420-foot elevation necessary to keep all boat ramps operable in a total of 3 months (out of 490) under the proposed Specific Plan initial water supply condition, relative to the existing condition. Table 4.11-25 also shows that at least two low-water boat ramps would remain available on each side of Folsom Reservoir in two additional months under the proposed Specific Plan initial water supply condition, relative to the existing condition. Finally, the proposed Specific Plan initial water supply would not reduce the usability of the Folsom Reservoir Marina wet slips (which require a minimum 412-foot elevation) in the primary boating season when compared to the existing condition.

The negligible decrease in boating opportunities under the proposed Specific Plan initial water supply when compared to the existing condition is not expected to affect boating use at the reservoir. Consequently, the overall effect of the proposed initial water supply on Folsom Reservoir boating opportunities would be ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.11.13-9 Development of the Specific Plan could impact swimming at Folsom Reservoir.

The most popular swimming months at Folsom Reservoir are May through September, when the weather is typically sunny and hot. Designated swimming beaches at Beal's Point and Granite Bay are generally usable between the elevations of 420 and 455 feet msl. Below 420 feet msl, the water declines below sandy areas and/or is too distant from parking and concessions; visitation decreases substantially when low-water conditions occur. Even with reservoir levels in the vicinity of 430 feet msl, the water is relatively far from parking and concessions, and some special low-water facilities are necessary to adequately accommodate swimmers. Above 455 feet msl, the high water limits the width of the available beach area, reducing the capacity of the beaches. As a result, to evaluate the effects on swimming opportunities of the proposed Specific Plan initial water supply, the number of months when water levels are in the usable range during the peak swimming period were examined and compared to the existing condition.

As indicated in Table 4.11-27, the proposed Specific Plan initial water supply would slightly affect the availability of swimming beaches during the months of May through September. Overall, however, the number of years with water levels within the usable beach range during the months of May through September would decrease by 3 out of 350 months, relative to the existing condition. The number of years with water levels within the optimum range (435 to 455 feet msl) would remain unchanged, relative to the existing condition.

Over the recreation season, the effect of the proposed Specific Plan initial water supply is negligible when compared to the existing condition. Therefore, the overall impact on Folsom Reservoir swimming opportunities would be ***less than significant.***

Mitigation Measure

No mitigation measures are required.

Table 4.II-27
Recreation Facility Usability on Folsom Reservoir Under Existing and Project Condition
Number of Years of the 70-Year Record at Specified Levels

Month	Number of Years All Boat Ramps Usable (>=420 ft)			Number of Years at Least One East/West Ramp Usable (>=375 ft)			Number of Years Marina Wet Slips Usable (>=412 ft)			Number of Years Swim Beaches Usable (420-455 ft)			Number of Years Optimum Recreation (435-455 ft)		
	Existing	Project	Diff	Existing	Project	Diff	Existing	Project	Diff	Existing	Project	Diff	Existing	Project	Diff
March	45	45	0	69	69	0	52	53	1	–	–	–	–	–	–
April	54	54	0	69	69	0	59	59	0	–	–	–	–	–	–
May	56	56	0	69	69	0	61	62	1	20	20	0	12	12	0
June	53	51	-2	69	69	0	60	60	0	24	22	-2	15	15	0
July	43	43	0	69	69	0	50	50	0	26	26	0	15	15	0
August	40	40	0	64	64	0	43	43	0	40	40	0	30	30	0
September	39	38	-1	66	68	2	43	43	0	39	38	-1	1	1	0
Total			-3			2			2			-3			0

Source: SWRI, 2002.

4.11.13-10 Development of the Specific Plan could impact recreation at Shasta Reservoir.

The primary season for water-dependent and water-enhanced recreation activities at Shasta Reservoir is May through September. Therefore, the potential to affect reservoir levels during these months was assessed to evaluate impacts on boating-related activities, shoreline recreation, and boat-in camping. Boating opportunity is heavily influenced by access to launching ramps, thus the relationship of reservoir levels to the operability of ramps was evaluated similar to the elevation for Folsom Reservoir. The drawdown distance of water from the vegetated shoreline was also considered as an important factor in sustaining shoreline recreation use and boat-in camping.

When compared to the existing condition, the proposed Specific Plan initial water supply would result in no changes in the frequency of Shasta Reservoir water surface elevation within the ranges required for boating and other water-related recreation activities at Shasta Reservoir (Template Output B-52).

The proposed Specific Plan initial water supply would result in no change in the total number of years when all boat ramps are usable (elevation 1,017 feet msl) during any month of the season. The number of years when at least one public ramp would be maintained on each of the reservoir arms (elevation 941 feet msl) also would remain unchanged under the proposed Specific Plan initial water supply, compared to the existing condition (Template Output B-52).

With regard to Shasta Reservoir shoreline and camping facilities, repeat visitors have come to expect the level to decline as the summer progresses; therefore, they appear to exhibit some tolerance of low-water conditions. Using the 60-foot drawdown criterion where boat-in camping and shoreline use begin to decline (1,007 feet msl), the analysis indicates that the proposed Specific Plan initial water supply would result in no change in the number of years in which Shasta Reservoir levels would be suitable, relative to existing conditions. The proposed Specific Plan initial water supply would also result in no change in the number of years that Shasta Reservoir levels would be at or above the 100-foot drawdown (967 feet msl) during May through September (Template Output B-52). Therefore, there would be ***no significant impact*** on Shasta Reservoir recreation opportunities under the proposed Specific Plan initial water supply.

<u>Mitigation Measure</u>

No mitigation measures are required.

4.11.13-11 Development of the Specific Plan could impact recreation at Trinity Reservoir.

Similar to Shasta Reservoir, the primary recreation use season for water-dependent and enhanced recreation activities at Trinity Reservoir is also from May through September. Therefore, the potential to affect reservoir levels during these months of the year was assessed for boating-related activities and shoreline recreation. Boating opportunity is heavily influenced by access to launching ramps, thus the relationship of Trinity Reservoir levels to operability of ramps was considered. Also, the drawdown distance of water from the vegetated shoreline was evaluated as an important factor in sustaining shoreline recreation use.

When compared to the existing condition, the proposed Specific Plan initial water supply would result in no change in the frequency with which Trinity Reservoir water surface elevations would be adequate for boating and other water-related recreation activities at Trinity Reservoir, relative to the existing condition (Template Output B-57).

The proposed Specific Plan initial water supply would result in no change in the frequency of reservoir levels required to allow for boat launching from the three major public ramps at Trinity Reservoir during May through September (Template Output B-57). Therefore, there would be ***no significant impact*** on recreation at Trinity Reservoir, under the proposed Specific Plan initial water supply.

Mitigation Measure

No mitigation measures are required.

4.11.13-12 Development of the Specific Plan could impact recreation on the upper Sacramento River.

Water-dependent recreation use on the upper Sacramento River, between Keswick Dam and the confluence of the American River, is higher in May through September than in other months of the year, coincident with the warmer summer weather. Consequently, effects of the proposed Specific Plan initial water supply on Sacramento River flows during this period are important for evaluating recreation opportunity impacts.

When compared to the existing condition, the proposed Specific Plan initial water supply would not result in a greater frequency of upper Sacramento River flows above the minimum flow required for recreation. A minimum recreation flow of 5,000 cfs is identified for the Sacramento River in the *California Water Plan Update* (DWR 1994). This is an overall standard that is not related to specific reaches of the upper Sacramento River, so it provides only general guidance in assessing recreation impacts. Definitive optimum and maximum/minimum river flows for recreation uses are not available for the upper Sacramento River, so the relative change in river flows are compared between the proposed Specific Plan initial water supply and the existing condition to assess potential recreation impacts. If relative flows are not substantially less for the proposed initial water supply compared to the existing condition, boat ramps and access points along the river between Keswick Dam and Colusa would not be adversely affected.

Exceedance plots for Sacramento River flow below Keswick Dam for May through September demonstrate that the probability of flow below Keswick exceeding 5,000 cfs is identical in all months. Additionally, flows under the proposed Specific Plan initial water supply remain the same as those under the existing condition at flows above 9,000 cfs (Template Output B-139 to B-140). Therefore, flow conditions attributable to the proposed initial water supply would result in ***no significant impact*** upon recreation opportunities in the upper Sacramento River.

Mitigation Measure

No mitigation measures are required.

4.11.13-13 Development of the Specific Plan could impact recreation on the lower Sacramento River.

Similar to other water recreation areas of northern California, the highest recreation use period for the lower Sacramento River (between the American River confluence and the Delta) is from May to September. Under the existing condition, monthly mean flow in the Sacramento River at Freeport averages from 13,300 to 19,300 cfs during this period. As with the upper Sacramento River, although 5,000 cfs has been identified as an overall flow standard, no definitive thresholds for optimal or minimum/maximum recreation flows are available. Therefore, the relative difference between the existing condition and the proposed Specific Plan initial water supply was evaluated.

Exceedance plots for Sacramento River flow at Freeport for May through September demonstrate that the probability of flow at Freeport exceeding 10,000 cfs is identical in all months between the proposed Specific Plan initial water supply and existing condition. The entire flow range is virtually identical throughout the May to September period (Template Output B-145 to B-146). Therefore, there would be ***no significant impact*** on recreational opportunities on the lower Sacramento River associated with the proposed initial water supply.

Mitigation Measure

No mitigation measures are required.

4.11.13-14 Development of the Specific Plan could impact recreation at the Delta.

The Delta's hydrology is complex and influenced by other water sources, specifically tidal action, San Joaquin River inflows, and east-side tributary inflows. Consequently, differences in Delta inflow from the Sacramento River would not translate directly into Delta water recreation effects. For instance, incoming tidal action in the summer contributes approximately 70,000 cfs in the Sacramento River near Rio Vista and 58,000 cfs in the central Delta reach of the San Joaquin River (DWR 1994).

The proposed Specific Plan initial water supply would have no impact on Delta inflows, relative to the existing condition (Template Output B-453). The largest decrease in Delta inflow under the proposed initial water supply would be four cfs (July), compared to the existing condition. Consequently, the differences in summertime inflow to the Delta resulting from the proposed initial water supply condition would not significantly change the Delta recreation opportunities. When compared to the existing condition, the proposed initial water supply condition would result in no significant impact on flows entering the Delta. Therefore, this impact is considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.11.13-15 Development of the Specific Plan could impact Oroville Reservoir or Feather River recreation.

The proposed Specific Plan initial water supply would not result in substantial changes in storage or water surface elevation at Oroville Reservoir, or in flow in the Feather River, relative to the existing condition. The water surface elevation and end of the month storage at Oroville Reservoir would remain unchanged in 840 of the 840 months modeled, relative to the existing condition. In addition, the flow in the Feather River would also remain unchanged in 836 of the 840 months modeled, relative to the existing condition (Technical Appendices A-121 to A-132 and A-580 to A-591 and A-592 to A-603). Any small changes that might occur would be considered ***less than significant impacts*** upon the recreation resources and activities inherent to those bodies of water.

Mitigation Measure

No mitigation measures are required.

4.11.13-16 Development of the Specific Plan could be inconsistent with the American River Parkway Plan.

The *American River Parkway Plan* Policy 3.1 on water flow anticipates that flow requirements are being researched and should be defined in the Plan once the research is completed. The policy indicates that flow standards associated with the SWRCB's D-1400 (1,500 cfs for recreation) would be too low if they are implemented. The analysis in this Revised Draft EIR indicates that the minimum flow for adequate recreation opportunity on the lower American River, based on a review of known flow criteria, would be 1,750 cfs. The low end of an optimum flow range appears to be about 3,000 cfs. Both the minimum and optimum flow criteria used in this Revised Draft EIR are higher than the D-1400 standard, and implementation of the proposed Specific Plan initial water supply would not result in summertime flows being reduced below these criteria more often than under the existing condition. Therefore, the proposed initial water supply would be consistent with the American River Parkway Plan, and no conflicts with environmental plans or goals of the Plan would occur. This impact is therefore considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.11.13-17 Development of the Specific Plan could be inconsistent with State and federal Wild and Scenic River Act designations.

The proposed Specific Plan initial water supply would not result in summertime flows being reduced below optimal (3,000 to 6,000 cfs) and minimum (1,750 cfs) flow criteria for recreation on the lower American River more often than under the existing condition. There is no change in the total number of months in which the flows would fall within the optimal flow range under the proposed initial water supply when compared to the existing condition, for the entire May through September recreation season, as shown in Table 4.11-25. Implementation of the proposed Specific Plan initial water supply would result in one less year (i.e., during August) in which flows in the lower American River at Nimbus Dam would be below the minimum flow range suitable for recreation (Technical Appendices A-320 to A-324). However, this reduction would not be of sufficient frequency to constitute a significant impact to lower American River recreation opportunities. Therefore, the proposed initial water supply would not diminish the recreational values of the lower American River, consistent with the state and federal recreational river designations. This impact is therefore considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.11.13-18 Development of the Specific Plan area could result in cumulative impacts on passive and active parkland and related facilities.

Because the project as mitigated (see Mitigation Measures 4.11.12-1 and 4.11.12-3) will include park and recreational facilities consistent with County standards, and the developers will be required to provide for the funding to construct and maintain those facilities, no cumulative impacts related to parks and recreation have been identified. This is a ***less than significant cumulative impact***.

Mitigation Measure

No additional mitigation is required.

SURFACE WATER SUPPLY

A surface water supply of 11,500 AFA will be required to meet the needs of the Specific Plan buildout. This 11,500 AFA is a portion of the PCWA's pending amendatory CVP contract with the Reclamation for 35,000 AFA. This water would be diverted from the Sacramento River, which has an annual runoff of approximately 18 million AF (PCWA 2001). The entire 35,000 AFA of the PCWA CVP contract water was used for the project's incremental contribution analysis (For a further description of the cumulative analysis, see Section 4.3.3 of this Revised Draft EIR). The full CVP contract amount of 35,000 AFA (long-term surface water supply) was evaluated based on the premise that this higher diversion amount provides a conservative representation of potential impacts associated with increased diversions from the Sacramento River to meet the proposed project needs.

The following consists of two parts: (1) an analysis to determine the effect of the proposed Specific Plan water supply project in combination with all past, present, and reasonably foreseeable future projects (cumulative analysis) (this is the same as the *American River Basin Cumulative Report (*Cumulative Report) analysis that was prepared by Reclamation in September 2002 as part of the PCWA Pump Station Project EIS/EIR); and (2) if a significant cumulative impact was found, an analysis to determine the incremental contribution of the long-term water supply to the cumulative impact. If the modeling results indicated that potentially significant or significant impacts would occur under the full (35,000 AFA) long-term surface water supply, then further evaluation was performed to evaluate more closely the future Specific Plan long-term surface water supply project's 11,500 AFA diversion potential to affect environmental resources.

The Cumulative Report evaluated the potential for future impacts to water-related recreational activities associated with the lower American River, Sacramento River, Sacramento-San Joaquin Delta, and Folsom, Shasta and Trinity reservoirs. The results of this analysis indicated there would be no significant adverse cumulative impacts on:

- Upper Sacramento River Recreation,
- Lower Sacramento River Recreation,
- Delta Recreation, or
- Trinity Reservoir Recreation.

The Cumulative Report, however, identified ***potentially significant cumulative impacts*** related to the following water-related recreational activities:

- Lower American River Recreation,
- Folsom Reservoir Boating,
- Folsom Reservoir Swimming, and
- Shasta Reservoir Recreation.

These potentially significant cumulative impacts identified in the Cumulative Report are identified below. Each impact includes an evaluation of the potential for the proposed Specific Plan long-term water supply to result in a cumulatively considerable contribution to the identified cumulative impact.

4.11.13-19 Development of the Specific Plan could result in a cumulative effect on lower American River recreation.

Under the cumulative condition, flows would be reduced by greater than 1%, relative to the existing condition, in 229 months of the 350 months modeled throughout the May through September recreational use period. This would be considered a significant reduction in recreational opportunities on the lower American River. For recreational flow ranges, the cumulative condition would result in 12 fewer months in which lower American River flows would be in the minimum to maximum flow range (1,750 to 6,000 cfs), relative to 255 months within this range under the existing condition, and 19 fewer months within the optimum flow range (3,000 to 6,000 cfs), relative to 165 months within this range under the existing condition.

Incremental Contribution of the Long-Term Surface Water Supply. The proposed long-term water supply long-term average results indicate no fewer months in which lower American River flows would be in the minimum to maximum flow range (1,750 to 6,000 cfs), and no fewer months within the optimum flow range (3,000 to 6,000 cfs), relative to the cumulative condition (Template Output H-44). Therefore, the proposed long-term water supply would have no cumulatively considerable contribution to the significant recreational impacts that would occur under the cumulative condition. As the long-term water supply would not contribute to the impacts that occur under the cumulative condition, it would also have no cumulatively considerable contribution to the impacts that occur under the cumulative condition. The impacts would be considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.11.13-20 Development of the Specific Plan could result in a cumulative effect on Folsom Reservoir boating.

Under the cumulative condition, Folsom Reservoir elevation levels during the March through September recreational use period would be above the elevation required for use of all boat ramps (420 feet msl) in 37 fewer months, relative to 330 months available under the existing condition. Reservoir elevations would fall below 412 feet msl, the elevation required for the use of marina wet slips, in 37 additional months, relative to 368 months available under the existing condition. Such reductions in reservoir elevation would be considered to significantly reduce Folsom Reservoir boating opportunities under the cumulative condition, relative to the existing condition.

Incremental Contribution of the Long-Term Surface Water Supply. The proposed long-term water supply would be above the elevation required for use of all boat ramps (420 feet msl) in no fewer months, and reservoir elevations would fall below 412 feet msl in no additional months during the March through September period, relative to the cumulative condition (Template Output H-47). Consequently, the proposed long-term water supply would have no cumulatively considerable contribution to the significant Folsom Reservoir boating impacts that would occur under the cumulative condition. As the long-term water supply would not contribute to the impacts that occur under the cumulative condition, it would also have no cumulatively considerable contribution to the impacts that occur under the cumulative condition. The impacts would be considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.11.13-21 Development of the Specific Plan could result in a cumulative effect on Folsom Reservoir swimming.

Under the cumulative condition, Folsom Reservoir water levels would be within the usable swimming range (420 to 455 feet msl) during the peak May through September swimming season in 26 fewer months, relative to 149 usable months under the existing condition. For the optimum use elevation range (435 to 455 feet msl), there would be 15 fewer usable months, under the cumulative condition, relative to 73 months within the range under the existing conditions. Such changes in reservoir water levels under the cumulative condition would significantly limit swimming opportunities at Folsom Reservoir, relative to the existing condition.

Incremental Contribution of the Long-Term Surface Water Supply. The proposed long-term water supply would not contribute to reductions in the frequency of usability for either the usable or optimum elevation ranges required for swimming activities at Folsom Reservoir in any month modeled for the May through September period (Template Output H-47). Therefore, the proposed long-term water supply would have no cumulatively considerable contribution to Folsom Reservoir swimming impacts under the future cumulative condition. As the long-term water supply would not contribute to the impacts that occur under the cumulative condition, it would also have no cumulatively considerable contribution to the impacts that occur under the cumulative condition. The impacts would be considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

4.11.13-22 Development of the Specific Plan could result in a cumulative effect on Shasta Reservoir recreation.

Under the cumulative condition, long-term average water surface elevation at Shasta Reservoir would not be substantially reduced during the May through September period. However, reservoir water surface elevation levels would fall below individual recreational thresholds more frequently than under the existing condition. Under the cumulative condition, there would be 25 fewer months in which reservoir water surface elevations would be at or above the levels required for usability of all boat ramps (1,017 feet msl), relative to 206 usable months under the existing condition. Similarly, there would be 12 fewer months in which reservoir water surface elevations would be at or above the levels required for usability of at least one boat ramp (941 feet msl), relative to 329 usable months under the existing condition. Furthermore, there would be 27 fewer months in which water surface elevations would be suitable for shoreline uses (1,007 feet msl), and 17 fewer months in which boat-in camping would be sustained (967 feet msl), relative to 234 and 310 months, respectively, in which these uses would be sustained under the existing condition. Such reductions would occur with sufficient frequency to significantly limit future recreational opportunities at Shasta Reservoir, under the cumulative condition.

Incremental Contribution of the Long-Term Surface Water Supply. The proposed long-term water supply, however, would not contribute to reductions in the usability of any recreational activity at Shasta Reservoir in any month modeled for the May through September recreational use period, as shown in Table 4.11-28 (Template Output H-52). Therefore, the proposed long-term water supply would have no cumulatively considerable contribution to significant cumulative

impacts to recreation at Shasta Reservoir that would occur under the cumulative condition. As the long-term water supply would not contribute to the impacts that occur under the cumulative condition, it would also have no cumulatively considerable contribution to the impacts that occur under the cumulative condition. The impacts would be considered ***less than significant.***

Mitigation Measure

No mitigation measures are required.

Table 4.11-28
Recreation Facility Usability of Shasta Reservoir Under Future No Project (NP) and Cumulative Conditions

Month	Number of Years of the 70-Year Record at Specified Levels											
	Number of Years All Boat Ramps Usable			Number of Years At Least One Boat Ramp Usable on Each Arm			Number of Years Shoreline Use Levels Sustained			Number of Years Boat-In Camping Use Levels Sustained		
	(>=1,017 ft)			(>=941 ft)			(>=1,007 ft)			(>=967 ft)		
	Future NP	Cumulative	Diff	Future NP	Cumulative	Diff	Future NP	Cumulative	Diff	Future NP	Cumulative	Diff
May	57	57	0	68	68	0	60	60	0	64	64	0
June	50	50	0	65	65	0	54	54	0	63	63	0
July	33	33	0	63	63	0	42	42	0	61	61	0
Aug.	24	24	0	61	61	0	26	26	0	55	55	0
Sept.	17	17	0	60	60	0	25	25	0	50	50	0
Total			0			0			0			0

4.11.14 GENERAL COUNTY FACILITIES AND SERVICES

ENVIRONMENTAL SETTING

The proposed Specific Plan is located in the unincorporated portion of Placer County. General County services include Health and Human Services, miscellaneous criminal justice functions, including jails and public protection, senior citizens services, road maintenance, and general government, including Treasurer-Tax Collector, Auditor, Assessor, Elections, Planning and the County Board of Supervisors.

REGULATORY SETTING

FEDERAL

There are no specific federal laws that the County must follow in general government processes and facility development that are relevant to CEQA analysis.

STATE

There are no State laws that the County must follow in general government processes and facilities development that are relevant to CEQA analysis.

LOCAL

The Placer County General Plan

The *Placer County General Plan* provides a local regulatory framework pertaining to general county services as follows:

Goal 4.A: To ensure the timely development of public facilities and the maintenance of specified service levels for these facilities.

Policies:

4.A.1. Where new development requires the construction of new public facilities, the new development shall fund its fair share of the construction. The County shall require dedication of land within newly developing areas for public facilities, where necessary.

4.A.2. The County shall ensure through the development review process that adequate public facilities and services are available to serve new development. The County shall not approve new development where existing facilities are inadequate unless the following conditions are met:

a. The applicant can demonstrate that all necessary public facilities will be installed or adequately financed (through fees or other means); and

b. The facilities improvements are consistent with applicable facility plans approved by the County or with agency plans where the County is a participant.

Goal 4.B: To ensure that adopted facility and service standards are achieved and maintained through the use of equitable funding methods.

Policies:

4.B.1. The County shall require that new development pay its fair share of the cost of all existing facilities it uses based on the demand for these facilities attributable to the new development; exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues.

4.B.2. The County shall require that new development pay the cost of upgrading existing public facilities or construction of new facilities that are needed to serve the new development; exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues.

4.B.3. The County shall require, to the extent legally possible, that new development pay the cost of providing public services that are needed to serve the new development;

exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues. This includes working with the cities to require new development within city limits to mitigate impacts on countywide facilities and services.

4.B.4. The County shall seek broad-based funding sources for public facilities and services that benefit current and future residents of the county.

4.B.5. When adopting, amending, and imposing fees and developer exactions, the County shall consider the effects of such fees and exactions on project economics and the County's development goals, and for residential development, housing affordability. This consideration shall recognize any increase in the value of property resulting from County-granted entitlements, including the redesignation of agricultural land for development.

4.B.6. The County shall require the preparation of a fiscal impact analysis for all major land development projects. The analysis will examine the fiscal impacts on the County and other service providers which result from large-scale development. A major project is a residential project with one hundred or more dwelling units or a commercial, professional office or industrial development on ten or more acres of land.

Goal 8.I: To provide municipal-type environmental health services to the unincorporated urban development areas in Western Placer County.

Policies:

8.I.1 Within overall County budgetary constraints, the County shall strive to provide one environmental health specialist per every 9,000 persons in Western Placer County.

Capital Facilities Fee Program

The *Placer County General Plan* provides that new development will pay its fair share of the cost for facilities attributable to growth in the County. The County prepared a study titled *County Facilities to Serve Growth* (Recht, Hausrath and Associates, 1994) to determine the relationship between new development and additional capital facilities needed to serve it. After public hearings, the County adopted the Capital Facilities Fee Program, based on the Recht, Hausrath and Associates report, for the unincorporated area on October 15, 1996. The fees that are levied pay for new facilities to serve growth, including facilities for health and human services, libraries, jails, public protection, finance and administration.

As of July 2005, the fee for a single family dwelling was $3,090.54. Capital Facilities Fees are also required for new commercial, office, industrial and warehouse space on a square footage basis.

Public Facilities Financing Plan

The Placer Vineyards Financing Plan identifies all backbone infrastructure improvements, public facilities, and administrative costs needed to serve the Plan Area. The Financing Plan includes improvements to roadways, sewer, water, drainage, recycled water, detention, parks, open space, and erosion, as well as schools, public administration, fire, sheriff, library and transit. The Financing Plan describes the costs and financing mechanisms that will be used to create these improvements in a timely manner.

The Financing Plan is designed to achieve the following goals:

- Identify ways to finance construction of infrastructure through public and private financing.
- Utilize existing Placer County and Special District fee programs to the extent possible
- Establish project-specific fees to fund major backbone facilities not included in existing fee programs
- Make maximum use of "pay-as-you-go" mechanisms
- Make appropriate use of municipal debt financing mechanisms
- Build in flexibility to allow response to market conditions

Overview of Financing Strategy

The major infrastructure required for development to proceed in the Plan Area will be funded through a combination of public and private financing. Fees, (i.e. County, Special District and Plan Area fees), will be used to fund required facilities when possible. The County of Placer and Special Districts serving the Plan Area have established development impact fee programs to fund a portion of the road, sewer, water, sheriff, and park facilities.

A Plan Area fee program will be utilized to fund the remaining backbone costs and other public facilities serving the plan area. Also, a new regional fee may be created to fund public facilities serving the entire western Placer County area.

Bond financing may be needed to fund development impact fees and other costs during the early years of development, as well as at other strategic times when Plan Area fees are not able to timely fund the necessary facilities required for new development. However, debt financing will be limited to prudent levels and shall be consistent with State and County guidelines.

Several different financing sources will be used to fund the infrastructure required to serve the projected development and to mitigate impacts on surrounding developments.

School facilities will be funded through school mitigation fees and possibly through other funding sources including the State School Building Program, or local general obligation bonds.

It is expected that costs will change over time and therefore each funding mechanism should include a method for adjusting the amount of funding to reflect current costs at the time of construction. At any stage, smaller sub-areas may develop, depending on the financing capacity of the area, development plans, and market conditions.

FINANCING OF PUBLIC IMPROVEMENTS

The construction of backbone and other public improvements designed to serve the Specific Plan area will be funded by a variety of mechanisms including County-wide impact fees, school district impact fees, Specific Plan area fees, establishment of special districts and assessments (i.e., community facilities district, community services district, and/or county service area), developer financing, and other potential methods.

Financing Methods

Financing methods may include the following:

- **County Impact Fees:** Placer County has adopted a set of development impact fees to finance capital improvements. Future updates to the Placer County fees may include certain improvements within the Plan Area.

- **School District Impact Fees:** The various school districts have established fees, in accordance with state regulations, to be used to construct school facilities. School impact fees are collected by the County before the issuance of a building permit and are forwarded to the applicable school districts.

- **Specific Plan Area Fees:** County and other existing fee programs may not finance all capital improvements required to serve the Specific Plan area. Plan area fees and/or a reimbursement program may be created to finance the balance of road, water, sewer, drainage, detention, open space, parks, and capital facilities.

- **West Placer Fee:** The County may choose to create a new regional fee to fund the development of public facilities serving the entire western Placer County area. This fee could include, but is not limited to, funding for library, regional park, and sheriff facilities.

- **Community Facilities District:** A community facilities district (CFD) may be established to help fund the construction and/or acquisition of backbone infrastructure and facilities in the Plan Area. The 1982 Mello-Roos Community Facilities Act enables cities and other entities to establish a CFD to fund various facilities and services by levying an annual special maximum tax on land within the CFD boundaries. The proceeds from a CFD bond sale can be used for direct funding of improvements, to acquire facilities constructed by the developer, and/or to reimburse developers for advance funding of improvements. The annual maximum special tax can be used toward bond debt service or to build infrastructure as needed. The proceeds of the Mello-Roos special tax can be used for direct funding of facilities and/or to pay off bonds.

Public Services and Infrastructure Maintenance Plan

A public services plan will be created to address the manner in which public services delivery will be managed and financed. Maintenance of public infrastructure improvements also will be included in this plan.

Properties will be required to annex into an existing County Service Area and/or any special districts established for maintenance of certain facilities that provide special benefit to the Plan Area, such as a Sewer Maintenance District, prior to receiving said services.

Facilities maintained may include landscape corridors and medians, open space areas, trails, bike paths, public administration, drainage, detention and retention facilities, storm water quality treatment facilities, parks, and transit.

Public services delivery may include parks programming, roads, transit, sheriff, fire, library and public administration.

Service delivery and maintenance may be funded through these methods:

- User fees
- Special Tax Levies (including a Mello-Roos CFD special tax)
- Assessments

The total backbone and community facilities improvement costs at build out of the Specific Plan are approximately $657 million, as shown in Table 4.11-29. These costs are estimates only, and do not include in-tract subdivision costs that are the responsibility of individual developers.

Table 4.11-29
Infrastructure and Facilities Costs (2005 Dollars; Rounded to 10,000s)

Infrastructure Improvements	
Roadways	$ 117,460,000
Storm Drainage	$ 22,800,000
Sewer	$ 36,720,000
Water	$ 51,920,000
Recycled Water	$ 15,170,000
Open Space/Detention/Erosion	$ 28,376,000
Dry Utilities	$ 23,670,000
Subtotal Infrastructure Improvements	**$ 296,100,000**
Public Facilities	
Fire Stations	$ 16,120,000
Government Center	$ 3,500,000
Parks and Trails	$ 80,400,000
Schools	$ 261,360,000
Subtotal Public Facilities	**$ 361,380,000**
TOTAL [1]	**$ 657,480,000**

Table 4.11-29 Infrastructure and Facilities Costs (2005 Dollars; Rounded to 10,000s)
[1] Total costs exclude Administrative costs, Land Dedication costs, and costs for public facilities that would be constructed by public agencies through fee programs (i.e. the Aquatic Center). Source: Economic & Planning Systems, Inc. Preliminary Admin. Draft Financing Plan, 01/04/2006, Table I-2.

PROPOSED COUNTY FACILITIES-RELATED SPECIFIC PLAN TEXT

The following text is contained in the proposed Specific Plan related to County facilities.

Planned County Facilities

Placer County uses a County Capital Facilities Fee (CFF) to mitigate the impacts of new development on County facilities. Collection of this fee will provide funding for improvements to an expansion of the County's finance and administration facilities, justice system, health and human services facilities, and public works facilities needed to maintain appropriate levels of service in the Plan Area.

Several satellite County facilities need to be located within the Plan Area to ensure that adequate general services are provided. These facilities and their respective locations in the Plan Area include:

- New government administration service offices and County Sheriff's Department substation (designated Gov in the Land Use Plan), to be located in the Town Center

- A corporation/maintenance yard (designated CY in the Land Use Plan), planned and located on Town Center Drive a short distance from the Town Center, adjacent to open space buffers with some separation from the surrounding residential community

- Park shops for the County's Facilities Services Department, to be provided in each of the Community Parks

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- Result in substantial adverse physical impacts associated with provision of new or physically altered County facilities.

- Need for new or physically altered County facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.

- Result in a project developed in a manner inconsistent with the adopted *Placer County General Plan.*

4.11.14-1 Public facility needs generated by development pursuant to the Specific Plan could exceed funding capacity.

Placer County has adopted a Capital Facilities Fee program. The purpose of the program is to ensure that adequate funding for capital and public facilities is generated in a timely manner when new development occurs. At full Specific Plan buildout, a total of $40,184,779 would be generated in gross new capital facilities fees needed to serve new growth (see Table 4.11-30). Revenue from the program is used to fund specific capital improvements necessitated by new development including the expansion and construction of office space, libraries, adult and juvenile detention facilities, clinics and laboratory space, social service facilities, communications/dispatch equipment, warehouses, vehicles and related furnishings and equipment. Because the imposition of the Capital Facilities Fee (as updated from time-to-time) is based on a documented assessment of need, the fee demonstrably responds to the need for general County facilities generated by the proposed Specific Plan. The potential impacts are, therefore, considered ***less than significant.***

Table 4.11-30
Capital Facility Fees

Geographic Area	Type of Unit	Dwelling Units (DU)	Factor per DU	DU Impact	Office SqFt	Office Impact Factor ($0.66/SqFt)	Retail SqFt	Retail Impact Factor ($0.41/SqFt)	Revenue Generated *
Specific Plan Area - Buildout	Low-Density	4,178	2,933.08	$12,254,408					
	Medium-Density	6,266	2,933.08	$18,378,679					
	High-Density	3,688	1,928.44	$7,112,087					
	Total	14,132		$37,745,174	162,450	$107,217	957,988	$392,775	$38,245,166

1. Dwelling units and square footage projections provided by Placer County Planning Department
2. Capital Facilities Impact Fee factors provided by Placer County Executive Office

Mitigation Measures

No mitigation measures are required.

4.11.14-2 Total revenues generated by the proposed Specific Plan may be less than the cost of providing public services.

Failure by the Specific Plan to generate revenues at least equal to Specific Plan costs would be inconsistent with the *Placer County General Plan* and Specific Plan, and would be a ***potentially significant impact.***

Mitigation Measure

Implementation of the following mitigation measure would reduce impacts on public services to a *less than significant level:*

4.11.14-2 *Project developers shall establish a special benefit assessment district or other funding mechanism to ensure fair share funding for the ongoing operation and maintenance of general County services serving the Specific Plan area. This funding mechanism shall be established prior to recordation of the first final small lot subdivision map in the Specific Plan area to ensure that immediate funding for adequate general County services is in place.*

4.11.14-3 New public facility demands will be generated by development in the Specific Plan area.

The County has indicated that the proposed project will require the following general government public facilities:

- A shared Corporation Yard on approximately 15.81 acres to accommodate the needs of the County Fire Department, Public Works Department, Sheriff's Department, and Facility Services Department as follows:

  - Transit, Fleet and Roads Divisions:
    - shared office

  - Transit Division:
    - parking buses
    - parking for staff cars
    - employee parking spaces
    - 2 maintenance bays
    - high capacity rapid fill CNG dispenser hookups
    - a CNG tank storage
    - CNG fueling compressors
    - bus wash facility

  - Fleet Services Division:
    - area for parts storage, fueling island for diesel and gas, vehicle wash bay, parking for autos and large trucks/buses
    - fleet maintenance facility

  - Roads Division:
    - material and equipment storage and employee parking

  - Sheriff's Department:
    - equipment storage facility
    - vehicle parking

  - Fire Division:
    - indoor training facility
    - outdoor mini training facility
    - storage

  - property and vehicle storage

- Special Districts Division:
  - office and shop area
  - indoor storage
  - covered parking
  - outdoor storage

- Maintenance Division:
  - area for vehicle parking, maneuvering area, work areas, and miscellaneous yard area

In addition, the following facilities will be needed in other locations within the Specific Plan area:

- Department of Facility Services
  - Two park maintenance facilities to be located in the two community parks
  - One community center
  - One recreation center
  - One senior center
  - One youth center
  - One gymnasium
  - One aquatic center
  - Two skateboard parks

- Land Development Administrative Services
  - Office building for Building, Planning, Public Works, Facilities, and Environmental Health Services.

- Fire Department and Sheriff Administrative Offices

- Health and Human Services
  - Office for Health & Human Services

Although the Specific Plan reflects many of these facilities, not all have been described or provided for. Lack of these facilities would be a ***potentially significant impact.***

<u>Mitigation Measure</u>

Implementation of the following mitigation measure would reduce impacts on public facilities to a *less than significant level:*

4.11.14-3 *The Specific Plan proponents shall submit a phased schedule for providing the above described general government facilities for approval by the County Executive Office. Funding for construction, operation and maintenance of these improvements shall be provided in accordance with Mitigation Measure 4.11.14-2.*

OFF-SITE INFRASTRUCTURE

Installation of utilities and maintenance of the off-site infrastructure would be funded by sewer and water impact fees and user fees, and would have no impact on the ability of the Specific Plan to generate funds for adequate general government services.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Development of the Specific Plan would have a direct impact on General Fund and proprietary funds (i.e. Public Safety, Library and Road Funds) revenues and the costs incurred by the County in providing additional services. While other pending and proposed development in the region would also have an impact on the revenues and costs of Placer County, the assessment of revenue neutrality would require evaluation not only of the project components, but their timing and market conditions in the future. Due to such factors, the assessment of the exact nature of the impact would require speculation, and is not possible at this time.

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4.12

Hazards

4.12 HAZARDS

4.12.1 INTRODUCTION

This section evaluates the potential for soil or groundwater contamination in the Specific Plan area as a result of current or past land uses, and the potential for impacts from hazardous substances and/or waste contamination due to proposed land uses associated with the Specific Plan. Evaluation of impacts from previous land uses is based on information contained in the Phase I and Phase I Supplemental and Phase II Environmental Site Assessments (ESAs) prepared by Carlton Engineering, Inc. Location of the properties evaluated in the Phase I and Phase II ESA are shown on Figure 4.12-1. ***The Property Group numbers and other features appearing on this figure vary somewhat from those in use elsewhere in this EIR, due to changes in ownership since the ESAs were performed. The Property Group numbers appearing on Figure 4.12-1 are those used in this section. In some cases, reference is also provided to the contemporary Property Ownership numbers appearing on Figure 3-11.***

The ESAs were prepared to support the project's Environmental Impact Report process, and are included in Appendix L of this Revised Draft EIR. The Phase I ESA evaluated approximately 4,300 acres or 82% of the Specific Plan area. The Supplemental Phase I ESA evaluated Property #12, an approximately 290-acre site located in the north-central area of the project. Due to changes in the regulatory setting since ESA preparation, it may be necessary that supplemental work be performed prior to property development in order to update ESA findings. This possibility is described in more detail below.

This section also addresses potential health hazards related to vector (mosquito) control in the Specific Plan area and vicinity.

4.12.2 ENVIRONMENTAL SETTING

The Specific Plan area is characterized predominantly as agricultural/pasture land, with areas of large acreage agricultural/residential properties scattered throughout the Specific Plan area. Previous and current land uses consist of dry farming for hay and cattle grazing, and irrigated farming for rice production and enhanced cattle grazing. The western portion of the Specific Plan area includes approximately 979 acres designated as a Special Planning Area. These 979 acres are mostly rural residential-agricultural parcels ranging in size from 1 to 40 acres.

The Specific Plan area is bordered by agricultural land to the north of Baseline Road, which has similar uses as the Specific Plan area, primarily dry land farming and cattle grazing. Rice production has also occurred north of Baseline Road. The Specific Plan area is bound the east and southeast by Dry Creek. Beyond Dry Creek lies an area predominantly comprised of single family homes in the unincorporated part of Placer County. Sutter County lies west of the Specific Plan area and is developed primarily with agricultural lands, including rice and cattle grazing. Sacramento County borders the Specific Plan area on the south, and land uses include a mix of rural/agricultural and residential lots ranging in size from approximately 1 to 20 acres.

Nine locations are identified in the Specific Plan as proposed school sites, and are considered areas for sensitive receptor use (see Figure 4.11-2 in Section 4.11 of this Revised Draft EIR). The general proposed school locations received focused site reconnaissance assessment during the ESA process.

HAZARDOUS MATERIALS USE

Hazardous materials use in the Specific Plan area as identified during the ESA process has included application of agricultural chemicals and storage and use of petroleum hydrocarbon products. Future project-specific uses may include use of petroleum hydrocarbon products and other potentially hazardous materials during construction and development. Development of the Specific Plan area will include commercial businesses, which may involve the use of potentially hazardous materials in the course of business.

AGRICULTURAL CHEMICALS

Current and past agricultural use of the Specific Plan area properties has been for rice production, dry farming for hay production, and irrigated and dry land cattle grazing. Use of herbicides and pesticides is commonly associated with the production of rice. No records were found during the ESA process that indicated which of the available agricultural chemicals may have been used on the Specific Plan area rice production properties. The reported hay production and cattle grazing land uses were considered unlikely to have directly generated potential for residual impacts to soil and groundwater from fertilizers and feeds when used in normal amounts.

The Specific Plan area appears to have been developed for agricultural and residential purposes prior to 1952. The principal agricultural activities included rice production, hay production and cattle grazing. It appears from interviews and published materials that these agricultural activities did not tend to cause persistent contamination of the soil and groundwater. No known permanent negative impacts to subsurface soil and groundwater have been linked with the current and past agricultural practices, except those areas of potential concern identified with farm equipment and machinery fueling, operations, and maintenance.

Other past Specific Plan area land uses identified in the ESAs include almond orchard cultivation. Two orchards were identified on 1952, 1958, 1964, and 1971 aerial photographs on the southern portion of Property #5C near the residence and other structures (refer to Figure 3-11 in Chapter Three of this Revised Draft EIR for a map of property ownership). The orchards were not observed in the 1981 photographs. An interview with the owner of Property #5C indicated that there was an almond orchard on the property when it was purchased in 1952, although the age of the orchard was not known. A Bluestone copper sulfate/water mixture was reportedly sprayed on the orchard trees. A representative of the Placer County Agricultural Commissioner's office indicated that copper sulfate has no residual in soil. Reports were also received indicating almond orchards in the vicinity of Properties #8 and #9. Orchards were not observed on Property #8 in the 1952 aerial photographs. Orchards were observed on Property #9 on the 1952 aerial photograph, but could not be identified in the 1958 photograph. A 1937 aerial

photograph of the eastern portion of the Specific Plan area indicates that commercial orchards and vineyards existed at least as far back as that date.

Some agricultural chemicals have the potential to remain in near-surface soils, depending upon the concentrations and types used. During approximately the last 25 years, environmentally persistent chemicals such as DDT and Chlordane have been banned from use. Prior to such regulation, however, and especially during the 1940s and 1950s, DDT was a common commercial chemical available for use as a pesticide. There is also the possibility that arsenic-based compounds, including lead arsenate, arsenic trioxide, and copper acetoarsenate (Paris green) were used from the late 1880s to the 1950s. These inorganic compounds can be persistent in the environment and highly toxic to all forms of animal life. Lead arsenate was commonly applied as both a pesticide and herbicide in orchards, and perhaps in other crops (such as vineyards). A representative of the Placer County Agricultural Commissioner's office agreed that the soil at the old orchard sites should be tested for residual arsenic and other agricultural chemicals. Analyses, including copper, were conducted in the Phase II assessment for former orchard areas.

Vineyards were identified on Property #5C in the 1987 photograph, and on Property #5B in all photographs beginning in 1971 to the most recent. Reports from Agricultural Commissioner's office representatives indicate that vineyards in the Specific Plan area are not known to use environmentally persistent pesticides and fungicides that pose risks to soil and groundwater quality. The owner of Property #5B indicated that only sulfur has been applied to his vineyards on Property #5B.

PETROLEUM HYDROCARBON PRODUCTS

ESA research of public records available at various regulatory agencies found no record in agency databases of existing or former underground storage tanks (USTs) in the Specific Plan area. The nearest reported operating underground fuel storage tanks are located at the Gibson Ranch County Park in Sacramento County, and at the Riego Market & Deli located at the intersection of Pleasant Grove Road and Riego Road, west of the Specific Plan area. Neither underground fuel storage tank facility has had reports of subsurface petroleum releases.

The ESA did report observations of above-ground fuel storage tanks in the Specific Plan area. According to information provided to Carlton Engineering by local regulatory agencies, farm-related above-ground storage tanks have not been recognized as a common source of soil and groundwater contamination. Carlton did observe small drip zones associated with the above-ground tanks on Property #15A.

Interviews with property owners in response to questionnaires indicate that an underground storage tank exists on Property #5C, and that a former underground storage tank has been removed from Property #2. Evidence was also observed suggesting the presence of USTs on Property #7, one near the abandoned radio beacon building, and one near a former radio beacon building site, approximately 2,000 feet southeast of the existing beacon building.

SOIL AND GROUNDWATER CONTAMINATION

Evidence of petroleum hydrocarbon soil contamination was observed on Property #15A, which is associated with operation, maintenance and storage of farm machinery and equipment. Additionally, used oil filters were observed on Properties #7 and #10. Areas of potential concern and/or circumstances requiring further study were also observed on seven properties (#2, #4 (now Property #1B), #5B, #5C, #9, #11, and #20). Those concerns included dumping along publicly accessible roadways, open abandoned wells, and debris and burn pits in former structure and storage areas.

Following completion of the Phase I Environmental Site Assessment, Phase II studies were conducted to address the recommendations for soil sampling and further site observations or locations contained in the Phase I report. In addition to the Phase II studies, a Phase I level assessment was conducted for Property #12, and the results of that assessment are included along with the Phase II report, in Appendix L.

SITE CONDITIONS SUMMARY OF POTENTIAL SOIL AND GROUNDWATER CONTAMINATION

The Phase II ESA completed in October 2001 expanded on sites of potential contamination identified in the Phase I ESA completed in 2000. The Phase II work identified properties on which potential hazardous materials are located, underground storage tanks (UST) or their former structures, stained areas and/or discarded items, and open wells. Phase II ESA study area, properties, well locations, and soil sample sites are shown on Figure 4.12-2. The Phase II ESA conducted site assessment work, including soil sampling and laboratory analysis, observation of previously inaccessible buildings, and mapping locations of unused or abandoned water wells.

As part of the Phase II site assessment on Property #7, a backhoe was used for exploratory excavation north of the former radio beacon building suspected as the location of a UST. One UST of approximately 250 gallons in volume was located approximately 6.5 feet north of the building and 1.6 feet below ground surface (bgs). At the possible hilltop site location of a former radio beacon building, about 0.25 mile south of the radio beacon building near Baseline Road, another UST was located. Photographs, sample locations, and laboratory analysis for both USTs are included in Appendix L.

A summary of the site conditions observed, general laboratory results obtained from sample analysis, observation, and recommendations resulting from the Phase II ESA are listed in Table 4.12-1. Potential impacts and proposed mitigation measures are identified in Section 4.12.4. Soil sample analytical results are summarized in Table 4.12-2. Also refer to the Phase II ESA, Appendix L for the original tables.

Table 4.12-1 Phase II ESA Sample and Analysis Summary			
Property Number	**Sample number, Item, or Location**	**Analysis Results/ Observation**	**Recommendations**
7	Former Radio Beacon Structure and UST	UST found during excavation	Remove UST.
	Former structure and UST	UST found during excavation	Remove UST.
	7-3	5.4 mg/Kg TPH Diesel	Verify concentration of petroleum hydrocarbon constituents below UST during removal.
	7-2	16 mg/Kg TPH motor oil	Verify concentration of potential motor oil contamination at sample location during UST removal.
	Approx. 750' SW of existing structure	Open well	Abandon/destroy open well according to required State and County standards.
9	9-1	340 mg/Kg TPH motor oil, 14 mg/Kg Diethylphthalate	Verify concentration of potential motor oil contamination at sample location in remediation plans.
	9-3	14 mg/Kg TPH motor oil	Verify concentration of motor oil contamination at sample location in remediation plans.
10	10-1	16 mg/Kg TPH motor oil	Verify concentration of motor oil contamination at sample location in remediation plans.
	10-2	46 mg/Kg TPH motor oil (57 mg/Kg Lead)	Verify concentration of motor oil contamination at sample location in remediation plans.
	North and East of existing structures	Existing capped and out of service wells	Wells should be destroyed if not planned for groundwater production. Abandon/destroy open well according to required State and County standards.
11	11-1	17 mg/Kg TPH motor oil	Verify concentration of potential motor oil contamination at sample location area during remediation activities.
	11-2	50 mg/Kg oil and grease	Verify concentration of potential oil and grease contamination at sample location area during remediation activities.
	Central portion of property	Open well (pump motor placed over open casing)	Abandon/destroy open well or weld steel cap on according to required State and County standards.
15A	Buildings and storage areas	Petroleum products, batteries, tires, refrigerators	Disposal by licensed waste haulers prior to project development.

Table 4.12-1 Phase II ESA Sample and Analysis Summary			
Property Number	**Sample number, Item, or Location**	**Analysis Results/ Observation**	**Recommendations**
	15-1	64 mg/Kg TPH motor oil, 4.2 mg/Kg TPH diesel, 760 mg/Kg oil and grease	Verify concentration of oil and grease at sample location in remediation plans.
	15-2, 3, and steam cleaning area	225 and 740 mg/Kg oil and grease	Verify concentration of oil and grease concentration at sample location in remediation plans.
	15-4, and 15-5 Petroleum product storage area	40,000 mg/Kg oil and grease, 17,000 mg/Kg TPH motor oil; 3,300 mg/Kg TPH diesel, 71 mg/Kg motor oil, minor concentration of gasoline constituents	Concentrations of oil and grease, TPH diesel, and motor oil found in sample. Verify concentration of oil and grease and petroleum hydrocarbon constituents at sample location in remediation plans.
	15-6, 15-7, 15-8, 15-9, 15-10, and 15-11	190 to 11 mg/Kg oil and grease; 1.1 mg/Kg TPH diesel; 12 to 100 mg/Kg TPH motor oil	Concentrations of oil and grease, TPH diesel, and motor oil found in sample. Verify concentration of oil and grease and petroleum hydrocarbon constituents at sample location in remediation plans.
	15-12 and 15-13	17,000 mg/Kg oil and grease and TPH motor oil; 1300 mg/Kg TPH diesel and 65 mg/Kg TPH motor oil	Concentrations of oil and grease, TPH diesel, and motor oil found in sample. Verify concentration of oil and grease and petroleum hydrocarbon constituents at sample location in remediation plans.
19	19-1	Auto parts, debris, household waste	Remove waste from parcel and dispose of at appropriate disposal site.
20	#Storage barn area	Auto parts, household waste in burn area	Remove waste from parcel and dispose of at appropriate disposal site. Inspect soil below slab for potential soil impacts at time of demolition.
	North of house	Existing in-service well	If well not planned for groundwater production for project development, it should be destroyed. Abandon/destroy open well according to required State and County standards.
Source: Quad Knopf, modified from Table 1 in Phase II Environmental Site Assessment, Carlton Engineering Inc., October 2001.			

Table 4.12-2
Placer Vineyards – Analytical Results Summary for Soil Samples

Property Number, Sample No.	Organic Constituents (mg/Kg)												Inorganic Constituents (mg/Kg)												
	Oil and Grease	TPH Diesel	TPH Motor Oil	TPH Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Semi-volatile Organics	Organochlorine Pesticides	Dioxins	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
7																									
7-1©		-	-	-	-	-	-	-	-																
7-2©		-	16	-	-	-	-	-	-							0.10	26		4.6		9.8				15
7-3		5.4	-	-	-	-	-	-	-																
7-4		-	-	-	-	-	-	-	-																
9																									
9-1©		-*	340	-	-	-	-	-	-	14*		-				0.12	23		25		14				70
9-2©											-			2.8	0.20	0.12	21	14	5.9		9.0				20
9-3©		-	14	-	-	-	-	-	-	-		-				0.22	18		15		10				68
10																									
10-1©		-	16	-	-	-	-	-	-							0.22	19		17		11				54
10-2©		-	46	-	-	-	-	-	-							0.25	18		57		10				36
11																									
11-1©		-	17	-	-	-	-	-	-	-		-				0.088	16		6.3		6.4				11
11-2©	50	-	-	-	-	-	-	-	-	-						0.40	17		5.8		8.9				100
11-3												-													
15A																									
15-1©	760	4.2	64	-	-	-	-	-	-							0.71	20		42		9.2				140
15-2	225															0.10	16		10		5.2				31
15-3©	740															0.42	26		11		24				66
15-4©	40,000	-*	17,000	-	-	-	-	0.011	-							0.25	19		9.3		17				95
15-5©	3000	3300	71	1.4	-	0.0085	0.0057	0.024	-																
15-5.1©	1100	-*	2600	-	-	-	-	0.0089	-							0.15	21		6.7		15				34
15-6©	190	-*	100	-	-	-	-	-	-							0.13	20		5.1		13				40
15-7©	370	1.1	28	-	-	-	-	-	-							0.19	56		11		11				71
15-8©	200	-	44	-	-	-	-	-	-							0.12	20		5.5		9.0				20
15-9©	190	-	12	-	-	-	-	-	-							0.094	18		4.5		9.2				19
15-10©	300															0.42	20		8.5		12				180
15-11©	17,000	-*	57	-	-	-	-	-	-							0.22	28		6.9		21				36
15-12©		-*	17,000	-	-	-	-	-	-							0.26	18		9.5		10				32
15-13©		1300	65	-	-	-	-	-	-							0.27	26		24		19				37
19																									
19-1©		-	-	-	-	-	-	-	-							0.11	18		7.4		7.3				18

- Below method reporting limit -* Increased Reporting Limit due to interference © Composite sample 14* Diethyphthalate

Source: Phase II Environmental Site Assessment, Carlton Engineering, Inc., October 2001.

POTENTIAL HAZARDS RELATED TO OLD BUILDINGS

The Phase II ESA site assessment work included sampling and analysis of potential asbestos materials and observation of previously inaccessible buildings. An asbestos survey was conducted in the former, abandoned radio beacon structure located immediately south of Baseline Road on Property #7. Non-friable asbestos containing materials were found in the cementitious shingles on the exterior of the structure. The presence of structures on Properties #10, #15A, #16, #17, and #20, which are likely constructed prior to federal and state regulation of asbestos containing building materials, indicates the potential for asbestos containing materials in the structures. As these structures were occupied or still in use, no surveys were conducted at the time of this assessment.

PROPOSED LAND USES FOR POTENTIALLY CONTAMINATED PARCELS

Table 4.12-3 below summarizes the proposed land uses for each parcel analyzed in the Phase II ESA as described above.

Table 4.12-3
Phase II Parcels Proposed Land Uses

Property Number	Proposed Land Uses
7	Low Density Residential, Medium Density Residential, High Density Residential, Power Center, Business Park, Commercial Mixed Use, Elementary School, Public, Park, Open Space, Religious
9	Low Density Residential, Medium Density Residential, Elementary School, Park, Open Space
10	Low Density Residential, Medium Density Residential, High Density Residential, Elementary School, Park, Open Space, Religious
11	Low Density Residential, Medium Density Residential, Park, Open Space
15A	Medium Density Residential, High Density Residential, Park, Open Space
19	Low Density Residential, Medium Density Residential, High Density Residential, Office, Business Park, Commercial Mixed Use, Elementary School, Middle School, High School, Park, Open Space, Religious
20	Low Density Residential

Source: Phase II Environmental Site Assessment, Carlton Engineering, Inc., October 2001.

KNOWN HAZARDOUS MATERIALS SITES

In addition to the Phase I and II ESA work described above, the following databases, lists, or reports, compiled pursuant to Government code Section 65962.5, were consulted in August 2005 in order to identify any recorded hazardous waste sites within the Specific Plan area. No recorded sites were identified.

FEDERAL

National Priority List (NPL). Identifies sites for priority cleanup under the Superfund program.

Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS). Contains information on sites identified by the USEPA as abandoned, inactive, or uncontrolled hazardous waste sites that may require cleanup. CERCLIS sites are in the evaluation stage to determine whether theses sites are to be included on the Federal NPL list.

No Further Action Planned Report (NFRAP). The NFRAP database contains information pertaining to sites that have been removed from the CERCLIS database.

Resource conservation and Recovery Information System (RCRIS). Contains sites, which generate, transport, store, treat, and/or dispose of hazardous waste.

Toxic Release Inventory System (TRIS). Contains all sites that have or may be prone to toxic material releases.

STATE

Active Work Plan List (AWP). This list, formerly called the BEP, identifies known hazardous waste sites that are targeted for cleanup. It is the state level equivalent to the federal NPL list.

CALSITES. This database lists sites that have potential or confirmed hazardous-release properties. It is the state level equivalent to the federal CERCLIS list.

Leaking Underground (LUST) and Above Ground (LAST) Storage Tank List. Tracks all of the known leaking underground and aboveground storage tanks and provides some information on the status of the remedial action on those sites.

Permitted Underground (UST) and Aboveground Storage Tank (AST) List. Provides a listing of underground and aboveground storage tanks that are permitted within the state.

Solid Waste Information System (SWIS). Provides a listing of solid waste landfills, incinerators, and transfer stations maintained by the California Integrated Waste Management Board.

Hazardous Waste and Substances Sites (CORTESE). Provides a listing of hazardous materials release sites and their locations. This list is compiled by various state and local government agencies including the California Department of Toxic Substances Control and the State Water Resource Board.

California Hazardous Materials Spill Information (RIMS). Contains information relating to reported hazardous materials incidents, such as accidental releases or spills. Maintained by the California Office of Emergency Services.

Dry Cleaners. The Specific Plan area was searched for the presence of any dry cleaning facilities which commonly use various hazardous substances during normal operation.

PG&E SUBSTATION

PG&E is proposing to install a 230/21kV distribution substation, to be known as the Placer Vineyards Substation, on an approximately six-acre site and related distribution facilities within the Specific Plan area. The property selected for the site is located north of proposed Town Center Drive at the intersection of Palladay Road and A Street, contiguous to and west of the existing PG&E 230kV electric transmission line. The site is next to PG&E's transmission lines, eliminating the need for construction of a new transmission line for this project. The distribution circuits will be located along the proposed streets within the Specific Plan area.

The proposed Placer Vineyards Substation will be a remote-controlled, low profile facility that will require only periodic maintenance. Electric power will enter the substation at 230kV from a tap line off of the existing PG&E 230kV power lines that traverse the area in a north-south direction. The lines will be tapped by adding wires ("conductors") to the existing towers in order to drop power into the substation. Distribution power will leave the substation property through underground distribution feeder lines at 21 kV, and then interconnect with existing and projected distribution feeders along existing and proposed County roads, providing service to the western Placer County area.

The fenced portion of the substation will include three 45 MVA (megavolt ampere) transformers at full buildout. In addition to the transformers, on-site equipment will include switch-gear, dead-end structures, bus structures, steel take-down structures, other related electrical equipment, and an SPCC (Spill Prevention Control Countermeasures) concrete basin designed for transformer oil containment in the event of an equipment failure.

Other facilities at the substation will include a perimeter fence around the substation itself, interior lighting for the substation, and telecommunications equipment for protection of the substation and power lines in the event of a downed line. The transformers and related electrical equipment will require a footprint approximately 300 feet by 375 feet, including a concrete pad for the transformers and switch gears and a 20-foot wide paved access road surrounding the electrical structures. In addition, the oil retention pond will include an area sized appropriately. The substation will be landscaped and set back approximately 120 feet from the county road right of way.

TRANSMISSION LINES AND ELECTROMAGNETIC FIELDS

The Specific Plan area is crossed by electric transmission and distribution lines. These existing lines are part of Western Area Power Administration (WAPA), Pacific Gas & Electric (PG&E), and Sacramento Municipal Utility District (SMUD) systems. Refer to Figure 3-10 for the location of existing electric transmission lines and substations. Transmission lines on-site range in size from 115 kilovolts (kV) to 230kV.

Transmission power lines and substations emit electromagnetic fields, or EMF. EMF is a term used to describe electric and magnetic fields that are created by electric voltage (electric fields) and by electric current (magnetic fields). Power frequency EMF is a natural consequence of electrical circuits and is present where electricity is used. This includes not only utility

transmission lines, distribution lines, and substations, but also the building wiring in homes, offices, and schools, and in the appliances and machinery used in these locations.

Electric fields are present whenever voltage exists on a wire, and are not dependent on current. The magnitude of the electric field is primarily a function of the configuration and operating voltage of the line and decreases with the distance from the source (line). The electric field can be shielded (i.e., the strength can be reduced) by any conducting surface, such as trees, fences, walls, buildings, and most types of structures.

Magnetic fields are present whenever current flows in a conductor, and are not dependent on the voltage present on the conductor. The strength of these fields also decreases with distance from the source. However, unlike electric fields, most common materials have little shielding effect on magnetic fields. Magnetic field strengths do, however, diminish with distance.

The magnetic field levels of PG&E's overhead and underground transmission lines will vary depending upon customer power usage. The strongest magnetic fields around the outside of a substation come from the power lines entering and leaving the station. The strength of the magnetic fields from transformers and other equipment decreases quickly with distance. Beyond the substation fence, the magnetic fields produced by the equipment within the station are typically indistinguishable from background levels.

Studies of the effects of EMF exposure have varied widely. Some epidemiological studies have reported that children living near power lines have higher than average rates of leukemia, brain cancer, and/or overall cancers. The correlations between EMF exposure and cancer rates have not been strong, and typically have not been related to dose levels. Other epidemiological studies have shown no correlation between living near power lines and cancer, including childhood leukemia. Very few studies have shown correlations between adult cancers and proximity to power lines.

While some epidemiological studies have shown correlations between exposure to EMF and cellular activity necessary to development of cancer, there is little laboratory evidence of a biomechanism affected by EMF. Of more than 60 laboratory studies that have been published, the reported effects on genotoxicity (injury to cells, which could result in cancer) are overwhelmingly negative, even when extremely high field strengths are used (California Electric and Magnetic Fields Program, *Short Factsheet on EMF*, 1999.).

Several reviews of EMF studies have been conducted by government agencies, including the National Institute of Environmental Health Sciences of the National Institutes of Health (NIEHS) and the California Department of Health Sciences (DHS). In general, these reviews have concluded that there is limited evidence linking exposure to EMF and cancer. The International Agency for Research on Cancer (IARC) found that childhood leukemia was the only type of cancer for which there could be a link to EMF exposure, and that the evidence for that link was limited.

The California Department of Health Services convened a panel of three epidemiologists to review studies of the effects of EMFs on human health, including increased risks of various

cancers, miscarriage, Lou Gehrig's Disease (ALS), etc.. Each panel member reviewed existing literature and then rated his or her degree of certainty that EMF increased the personal risk of contracting the diseases under study. The panelists "strongly believed" that EMFs are not universal carcinogens and do not increase the risk of birth defects or low birth weight, but, to one degree or another, were "…inclined to believe…" that EMFs can "…cause some degree of increased risk of childhood leukemia and adult brain cancer, Lou Gehrig's Disease (ALS), and miscarriage…" Two of the panelists were "…close to the dividing line between believing or not believing" and one was "prone to believe" that EMFs cause some degree of increased risk of adult leukemia. The panel's findings were reviewed by the Electric and Magnetic Field Scientific Advisory Panel (SAP), which found that the conclusions of the panel "…were logically supported within a range of reasonable scientific discourse…" At the same time, there was consensus that different evaluators using the DHS guidelines could arrive at different confidence ratings (i.e., conclusions regarding the likelihood that EMF causes cancer or other diseases).

VECTOR CONTROL

Placer County, including the Specific Plan area, is within the boundaries of the Placer Mosquito Abatement District. The District was formed in 1996 and became active in November 2000 upon securing a funding source for its operations. A benefit assessment was established for most of the District, including the Specific Plan area. This benefit assessment is based on the benefit received by they property owner. For example, a single family dwelling will contribute $13.24 per year for vector control services. The benefit assessment may be increased up to an additional 3% per year based on increases in the Consumer Price Index.

In July 2005, the Placer Mosquito Abatement District had 17 employees including eight technicians certified by the State of California Health Services in mosquito and vector identification and pesticide use. The District uses 14 trucks and vehicles, 1 boat, 3 ATVs, and various special sprayers and other equipment.

The District employs a number of practices in order to reduce mosquitoes and other vector populations and prevent the spread of the diseases they can carry. District technicians continuously conduct surveillance throughout the county to locate vector breeding grounds including creeks, wetlands, and vernal pools as well as man-made features in agricultural, industrial, and residential areas. Additionally, individual property inspections are conducted upon request of the owner. Airplanes and individual sprayers are used to apply insecticides and larvicides to control adult populations and to prevent larva from hatching in these identified breeding grounds. Additionally, mosquito fish are available by the district at no fee for residents to place in decorative ponds, unused swimming pools, and animal troughs in order to eliminate mosquito larva. Research on adult mosquitoes is conducted using New Jersey Light Traps and sentinel chicken flocks. Public education is also an important tool used by the District to protect residents and reduce breeding grounds.

Placer County has 26 different species of mosquitoes, 17 of which are common throughout the county and 11 of which are less common or are located outside of the District. The primary diseases of concern that are carried and transmitted by mosquitoes are malaria and encephalitis.

The county currently has four different encephalitis viruses including the West Nile Virus (WNV).

According to the Placer Mosquito Abatement District, WNV is a mosquito-borne virus commonly found in humans, birds, and other vertebrates in Africa, Eastern Europe, West Asia, and the Middle East. WNV was first identified in the United States in New York City in the late summer of 1999, while the first case of WNV in Placer County was identified in 2004. During 2005, 35 humans, 23 horses, 84 birds, 20 sentinel chickens, and 2 mosquito pools (collections of approximately 50 mosquitoes tested together for WNV) were found to be positive for the virus in Placer County. Most of the sentinel chickens that were found to be positive with the virus were located in or near Roseville, Loomis, and Auburn. The mosquito pools that tested positive for the virus are located where agricultural land and urban development meet in the Lincoln and Roseville areas. As of March 2006, there has been no WNV activity in the County (http://www.westnile.ca.gov).

OFF-SITE INFRASTRUCTURE

The Specific Plan includes construction and operation of off-site infrastructure. This includes routes for sewer trunk lines and water transmission lines as well as upgrade and expansion of plant facilities at the Dry Creek Wastewater Treatment Plant (DCWWTP) and the construction of additional recycled water storage facilities at the City of Lincoln Wastewater Treatment Plant. The Specific Plan also assumes treatment of wastewater at the Sacramento Regional Wastewater Treatment Plant (SRWTP). In most instances, utility lines will be placed within existing roadways, so as to minimize environmental impacts.

RECYCLED WATER

The following discussion is excerpted, in part, from *Roseville Regional Wastewater Treatment Service Area Master Plan Draft Environmental Impact Report*, 1996.

Recycled water is commonly used throughout California and the United States for a wide range of uses, including agricultural and landscape irrigation, industrial uses, and groundwater recharge. Although untreated wastewater is known to contain pathogenic (disease-causing) microorganisms and other chemicals with potential public health effects, treatment processes for wastewater provide a high level of removal of these constituents. The treatment level for the effluent proposed to be used in conjunction with this project, disinfected tertiary treatment, has been approved by the DHS for “full body contact” (State of California, 1978), which is the highest treatment level possible.

Numerous studies have been conducted, many in California, to examine the potential public health effects of recycled water and to ascertain the adequacy of the recycled water criteria and requirements for the protection of public health. In general, the results of numerous studies and long-standing observations from existing reclamation projects have indicated that recycled water that meets Title 22 standards for the intended use does not present a public health risk. There have been no recorded incidents of disease outbreaks associated with lawful use of recycled

water, and no adverse health effects have been observed to be associated with use of recycled water.

It is possible that use of recycled water and increased storage for recycled water could aggravate the mosquito nuisance in these areas. Recycled water could stimulate algae and plant growth in standing water, which could increase mosquito populations.

Pathogens are microscopic organisms that have the potential to cause disease. Tertiary treatment of municipal wastewater typically results in greater than 99.99% removal of pathogenic organisms, including bacteria, viruses and parasites (Yates, 1993). However, in light of the fact that 100% removal cannot be guaranteed even with tertiary treatment processes, there is still some finite risk, however low, for public health effects to occur.

There are several possible routes of exposure to pathogens in recycled water:

- through drinking water that has been contaminated by recycled water;
- through contact with plant and soil materials that have been irrigated using recycled water;
- through inhalation of aerosols generated during spray irrigation with recycled water; and
- through indirect contact with persons who have been in direct contact with recycled water.

The risk of infection, however, depends on many factors, including the efficiency of the individual treatment process in removing or inactivating the pathogen and the survival of the pathogen in the effluent, on the soil or plants, or in the air. This in turn depends upon temperature, humidity and sunlight intensity. In particular, sunlight is effective in removal or inactivation of all microorganisms in recycled water that has been applied to soil or plant surfaces. In one study, more than 99% of the detectable viruses and bacteria were eliminated after two days of exposure to sunlight (Feigin, et. al., 1991). In addition, further removal of pathogens, such as bacteria and parasites, occurs when recycled water passes through soils, and filtration.

Viruses in recycled water have been of particular concern due to their potential to survive disinfection by chlorination, their low infectious dose, and their minute size. Studies of enteric viruses (originating in the intestinal tract of humans) in recycled water have been conducted to determine the risk of infection due to use of recycled water. The analyses have determined that the annual risk of infection from exposure to chlorinated, tertiary-treated wastewater used for irrigation is in the range of one in one million to one in one hundred billion. The probability of infection can be further mitigated by controlling exposure to recycled water in the use area (Asano, et al., 1992).

Other chemical constituents present in recycled water with potential for human health effects include nitrogen (in the form of nitrate) and heavy metals. Nitrogen in wastewater is generally in the form of either organic nitrogen, ammonium, or nitrate. Secondary treatment typically removes most of the organic nitrogen, and nitrification typically removes all of the ammonia (by converting it to nitrate) and some of the nitrate.

If the recycled water contains high concentrations of nitrate and is used for irrigation, there is the potential for the nitrate to contaminate the groundwater, since nitrate readily leaches through the soil profile. High concentrations of nitrate can have toxic effects on humans, especially infants under seven months old, causing methemoglobinemia (blue baby syndrome). However, nitrate in recycled water that is applied for irrigation purposes is essentially a fertilizer and is readily taken up by plants. Therefore, where high nitrate concentrations occur, application of recycled water for landscape irrigation is generally regulated by the amount of nitrogen (as nitrate) consumed by the plants to minimize the excess nitrate that leaches through the soil column and to avoid nitrate contamination of groundwater. Plants vary in their ability to absorb nitrogen, and usually do not absorb more than 50% of that applied.

Grasses, especially perennials, are very efficient in nitrogen uptake. Table 4.12-4 shows nitrogen uptake rates for several grasses on an annual basis.

Table 4.12-4
Yearly Nitrogen Uptake Rates for Grasses

Vegetation Type	Annual Nitrogen Uptake (pounds per acre)
Alfalfa	450
Bromegrass	166
Coastal Bermuda Grass	500
Reed Canary Grass	312
Ryegrass	210
Sweet Clover	158
Tall Fescue	119

Source: City of Roseville, Environmental Utilities Department, City of Roseville Reclaimed water Master Plan, September 1, 1993.

The presence of trace elements, or heavy metals, in recycled water depends upon the contaminants discharged into the sewage system and the effectiveness of the treatment processes. In general, about 70% to 90% of trace elements are removed with wastewater solids during secondary treatment (Crohn, 1993). The remaining percentage of trace elements remain in the recycled water, and if the wastewater is used for irrigation, the trace elements, with the exception of boron, have a tendency to accumulate in the upper soil layers. Excessive accumulation of many trace elements can be toxic to plants and/or animals or humans. According to the EPA, the trace elements of greatest concern in recycled water include cadmium, copper, molybdenum, nickel, zinc, arsenic, chromium, lead, mercury, and selenium. However, the concentration of these elements typically found in tertiary treated effluent from municipal wastewater is well below the drinking water standard, and land application of recycled water can generally be continued for over one hundred years before exceeding the recommended EPA cumulative limit in soil (EPA, 1992).

A long-term study conducted in Monterey, California examined the health effects of using recycled water to irrigate food crops that are eaten raw. The results of the five-year study determined that there is no increased health threat to farm workers or others coming in contact with spray from irrigation, soil, plants, or runoff water from the fields irrigated with recycled water. No viruses were ever found on samples of crops grown with recycled water, and

naturally-occurring levels of coliform bacteria in well water often exceeded the levels in recycled water. In addition, there was no tendency for metals to accumulate in soils or plant tissues (Engineering-Science, 1987).

HAZARDOUS MATERIALS IN PLANT OPERATIONS

During normal operation of a wastewater treatment facility, a number of chemicals that are required in the treatment process are considered to be hazardous. Hazardous materials, as defined in Title 22 of the California Code of Regulations, are substances with certain chemical and physical properties that could pose a substantial present or future hazard to human health or the environment when improperly managed.

The chemicals used in the treatment process are considered to be safe in the conditions and low levels that workers and the community are exposed to under normal operating conditions. However, an acute exposure due to a sudden inadvertent release or spill may pose a public health hazard to workers and the surrounding community. The chemicals used at the DCWWTP are regulated under the Hazardous Materials Release Response Plans and Inventory Law of 1985, which requires a business plan for emergency response to a release or threatened release of a hazardous material or other emergencies such as an earthquake or fire. The City of Roseville (plant operator) performs regular safety training and inspections at the DCWWTP, and maintains necessary safety equipment for protection from chemical spills.

The DCWWTP currently operates under a Hazardous Materials Management Plan (HMMP) which identifies responsible parties for hazardous materials management at the plant, emergency contacts at local agencies, types and quantities of chemicals stored on-site and the appropriate storage methods. The HMMP also includes Material Safety Data Sheets (MSDS) that describe the properties and health risks of all hazardous chemicals used or stored on-site. The HMMP includes an Emergency Action Plan that provides procedures and other directives to minimize health and property hazards in the event of upset conditions; emergency response training information, record keeping logs, and a hazardous materials communication program. Of the chemicals used at the DCWWTP, the chemicals of greatest concern to public health are gaseous chlorine and sulfur dioxide. Emergency response actions for leaks, fires, earthquakes or other upset conditions are detailed in the operations manual for the Bulk Chlorine/Sulfur Dioxide Facilities (Montgomery Watson, 1993). Chlorine is identified as an acutely hazardous material by the EPA. Chlorine gas is used at the DCWWTP for disinfection, which is common practice at water and wastewater treatment facilities. Chlorine gas is a poisonous, non-flammable, but highly reactive substance, which is highly effective in killing bacteria at low levels. At higher concentrations it can cause severe respiratory irritation to humans. Chlorine gas is stored at the DCWWTP in the chlorine/sulfur dioxide building. Bulk storage tanks in the building have one-inch-thick shells. Sixty tons maximum of chlorine are on-site at any given time, and an average of about 660 pounds of chlorine are used per day.

Sulfur dioxide (SO2) is identified as an acutely hazardous material by the EPA. SO2 is a nonflammable, poisonous and reactive substance that is stored at the chlorine/sulfur dioxide building in bulk storage tanks with one-inch-thick shells. Transportation of SO2 gas is regulated by the U.S. Department of Transportation. A gas alarm and leak detection system are in place at

the plant. There have been no recorded incidents of spills or public health problems associated with the use of SO2 gas at the plant.

The City of Roseville is in the design process to replace the chlorine disinfection and sulfur dioxide dechlorination systems with an Ultraviolet disinfection system. This will eliminate any potential hazards with the use of Chlorine or Sulfur Dioxide. The UV system is expected to be operational by the end of 2007.

Other operating chemicals used at the DCWWTP include sodium acetate solution (corrosive) at the chlorine/sulfur dioxide building; oil in 55-gallon drums and gasoline stored in 5-gallon containers at the oil and gasoline storage building; gas stored in a 500-gallon aboveground tank at the pump station annex; diesel fuel stored in a 500-gallon above-ground tank adjacent to the electric building; diesel fuel stored in a 10,000-gallon underground tank adjacent to the blower building; and relatively smaller amounts of gasoline, lubricants, solvents, and acetylene at the mechanical maintenance building. Relatively small quantities (two gallons or less, except for sodium hydroxide) of acetic acid, sulfuric acid, freon, chloroform, sodium hydroxide (25 pounds of solid), and a specialty acid solution are stored in the laboratory at the operations building.

The following is excerpted from the Sacramento *Regional Wastewater Treatment Plant Master Plan Draft Environmental Impact Report*, 1997. The SRWTP uses and processes a number of hazardous materials. These materials include acetone, acetylene, chlorine, diesel fuel oil #2, ferrous/ferric chloride, gasoline, hazardous waste, hexanes, hydrogen, methylene chloride, nitric acid, nitric oxide, phosphoric acid, sodium hydroxide, sulfur dioxide, sulfuric acid, and 1,1,2-Trichloro-1,2,2-Trifluo-roethane. Plant operators take a number of precautions to ensure safety at SRWTP including the employment of a full-time Safety Officer at the plant.

SRWTP is operated using a Risk Management and Prevention Program (RMPP). The RMPP outlines all of the administrative and operational programs of a business that are designed to prevent acutely hazardous material accident risks, which may include standard operating procedures, preventative management programs, emergency response planning, and audits. Additionally, an Emergency Response Plan has been developed for SRWTP that satisfies the requirements of Section 6.95 of the California Health and Safety Code. The plan provides information such as instructions for reporting emergency events, site evacuation procedures, and methods to mitigate a release. The Plan identifies the Elk Grove Fire Department as the fire agency to be contacted in the event of a release or threat of a release. Finally, SRWTP has implemented a Hazardous Waste Management Procedure that establishes procedures for proper management of hazardous wastes generated at the plant.

Chlorine and sulfur dioxide are used in SRWTP in large quantities. These materials are delivered to the plant in 90-ton rail cars. A Chlorine/Sulfur Dioxide Procedures Manual, which provides procedures for handling chlorine and sulfur dioxide, was completed for SRWTP in 1996. Additionally, the manual provides general precautions and procedures, employee training, handling and storage at the rail yard, maintenance and repair of chemical-handling equipment, contractor work procedures, and leak response procedures. Two sulfur dioxide releases occurred at the plant in 1991. The first release was the result of a break in a polyvinyl chloride connector on a rail car liquid transfer line. The second release was determined to be caused by wrong sized

flange and gasket installed on a vent flange. Following these cases, appropriate measures were adopted to ensure that incidents do not occur again.

PROPOSED HAZARDS-RELATED GOALS AND POLICIES

The following goals and policies related to hazards are contained in the proposed Specific Plan.

Policy 3.2 Existing Agricultural Uses. Placer County will review and analyze development proposals for potential conflicts between aerial spraying associated with agricultural activities and proposed land uses.

Goal 4.14 Protect public health and safety by preventing the creation of mosquito breeding areas through proper drainage and routine surveillance of standing water sources for mosquito production.

Policy 4.43 Grading shall be performed in a manner to prevent the occurrence of standing water or other areas suitable for the breeding of mosquitoes or other vectors. Water detention and related surface water conveyance features shall also be designed to prevent the breeding of mosquitoes.

Policy 4.44 The Placer Mosquito Abatement District shall be granted access in perpetuity to perform vector control in all common areas, including drainage, open space corridors, and park areas. Such access shall be a condition of approval of all tentative maps approved within the Plan Area.

4.12.3 REGULATORY SETTING

HAZARDOUS MATERIALS USE

The use, storage, transport, generation and disposal of hazardous materials and wastes are regulated at three governmental levels: federal, state, and local.

FEDERAL

Hazardous substances and wastes, and their regulation, are defined by the federal government in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, and in the Resource Conservation and Recovery Act (RCRA) of 1976.

STATE

Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunications, electric, natural gas and water utilities, and railroad, rail transit, and passenger transportation companies. The CPUC is responsible for assuring safe services and that utilities provide those services at reasonable rates.

Department of Water Resources Bulletin 74-90

The California Department of Water Resources Bulletin 74-90, Section 23, contains standards for the abandonment of water wells no longer in use.

California Code of Regulations (CCR) Title 23, Division 3, Chapter 16 (Underground Storage Tank Regulations)

The regulations in this Chapter 16 are intended to protect waters of the state from discharges of hazardous substances from underground storage tanks by establishing construction requirements for new underground storage tanks; establishing separate monitoring requirements for new and existing underground storage tanks; establishing uniform requirements for unauthorized release reporting, and for repair, upgrade, and closure of underground storage tanks.

Recycled Water Requirements

In California, wastewater regulatory requirements fall under the jurisdiction of the California Regional Water Quality Control Board, Central Valley Region (RWQCB) with respect to waste discharge requirements, and under the jurisdiction of the State Department of Health Services (DHS) with respect to the development of the wastewater treatment system and the recycled water criteria. The City of Roseville Environmental Utilities Department would review and approve the proposed end users of the recycled water or would wholesale the recycled water to the water purveyor who would then implement the conditions of the City of Roseville's master Reclamation Permit.

Waste Discharge Requirements

The RWQCB is responsible for issuing Waste Discharge Requirements/National Pollutant Discharge Elimination System (NPDES) permits for wastewater treatment plants. These permits specify the conditions under which individual treatment plants can dispose of effluent, including long-term goals and schedules for water quality improvement and necessary monitoring. Under the existing permit, the Waste Discharge Requirements (WDR) for the DCWWTP allow for the disposal of up to 18 mgd of tertiary-treated wastewater to Dry Creek. Similarly, the WDR permit for SRWTP allows for discharge of 181 mgd of secondary treated wastewater to the Sacramento River. The RWQCB also provides guidelines for use of recycled water for irrigation and impoundments, which, in general, integrates RWQCB requirements and DHS reclamation criteria for the overall protection of public health.

CCR, Title 22

Water reclamation criteria are contained in Title 22, Division 4 of the California Code of Regulations (State of California, 1978) under the jurisdiction of the DHS as defined in the California Water Code. These criteria specify the level and degree of treatment for recycled water according to the designated use, and establish acceptable levels of constituents in recycled water. Title 22 also sets forth means forth means for assuring reliability in the production of

recycled water by requiring an Engineering Report that describes the recycled water quality, treatment process and reliability features, distribution and use of recycled water. These criteria, which are currently in the process of revision, are designed to protect public health based on potential exposure and potential public health effects.

Title 22 regulations specify treatment criteria for five categories of recycled water use: irrigation of food crops; irrigation of fodder, fiber and seed crops; landscape irrigation; recreational impoundments; and groundwater recharge. The most effective uses of recycled water require that it be "adequately disinfected, oxidized, coagulated, clarified, filtered wastewater." The tertiary treatment process at the DCWWTP currently produces wastewater that meets these requirements (Roseville, 1993).

Hazardous materials are defined in Title 22 of the California Code of Regulations. The regulation of hazardous materials generation, storage and transport is conducted by several State agencies under the California Environmental Protection Agency (CalEPA). The regulating agencies include but are not limited to: the Air Resources Board, the Department of Pesticide Regulation, the Department of Toxic Substances Control, the Integrated Waste Management Board, the Office of Environmental Health Hazard Assessment, and the State Water Resources Control Board.

CCR, Title 5

With some exceptions, the California Code of Regulations requires that new school sites be located at least 100 feet from the transmission line right of way for 50-133 kV lines, 150 feet for 220-230 kV lines and 350 feet for 500-550 kV lines. These distances were not based on specific biological evidence. Rather, they are based on the fact that the strength of EMFs decreases to approximately background levels at these distances. Standards for School Site Selection Agencies at the federal and state levels, including the California Department of Health Services, have reviewed studies conducted to determine if adverse health effects were associated with EMF, and have found no basis for setting health standards to date.

LOCAL

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) was mandated by the State in 1993. The program was created to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for several hazardous materials programs. At the local level, this is accomplished by identifying a Certified Unified Program Agency (CUPA) that coordinates all of these activities to streamline the process for local businesses. In May, 1997, the Division of Environmental Health Services was approved by Cal-EPA as the CUPA for Placer County. This division administers the Underground Storage Tank program in Placer County performing regular inspections of existing facilities, granting permits for new facilities, checking construction plans, performing site mitigation and necessary enforcement actions. The City of

Roseville Fire Department has been approved as the CUPA for the City of Roseville. The approved CUPA for Sacramento County is the Hazardous Materials Division of the Sacramento County Environmental Management Department.

VECTOR CONTROL

There are no specific State or federal regulations pertaining to mosquito abatement that would address environmental impacts associated with the proposed Specific Plan. The Placer Mosquito Abatement District, under Section 2270 of the California Health and Safety Code, has the authority to exterminate mosquitoes, flies and other insects either inside or outside the district.

PLACER COUNTY GENERAL PLAN

Hazardous Materials

The following are applicable goals and policies from the *Placer County General Plan:*

8.G.1. The County shall ensure that the use and disposal of hazardous materials in the county complies with local, state, and federal safety standards.

8.G.2. The County shall discourage the development of residences or schools near known hazardous waste disposal or handling facilities.

8.G.3. The County shall review all proposed development projects that manufacture, use, or transport hazardous materials for compliance with the County's Hazardous Waste Management Plan (CHWMP).

8.G.5. The County shall strictly regulate the storage of hazardous materials and wastes.

8.G.6. The County shall require secondary containment and periodic examination for all storage of toxic materials.

8.G.7. The County shall ensure that industrial facilities are constructed and operated in accordance with current safety and environmental protection standards.

8.G.8. The County shall require that new industries that store and process hazardous materials provide a buffer zone between the installation and the property boundaries sufficient to protect public safety. The adequacy of the buffer zone shall be determined by the County.

8.G.9. The County shall require that applications for discretionary development projects that will generate hazardous wastes or use hazardous materials include detailed information on hazardous waste reduction, recycling, and storage.

8.G.10. The County shall require that any business that handles a hazardous material prepare a plan for emergency response to a release or threatened release of a hazardous material.

8.G.11. The County shall encourage the State Department of Health Services and the California Highway Patrol to review permits for radioactive materials on a regular basis and to promulgate and enforce public safety standards for the use of these materials, including the placarding of transport vehicles.

8.G.12. The County shall identify sites that are inappropriate for hazardous material storage, maintenance, use, and disposal facilities due to potential impacts on adjacent land uses and the surrounding natural environment.

8.G.13. The County shall work with local fire protection and other agencies to ensure an adequate countywide response capability to hazardous materials emergencies.

To ensure the implementation of the stated policies, the General Plan directs that the County shall maintain and implement a CHWMP that addresses: hazardous waste generators; emergency response programs; transportation, storage, collection, treatment, and disposal of hazardous wastes generated within Placer County; the siting of hazardous waste facilities; and enforcement activities. The General Plan also states that the County shall prepare and maintain a Hazardous Materials Emergency Response Plan.

DRY CREEK/WEST PLACER COMMUNITY PLAN

The Dry Creek/West Placer Community Plan "Exhibit 1" suggests that the existing power line easements should be maintained as open space corridors and should be developed as pedestrian, equestrian, and/or bicycle trail systems.

General Public Services And Facilities

Goal 4.A To ensure the timely development of public facilities and the maintenance of specified service levels for these facilities.

Policy

4.A.2. The County shall ensure through the development review process that adequate public facilities and services are available to serve new development. The County shall not approve new development where existing facilities are inadequate unless the following conditions are met.

a) The applicant can demonstrate that all necessary public facilities will be installed or adequately financed (through fees and other means); and

b) The facilities improvements are consistent with applicable facility plans approved by the County or with agency plans where the County is a participant.

Public Health

Goal 8.I To provide municipal-type environmental health services to the unincorporated urban development areas in Western Placer County.

Policy

8.1.1 The County shall endeavor to identify and control important diseases transmitted by environmental factors in Western Placer County.

4.12.4 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines provides criteria for judging potentially significant impacts related to hazards and hazardous materials. Placer County has determined that a project could result in a significant impact if it 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 create a significant hazard to the public or the environment.

Additionally, the potential for exposure to existing hazardous conditions, materials, soil contamination, or groundwater contamination is considered in determining the significance of impacts regarding the proposed Specific Plan. This potential for exposure includes members of the public, or workers on the project, and associated potential for health risks during construction or maintenance activities.

Appendix G of the CEQA Guidelines does not address health or vector control hazards. The previous Environmental Checklist in the CEQA Guidelines (prior to the 1998 amendments) did, however, indicate that a project could result in a significant impact if it would involve:

- The creation of any health hazard or potential health hazard.
- Exposure of people to existing sources of potential health hazards.

4.12-1 The presence of underground storage tanks (USTs) could create hazardous conditions.

Two USTs were located on Property #7 (now Property #7 and Property #4) during the Phase II ESA. One UST was located a short distance north of the former radio beacon building near the northern border of the property. A second UST, the Hilltop Site, was located about 1,300 feet south and east at the location of a former radio beacon building with only a concrete slab and some steel pipe visible. The USTs may pose a ***potentially significant impact***.

Mitigation Measure

Implementation of the following mitigation measure would reduce the potential impacts of USTs to a *less than significant level:*

4.12-1 *The two USTs shall be removed and soil samples shall be collected and analyzed. In the event soil or water contamination has occurred above regulatory clean-up thresholds, remediation shall be performed consistent with State and County regulations. All required remediation shall be completed prior to recordation of any final small lot subdivision map on Property #7 (now Properties #4 and #7).*

4.12-2 The presence of contaminated soils could pose a health hazard.

Samples from Properties #7-2 and #7-3 were found to contain low concentrations (likely below the level of concern) of motor oil and TPH diesel, respectively. Samples from Properties #7-2 and #7-3 were collected near the Hilltop site UST. The level of concentration found in these samples is a ***less than significant impact***. If further sampling (see Mitigation Measure 4.12-1) finds concentrations at or above the level of concern, this impact would be ***potentially significant.***

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a *less than significant level:*

4.12-2 *If sampling during removal of the UST for the Hilltop site should confirm concentrations of potential motor oil and/or TPH diesel contamination at or above the level of concern, the site shall be remediated as described in Mitigation Measure 4.12-1.*

4.12-3 The presence of an open well on Property #7 (now Property #4) could pose a health hazard.

An abandoned open irrigation well was located during the Phase II ESA on Property #7 (now Property #4). This open well may pose a health hazard by providing a conduit for contaminants released during project construction and operation to reach a potable water supply. This is a ***potentially significant impact***.

Mitigation Measure

Implementation of the following mitigation measure would reduce impacts of the open well to a *less than significant level:*

4.12-3 *Prior to recordation of any final small lot subdivision map on Property #7 (now Property #4), the open well shall be abandoned/destroyed according to California Well Standards, California Department of Water Resources Bulletin 74-90 Section 23, and Placer County Environmental Health Services requirements.*

4.12-4 A burn pits, debris piles, and an illegal dumping site on Property #9 could pose hazardous conditions.

A sample from site #9-1 was collected at the corner of Dyer Lane and Tanwood Avenue in the area of illegal dumping northwest of the road pavement. A sample from Property #9-3 was collected in the oak grove in the southeastern portion of the property in the vicinity of a burn pit and debris piles. Analysis of the sample from Property #9-1 indicated motor oil concentration likely above the level of concern. This sample indicates a ***potentially significant impact*** at this location.

Mitigation Measure

Implementation of this mitigation measure would reduce the impact related to Property #9 to a *less than significant level:*

4.12-4 *Additional sampling shall be performed at the Dyer Lane and Tanwood Avenue area of illegal dumping. If test results show that the level of concern is exceeded, remediation shall be required to meet State and County regulations. All remediation shall be completed prior to recordation of any final small lot subdivision map on Property # 9.*

4.12-5 Unused wells on Property #9 could pose a hazardous condition.

Two unused wells with pumps installed were observed on Property #9. While the wells do not present a physical hazard in their current condition, they should be destroyed prior to project development. Unused wells pose a health hazard by providing a conduit for contaminants released during project construction and operation to reach a potable water supply, creating a ***potentially significant impact.***

Mitigation Measure

Implementation of this mitigation measure would reduce the impacts from abandoned wells to a *less than significant level*:

4.12-5 *Prior to recordation of any final small lot subdivision map on Property #9, unused wells on-site shall be destroyed according to California Well Standards, California*

Department of Water Resources Bulletin 74-90 Section 23, and according to Placer County Division of Environmental Health Services requirements.

4.12-6 Contaminated soils and unused wells on Property #10 could pose a health hazard.

Sites #10-1 and #10-2 were found to contain low concentrations (below the level of concern) of motor oil and grease. A sample from site #10-2 was also found to contain low concentrations (below regulatory clean-up thresholds) of lead. The level of concentration found in these samples appears to be less than significant. However additional testing should be performed prior to development to confirm this finding. If further sampling finds concentrations at or above the regulatory threshold, this impact would be ***potentially significant.***

Two unused wells with pumps installed were observed on Property #10 near the former residence. While the wells do not present a physical hazard in their current condition, they should be destroyed prior to development of the immediately affected area. Unused wells pose a health hazard by providing a conduit for contaminants released during project construction and operation to reach a potable water supply, creating a ***potentially significant impact.***

Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to hazards on Property #10 to a *less than significant level:*

4.12-6a *Additional sampling shall be performed on sites #10-1 and #10-2. If test results show that regulatory clean-up thresholds are exceeded, remediation shall be required to meet State and County regulations. All remediation shall be completed prior to recordation of any final small lot subdivision map on Property #10.*

4.12-6b *Prior to recordation of any final maps on Property #10, unused wells on-site shall be destroyed according to California Well Standards, California Department of Water Resources Bulletin 74-90 Section 23, and according to Placer County Division of Environmental Health Services requirements.*

4.12-7 Contaminated soils and unused wells on Property #11 could pose a health hazard.

Sites #11-1 and #11-2 were found to contain low concentrations (below the level of concern) of motor oil and grease. The level of concentration found in these samples appears to be less than significant. However additional testing should be performed prior to development to confirm this finding. If further sampling finds concentrations at or above the regulatory threshold, this impact would be a ***potentially significant.***

An abandoned open well was located during the Phase II ESA on Property #11. While the well does not present a physical hazard in their current condition, it should be destroyed prior to development of the immediately affected area. Unused wells pose a health hazard by providing a conduit for contaminants released during project construction and operation to reach a potable water supply, creating a ***potentially significant impact.***

Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to hazards on Property #11 to a *less than significant level:*

4.12-7a *Additional sampling shall be performed on sites #11-1 and #11-2. If test results show that levels of concern are exceeded, remediation shall be required to meet State and County regulations. All remediation shall be completed prior to recordation of any final small lot subdivision map on Property #11.*

4.12-7b *Prior to recordation of any final maps on Property #11, unused wells on-site shall be destroyed according to California Well Standards, California Department of Water Resources Bulletin 74-90 Section 23, and according to Placer County Division of Environmental Health Services requirements.*

4.12-8 Abandoned materials on Property #15A (now Property #22) could pose a health hazard.

Petroleum products, batteries, tires, and refrigerators were found in and around buildings and storage areas on Property #15A (now Property #22) during the site assessments. These items pose a health hazard and a ***potentially significant impact***.

Mitigation Measure

Implementation of this mitigation measure would reduce impacts related to conditions on Property #15A (now Property #22) to a *less than significant level:*

4.12-8 *Disposal of refrigerators, tires, batteries and similar materials by licensed waste haulers at approved waste disposal facilities shall be completed prior to recordation of any final maps on Property #15A (now Property # 22).*

4.12-9 Contaminated soils on Property #15A (now Property #22) could pose a health hazard.

A sample from site #15-1 was found to contain low concentrations (likely below levels of concern) of motor oil and TPH diesel. Analysis of samples from sites #15-2, #15-3, #15-4, #15-5, #15-6, #15-7, #15-8, #15-9, #15-10, #15-11, #15-12, and #15-13 indicated motor oil, oil and grease, and/or TPH diesel concentration (likely above the level of concern or regulatory clean-up threshold). Refer to Table 4.12-1 for concentrations in each sample, and Table 4.12-2 for analytical results summary for soil samples. These concentrations indicate a ***potentially significant impact*** at this location.

Mitigation Measure

Implementation of this mitigation measure would reduce the impact of this contamination to a *less than significant level:*

4.12-9 *Additional sampling shall be performed on sites #15-1, #15-2, #15-3, #15-4, #15-5, #15-6, #15-7, #15-8, #15-9, #15-10, #15-11, #15-12, and #15-13. If test results show that levels of concern, or regulatory clean-up thresholds are exceeded, remediation shall be required to meet State and County regulations. All remediation shall be completed prior to recordation of any final small lot subdivision map on Property #15A (now Property # 22).*

4.12-10 Abandoned materials and refuse encountered on Property #19 could pose a health hazard.

Auto parts, debris, and household waste were found on Property #19 during the site assessments. These items pose a ***potentially significant impact***.

Mitigation Measure

Implementation of this mitigation measure would reduce impacts related to conditions on Property #19 to a *less than significant level:*

4.12-10 *Disposal of auto parts, debris, household waste and similar materials by licensed waste haulers at approved waste disposal facilities shall be completed prior to recordation of any final small lot subdivision map on Property #19.*

4.12-11 Contaminated soils and miscellaneous materials storage on Property #20 (now Property #21) could pose a health hazard.

One section of the barn, located on Property #20 (now property #21), contains a storage area with an exposed soil floor, and another part consists of a workshop area with a concrete floor (see Figure 3-11). The storage area contained automotive batteries, small gasoline containers, and auto parts. The workshop area contained tools and small containers of paints and automotive fluids. Northeast of the barn doors were used tires, auto wet cell batteries and various auto parts. Auto parts and household waste were found in a burn area west of the barn. These items may pose a ***potentially significant impact***. An existing in-service well was observed north of the house on Property #20. Upon discontinuance of use of the well, it should be properly abandoned/destroyed. Without such steps being taken, the well may pose a ***potentially significant*** health hazard.

Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to conditions on Property #20 (now Property #21) to a *less than significant level:*

4.12-11a *Soil in the storage area and below the concrete slab in the workshop shall be inspected by a California Registered Environmental Assessor II for indications of impacts to soil at the time of the demolition of the site buildings and concrete slab. Recommendations for soil sampling and analysis shall be determined at that time. If sampling results show that regulatory clean-up thresholds are exceeded, remediation*

shall be required to meet State and County regulations. All demolition and remediation shall be completed prior to recordation of any final small lot subdivision map on Property #20 (now Property #21).

4.12-11b *Disposal of auto parts, debris, household waste and similar materials by licensed waste haulers at approved waste disposal facilities shall be completed prior to recordation of any final small lot subdivision map on Property #20 (now Property #21).*

4.12-11c *The in-service well shall be abandoned/destroyed according to California Well Standards, California Department of Water Resources Bulletin 74-90 Section 23, and Placer County Environmental Health Services (EHS) requirements upon discontinuation of use.*

4.12-12 Mosquitos and other vectors could pose a health hazard.

The Placer Mosquito Abatement District serves the Specific Plan area. A benefit assessment has been established to provide revenue as development occurs. The Specific Plan area includes wetland, park, and open space corridor areas that have the potential to become locations for mosquito breeding. If not managed properly, residents and businesses may be exposed to diseases transmitted by vectors such as mosquitoes. This is considered a ***potentially significant impact.***

Mitigation Measures

The following mitigation measures and the existing benefit assessment would reduce impacts related to vector control to a *less than significant level:*

4.12-12a *During construction, all grading shall be performed in a manner to prevent the occurrence of standing water or other areas suitable for breeding of mosquitoes and other vectors.*

4.12-12b *The Placer Mosquito Abatement District shall be granted access to perform vector control in all common areas including drainage, open space corridor and park areas in perpetuity. Such access shall be a condition of approval of all tentative maps approved within the Specific Plan area.*

4.12-13 Abandoned septic systems could pose a health and safety hazard upon development of the Specific Plan area.

Abandoned septic systems present health and safety hazards regarding subsidence, subsurface voids, and possible chemical contamination resulting from disposal of hazardous materials in the systems, thereby introducing hazardous materials to the native soils of the disposal areas. The presence of existing homes and evidence of previously existing dwellings in the Specific Plan area indicates that septic systems consisting of septic tanks and disposal fields or dry wells, or cesspools, have been used to dispose of domestic wastewater on-site. Septic tanks have

commonly been constructed from metal, wood and concrete. Metal and wooden tanks (or tank lids) decompose and corrode over time and can leave subsurface voids which are unidentified at the surface. Concrete tanks may also become weak and unable to support surface loads. Septic systems may have been used to dispose of hazardous materials, including petroleum hydrocarbon products and wastes. Materials disposed of in domestic wastewater drains may enter subsurface disposal trenches or dry-wells, and thereby impact the subsurface soils or groundwater. The presence of existing and probable abandoned septic systems in the Specific Plan area is considered a ***potentially significant impact.***

Mitigation Measures

Implementation of the following mitigation measures would reduce the potential impacts from abandoned septic systems to a *less than significant level:*

4.12-13 *Site-specific evaluation by a California Registered Environmental Assessor II shall be conducted at each identified existing and former dwelling area to identify surface indications and locations of septic tanks or cesspools prior to demolition of existing residences. Identified septic tanks shall be destroyed according to Placer County Division of Environmental Health criteria prior to recordation of final small lot subdivision map for the affected property.*

Surface conditions shall be evaluated by a California Registered Environmental Assessor II when the dwellings are vacated, and prior to demolition of the structures, regarding the possibility of previous site uses which may have included hazardous materials that could have been disposed of in on-site wastewater disposal systems.

Tank or cesspool destruction shall be monitored by a California Registered Environmental Assessor II regarding the likelihood of hazardous materials disposal in the systems. Any required remediation work shall be completed in accordance with State and County regulations prior to recordation of final small lot subdivision map for the affected property.

4.12-14 Asbestos in older structures to be demolished could pose a health hazard.

The presence of structures in the Specific Plan area which were constructed prior to federal and state regulation of asbestos-containing building materials indicates the potential for asbestos-containing materials in the Specific Plan area.

Construction/building materials were produced and used prior to regulation of asbestos-containing construction materials during the 1970s and 1980s. Dwellings observed in the Specific Plan area appear to have been constructed prior to regulation, and ruin areas observed indicate that previous buildings may have been constructed in the decades prior to 1970. Non-friable asbestos containing materials were found on the shingles of the abandoned radio beacon structure on Property #7. The possible presence of asbestos-containing materials in the Specific Plan area is considered a ***potentially significant impact***.

Mitigation Measures

Implementation of the following mitigation measure would reduce this impact to a *less than significant level*:

4.12-14a *Surveys of structures that are planned for demolition (that were not surveyed in the Phase II ESA) during Specific Plan development shall be conducted by a Certified Asbestos Consultant licensed with the California Department of Occupational Safety and Health to determine if friable Regulated Asbestos Containing Materials or non-friable asbestos containing materials are present within the structure demolition areas. Any regulated asbestos materials found in the investigated areas shall be removed and disposed of by a California licensed asbestos abatement contractor. All removal of asbestos material shall be completed prior to recordation of Final Maps for the affected property.*

4.12-14b *A California licensed asbestos abatement contractor shall be hired to remove the exterior wall shingles prior to demolition of the abandoned radio beacon structure on Property #7.*

4.12-15 Soils contamination in former orchard sites could pose a health hazard.

Past orchard development in the Specific Plan area indicates the potential for environmentally persistent agricultural chemicals in the near-surface soils.

Some agricultural chemicals have the potential to persist in near-surface soils, depending upon the concentrations and types used. As one example, from approximately the late 1880's to 1950's lead arsenate was commonly applied as both a pesticide and herbicide in orchards, and perhaps in other crops (such as vineyards). During approximately the last 25 years, environmentally persistent chemicals such as the chlorinated pesticide DDT and Chlordane have been banned from use. Prior to such regulation, and especially during the 1940s and 1950s, DDT was essentially the sole commercially practical chemical available and used as a pesticide. Both chlorinated pesticides and arsenic can persist in the environment. Some of the identified Property Groups where orchards or vineyards are reported to have existed appear to be in proximity to proposed residential or school sites. Residences or schools are considered especially sensitive receptors regarding potential environmental contaminants. Dependent on the degree of site disturbance, some commercial uses can also lead to exposures of health concern. The possible presence of environmentally persistent agricultural chemicals in near-surface soils is considered a ***potentially significant impact.***

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a *less than significant level:*

4.12-15 *Prior to submittal of a small lot tentative subdivision map or plans for industrial/commercial development, properties not previously evaluated with a current Phase I Environmental Site Assessment may be required to complete a Phase I Environmental Site Assessment, as determined by Environmental Health Services. A Phase I Environmental Site Assessment shall be conducted by a qualified professional. If past commercial agricultural uses are disclosed that could have resulted in persistent contamination, such as orchards or vineyards, then soil sampling shall be conducted within former commercial agriculture areas. In these instances, prior to setting conditions for subdivision or industrial/commercial development soil investigation shall be conducted according to guidelines developed by the California Department of Toxic Substances Control (DTSC) and contained in the DTSC August 2002 "Interim Guidance for Sampling Agricultural Fields for School Sites", or equivalent protocol. Sampling and site investigation shall be conducted by a California registered environmental professional, performed with oversight from Placer County Environmental Health Services, and with applicable permits.*

As a result of soil investigation, a limited and confined area of contamination may be identified and found to be suitable for simple removal. If this is the case, remediation will be required to meet State and County regulations and be completed prior to recordation of the final small lot subdivision map or equivalent final Placer County approval for commercial/industrial projects.

As a result of soil investigation, unconfined and/or widespread residual concentrations of agricultural chemicals may be identified at levels where they individually or in combination meet or exceed US EPA, CalEPA Preliminary Remediation Goals, or equivalent screening levels, thereby indicating the need for risk assessment. Any indicated risk assessment shall be completed prior to improvement plans or equivalent approval. Risk assessments shall include a DTSC Preliminary Endangerment Assessment or no further action determination, or equivalent.

Any remedial action indicated by a risk assessment shall be completed and certified prior to recordation of the small lot tentative subdivision final map or equivalent final Placer County approval for commercial/industrial projects. Remediation shall include a DTSC Remedial Action Workplan, or equivalent, and can include a range of activities, including restrictions on use, soil excavation and disposal off-site, or encapsulation in appropriate areas away from sensitive receptors in the Specific Plan area.

4.12-16 Unused wells could be encountered during Specific Plan area development, posing a safety and health hazard.

Unused or abandoned wells may be encountered in the Specific Plan area during remediation and/or development stages. Unused wells may represent a ***potentially significant impact***.

Mitigation Measure

Implementation of this mitigation measure would reduce the impacts of unused wells to a *less than significant level*:

4.12-16 *Any unused well encountered during subsequent exploration or development of the Specific Plan area shall be destroyed according to California Well Standards, California Department of Water Resources Bulletin 74-90 Section 23, and according to Placer County Division of Environmental Health Services requirements.*

4.12-17 Surface soils may be contaminated in areas not surveyed.

Surface soil affected by illegal dumping or containing soil staining or potential contamination may be encountered that presents potential residual chemical or hazardous material impacts to underlying soil in areas not previously evaluated in a Phase I ESA. If found, these sites may pose a ***potentially significant impact.***

Mitigation Measure

Implementation of this mitigation measure would reduce potential surface soil impacts in areas not surveyed to a *less than significant level:*

4.12-17 *Prior to submittal of a small lot tentative subdivision map or plans for industrial/commercial development, properties not previously evaluated with a current Phase I Environmental Site Assessment may be required to complete a Phase I Environmental Site Assessment, as determined by Environmental Health Services. A Phase I Environmental Site Assessment shall be conducted by a qualified professional. If past commercial uses are disclosed that could have resulted in persistent contamination then soil sampling shall be conducted within former commercial areas. In these instances, prior to setting conditions for subdivision or industrial/commercial development soil sampling shall be conducted according to guidelines developed by the California Department of Toxic Substances Control (DTSC) Phase II Environmental Site Assessment and/or Preliminary Endangerment Assessment with DTSC, or equivalent protocol. Sampling and site investigation shall be conducted by a California registered environmental professional, performed with oversight from Placer County Environmental Health Services, and with applicable permits.*

As a result of soil investigation, a limited and confined area of contamination may be identified and found to be suitable for simple removal. If this is the case, remediation will be required to meet State and County regulations and be completed prior to recordation of the small lot tentative subdivision final map or equivalent final Placer County approval for commercial/industrial projects.

As a result of soil investigation, unconfined and/or widespread residual concentrations of chemicals or other contaminants maybe identified at levels where

they individually or in combination meet or exceed US EPA, CalEPA Preliminary Remediation Goals, or equivalent screening levels, thereby indicating the need for risk assessment. Any indicated Risk Assessment shall be completed prior to improvement plans or equivalent approval. Risk assessments shall include a DTSC Preliminary Endangerment Assessment or no further action determination, or equivalent.

Any remedial action indicated by a risk assessment shall be completed and certified prior to recordation of the small lot tentative subdivision final map or equivalent final Placer County approval for commercial/industrial projects. Remediation shall include a DTSC Remedial Action Workplan, or equivalent, and can include a range of activities, including restrictions on use, soil excavation and disposal off-site, or encapsulation in appropriate areas away from sensitive receptors in the Specific Plan area.

4.12-18 Commercial use of potentially hazardous materials within the Specific Plan area could pose a safety and health hazard.

Development of the Specific Plan area will include commercial businesses and other related activities such as the County's proposed corporation yard that will use hazardous materials in the course of business.

Businesses including but not limited to: automotive fueling, private and County maintenance, and repair facilities; retail businesses with photographic processing services; and medical facilities with radiology imaging services may be developed in the areas designated for commercial use. These and other businesses routinely use, generate, and store hazardous materials. However, construction and operation of fueling related containers (USTs) and delivery systems for service stations are regulated by the Placer County Division of Environmental Health. The public safety aspects of transport of fuels and automotive service supplies and other hazardous materials used in commercial businesses likely to be established in the Specific Plan area are regulated by California State and federal transportation laws. Plans that describe the practices and materials used for business purposes as they involve generation, use and storage of hazardous materials must be submitted to the Placer County Division of Environmental Health Services. These business plans address worker and public safety aspects of handling and management of hazardous materials. Because regulations have been adopted to mitigate impacts associated with future handling and use of hazardous materials this is a ***less than significant impact***.

Mitigation Measures

No mitigation measures are required.

4.12.19 The proposed power lines and substation could expose project occupants to electromagnetic fields, hazardous material and waste, electric shock, and fire.

The Specific Plan area is crossed by electric transmission and distribution lines. A distribution substation is proposed for an approximately six-acre site located at the intersection of Palladay Road and A Street, contiguous to and west of the existing PG&E electric transmission line. The transmission lines and substation would emit electric magnetic fields, which have been implicated in increased cancer risks in some studies.

The *Dry Creek/West Placer Community Plan* "Exhibit 1" suggests that the existing power line easements should be maintained as open space corridors and should be developed as pedestrian, equestrian, and/or bicycle trail systems. The three power line easement corridors are primarily designated as open space under the proposed Specific Plan, which restricts intensive forms of development immediately adjacent to or under the power lines. Other related types of development proposed under the powerlines includes a cemetery, religious site, and County corporation yard, as shown on Figure 3-12. The power line easements contain three 115kV transmission lines and seven 230kV transmission lines. In addition, a new 230/21kV distribution substation is proposed for an approximately six-acre site located at the intersection of Palladay Road and A Street, Refer to Figure 3-10 for the location of existing electric transmission lines and substations.

Electrical currents and voltages at the substation and along its connection lines would generate electric and magnetic fields (EMFs). EMFs are fields of force created by electric voltage (electric fields) and by electric current (magnetic fields). Voltage on any wire produces an electric field in the area surrounding the wire. Electric field strength is described in terms of voltage per unit distance at a specified position (volts per meter V/m). A magnetic field is produced from current in a conductor such as a wire. Magnetic field strength is measured in terms of lines of force per unit area (Gauss, G; or milligauss, mG). EMFs are found whenever electricity is used, such as utility lines, building wires in homes, offices, schools, and home appliances. Typical magnetic fields from these sources range from below 1.0 mG to 1,000 mG. The operation of the new substation will result in an increased exposure to EMFs.

Electric power transmission lines maintained by power companies may or may not be hazardous to human health. Research continues on the effects of electromagnetic fields (EMF) on human beings. There is only limited evidence that exposure to EMFs from power lines could cause cancer or other diseases in humans.

The strength of EMFs diminishes with distance from power lines. The power lines traversing the Specific Plan area would be buffered from residential areas by a minimum of 100 feet of open space. School districts should be cautious about the health and safety aspects relating to overhead transmission lines. School districts should take a conservative approach when reviewing sites situated near easements for power transmissions lines.

According to the Land Use Plan contained in the Specific Plan, the property lines of proposed school sites will be greater than 200 feet from the existing 230kV lines in the Plan area. No proposed school sites are in the vicinity of the existing 115kV lines in the western portion of the Plan area.

Currently, there are no standards for locating residential uses near high-voltage power transmission line easements. However, the Land Use Plan does provide a buffer of at least 80 feet between residential uses and the 230kV power line easement that runs east-west through the Plan area, and a buffer of at least 35 feet between residential uses and the 115kV and 230kV power line easements that run north-south. The open space corridors, above described uses, and mitigation as described under Impact 4.1-6 (Mitigation Measure 4.1-6) will ensure that hazardous conditions that could occur due to high-voltage power lines are ***less than significant***.

During construction and operation of the project, hazardous wastes will be generated and several types of hazardous materials will be used and stored at the substation. Electrical transformers contain nonconducting mineral oil (highly refined hydrocarbon-base oil) used for insulation between conducting surfaces and as a coolant. Older transformers frequently contained polychlorinated biphenyls (PCBs), which are defined as hazardous materials. The existing transformers are not labeled as to the potential for PCB content. When a transformer is taken out of service, the oil must be disposed of as hazardous waste.

The substation will have lead acid batteries to provide DC power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting. The batteries will have 60 cells and be rated at 125 volts DC nominal. The electrolyte in the batteries is in a gel form that is totally sealed in a steel case. There will be liquid tight control barriers under and around the battery racks.

Sulfur hexafluoride gas (SF6) is used as an insulator and an arc suppresser in circuit breakers. It is completely contained in the equipment and not released under normal conditions. Since the gas is inert and non-toxic, its release would not cause a significant impact.

The substation will contain approximately four cylinders of compressed nitrogen gas. This is used to maintain a slight nitrogen pressure in oil-filled electrical equipment. This pressure serves to keep out air that contains moisture, which can damage the equipment. Since the gas is inert and non-toxic, its release would not cause a significant impact.

The proposed substation could pose a hazard of electric shock for site trespassers. This hazard will occur at the transformers and will not extend off-site to the general public. Since the substation involves the transformation of electricity, the new operating facility will be a potential electrical fire hazard. Incidents such as downed power lines and malfunctions at the substation could generate sparks and start a fire. The risk will be low for number of reasons. The substation will have asphalt pavement for road access and a gravel surface yard. There are minimum distance requirements implemented by PG&E for certain electrical equipment in the substation. In addition, PG&E installs high-speed relay equipment that senses a broken line condition and actuates circuit breakers to de-energize the line in a matter of milliseconds.

The operation of the proposed substation is a ***potentially significant impact.***

Mitigation Measures

Mitigation Measure 4.1-6 in Section 4.1 of this Revised Draft EIR will reduce effects related to high voltage transmission lines to a *less than significant level*. Implementation of the following mitigation measures would reduce potential impacts from the proposed substation to a *less than significant level:*

4.12-19a *The design of the substation shall implement no cost and low cost EMF reduction measures on new and upgraded transmission, substation, and distribution facilities. These measures shall reduce the magnetic field strength in the area by 15% or more at the fence line as compared to traditional installations.*

4.12-19b *PG&E proposes to prepare an EMF Field Management Plan that will specifically delineate the no-cost and low-cost EMF measures to be installed as part of the final engineering design for the substation. PG&E shall submit to the California Public Utilities Commission the EMF Field Management Plan for the project, prior to construction activity on the substation.*

4.12-19c *The site shall be graded to direct drainage to a pond that meets Federal Guidelines (40 Code of Federal Regulations, Part 112) for the facility so that, in the event a transformer becomes damaged and leaks oil, the oil would drain into the pond. The pond shall be designed to be impermeable and designed to contain 100% of the largest transformer oil volume plus 10% to contain rainwater and prevent discharge to surface water.*

4.12-19d *Storage batteries shall be located inside a dedicated metal-enclosed compartment in the switchgear.*

4.12-19e *Access to the site shall be restricted by fencing and warning signs posted to alert persons of the potential electrical hazards.*

4.12-19f *The power lines shall be designed in accordance with California Public Utilities Commission General Order 95 Guidelines for safe ground clearances that have been established to protect the public from electric shock.*

4.12-19g *The substation shall be fitted with an automated central alarm system that will immediately alert PG&E to any change in equipment condition.*

4.12-20 Listed hazardous waste sites could be present within the Specific Plan area.

In addition to the Phase I and Phase II ESAs that were performed for the Specific Plan area, various databases, lists, and reports, compiled pursuant to Government Code Section 65962.5, were consulted to determine if any known hazardous waste sites were listed as being located within the Specific Plan area. The results of this search indicate that there are no such sites within the Specific Plan area; therefore, this impact is ***less than significant***.

Mitigation Measures

No mitigation measures are required.

Off-Site Infrastructure

4.12-21 Hazards related to underground storage tanks, potential surface soil contamination, unused wells, asbestos containing structures and other waste materials within roadway and utility corridors, or wastewater treatment plant sites not previously surveyed, could be present.

Impacts in off-site infrastructure areas could include the potential to encounter underground storage tanks, contaminated soils, refuse and other abandoned materials, abandoned wells, septic systems, and structures containing asbestos. Expansion of the DCWTP, or SRWTP, and construction of recycled water storage facilities at the City of Lincoln Wastewater Treatment Plant may also have the potential to encounter hazardous materials, or pose a hazard to others during operation. All of the above conditions may be encountered during off-site construction, similar to the Specific Plan area. If encountered, these conditions may pose a ***potentially significant impact.***

Some of the off-site infrastructure would be located in other jurisdictions and not subject to Placer County oversight. Placer County cannot compel other jurisdictions to implement the same mitigation measures. However, most off-site utility lines will be placed in already disturbed roadway easements. Further, any construction will be subject to State and local requirements regarding underground storage tank removal, well and septic tank abandonment, wastewater treatment facilities operation, etc. NPDES requirements will also apply to all construction, including submission of a Stormwater Pollution Prevention Plan (SWPP), as administered by the State Water Resources Control Board. In addition, any construction will be under the oversight of another public agency, and ultimate owner of the improvements (e.g., the Sacramento Suburban Water District, Placer County Water Agency, Sacramento Regional County Sanitation District, Sacramento County, Sutter County). Each of these agencies has similar construction protocols to those administered by Placer County, and similar responsibilities and obligations.

Mitigation Measures

Based on the above described regulatory and institutional safeguards, and the availability of the following recommended mitigation measures, these are *less than significant* effects.

4.12-21a *Any USTs that are encountered during off-site utility line/roadway survey or construction, or wastewater treatment or storage facility construction shall be removed and soil samples shall be collected and analyzed. If a UST is subject to UST regulation, then a UST removal permit from Environmental Health Services shall be obtained. In the event soil or water contamination has occurred above regulatory clean-up thresholds, remediation shall be performed consistent with State and County regulations.*

4.12-21b *Prior to any utility, roadway, or wastewater treatment or storage facility construction on properties not previously evaluated in a Phase I Environmental Site Assessment, a Phase I Environmental Site Assessment shall be conducted by a Registered Environmental Assessor. If contaminant concentrations are found to be at or above regulatory clean-up thresholds, the site shall undergo remediation in accordance with State and County standards.*

4.12-21c *Any unused well encountered during construction of off-site utilities, roadways, or wastewater treatment and storage facilities shall be destroyed according to California Well Standards, California Department of Water Resources Bulletin 74-90 Section 23, and local requirements.*

4.12-21d *Surveys of any structures that are planned for demolition during off-site utility line, roadway, or wastewater treatment or storage facility construction shall be conducted by a Certified Asbestos Consultant licensed with the California Department of Occupational Safety and Health to determine if friable Regulated Asbestos Containing Materials or non-friable asbestos containing materials are present within the structure demolition areas. Any regulated asbestos materials found in the investigated areas shall be removed and disposed of by a California licensed asbestos abatement contractor.*

4.12-21e *Site-specific evaluation by a California Registered Environmental Assessor II shall be conducted at each identified existing and former dwelling area that may be affected by off-site utility line, roadway, or wastewater treatment and storage facility construction to identify surface indications and locations of septic tanks or cesspools prior to demolition of existing residences. Identified septic tanks shall be destroyed under permit of either the County Environmental Health Services Division or the Public Works Department..*

Surface conditions shall be evaluated by a California Registered Environmental Assessor II when the dwellings are vacated, and prior to demolition of the structures, regarding the possibility of previous site uses which may have included hazardous materials that could have been disposed of in on-site wastewater disposal systems.

Tank or cesspool destruction shall be monitored by a California Registered Environmental Assessor II regarding the likelihood of hazardous materials disposal in the systems. Any required remediation work shall be completed in accordance with State and County regulations prior to recordation of final small lot subdivision maps for the affected property.

4.12-21f *Disposal of auto parts, debris, household waste and similar materials by licensed waste haulers at approved waste disposal facilities shall be completed prior to any construction within off-site utility corridors.*

4.12-22 Operational hazards could occur due to expanded wastewater treatment facilities at the DCWWTP and SRWTP; and use of recycled water within the Specific Plan area.

With construction of dwellings and other uses in the Specific Plan area, the DCWWTP and SRWTP may be expanded and the amount of chemical use would increase. The increased chemical use could require more frequent chemical deliveries to the plant. The existing and future risk of a hazardous materials incident is slight due to the extensive precautions taken at the existing facilities. The precautions are described in the Risk Management and Prevention Program (RMPP) for Chlorine and Sulfur Dioxide for the DCWWTP site. SRWTP has precautions outlined in the RMPP for the plant, and specific precautions for use of chlorine and sulfur dioxide are described in the Chlorine/Sulfur Dioxide Procedures Manual. The greatest risk occurs during the unloading of chemicals, but this risk is small because staff has specific procedures used to unload the liquid chlorine and sulfur dioxide. The procedures include directions for parking the delivery vehicle, barricades and warning signs, equipment inspection, and inspections for leaks. Due to a positive history of past chemical use and the extensive regulatory precautions already in place, along with the plans to replace the chlorine and sulfur dioxide systems with Ultraviolet disinfection at DCWWTP, any increased chemical use at the existing facilities will result in a ***less than significant impact***.

The Specific Plan would allow use of recycled water for irrigation of parks, open space and other landscape areas. Recycled water would be supplied initially from the DCWWTP, and ultimately from the PGWWTP. The City of Roseville has indicated a willingness to be the operator for the system. The City has a successful program in place and has established protocols for its operations.

Exposure to recycled water could occur through drinking water that has been contaminated by recycled water, through contact with plant or soil materials that have been irrigated using recycled water, and inhalation of aerosols generated during spray irrigation with recycled water; however, tertiary treatment would provide an overall effective level of removal of pathogens and other harmful chemicals. Public health effects would only be likely to occur if the recycled water was confused with potable water or if ingestion were possible via another route, such as contact with a drinking water fountain or during play. The extent of the public health impacts at various potential user sites depends on site-specific conditions relating to types of uses, soil, proximity to surface waters, etc.

Construction of recycled water distribution pipelines present the possibility of cross-connection with potable water system, especially in areas where potable water systems are provided as a backup. Any potential for mixing of recycled water with the drinking water supply would pose a public health concern due to the possibility of ingestion of recycled water.

Title 17 of the California Code of Regulations (CCR), implemented by the Department of Health Services, provides specifications to avoid any potential for cross-connections with drinking water supplies. This includes identification (purple pipe) and signage of pipe materials, backflow prevention requirements, proper air gaps or cross-connection control design measures, plus minimum separation criteria for recycled water pipelines and water supply pipelines. The Department of Health Services, Public Water Supply Branch, has published the Guidance

Manual for Cross-Connection Control Programs, which provides detailed information on compliance with the requirements.

The quality of the recycled water would meet Title 22 requirements for all allowable unrestricted non-potable uses and the City of Roseville, with its experience and established protocols, would be the system operator. Because there is no evidence that use of water treated to Title 22 standards would result in undue exposure of people to risk, and a responsible entity for system operation has been identified, this is a ***less than significant impact***.

Mitigation Measures

No mitigation measures are required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Hazards identified within the Specific Plan area are local in nature and have no potential to contribute to cumulative hazardous conditions. By its very nature, the project will correct the current hazards conditions by cleaning up identified hazardous materials prior to construction, as required by regulation and the above mitigation measures. Future development and land uses will be subject to contemporary safety and hazardous materials controls, as set forth in the numerous regulations that control the use of potentially hazardous materials (see Regulatory Setting and discussion under Impact 4.12-18 above). No cumulative impacts related to hazards have been identified.

Mitigation Measures

No mitigation measures are required.

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