4.0 Environmental Setting, Impacts, and Mitigation Measures

The following is an introduction to the environmental analysis project-specific and cumulative impacts and general assumptions used in the analysis. The reader is referred to the individual technical sections of the Draft EIR regarding specific assumptions and methodology used in the analysis.

ANALYSIS ASSUMPTIONS GENERALLY USED TO EVALUATE THE IMPACTS OF THE MARTIS VALLEY COMMUNITY PLAN UPDATE

TREATMENT OF THE THREE LAND USE MAP SCENARIOS

As described in Section 3.0 (Project Description) the proposed Martis Valley Community Plan Update consists of a Proposed Land Use Diagram (PP) and 3 land use map alternatives (see **Figures 3.0-5** through **3.0-8**) to go with the policy document and are specifically identified below:

- Existing Martis Valley General Plan Land Use Map (noted as "AA" throughout the EIR)
- Alternative 1 Land Use Map (noted as "AB" throughout the EIR)
- Alternative 2 Land Use Map (noted as "AC" throughout the EIR)

The environmental effects of the Proposed Land Use Diagram and these three land use map alternatives are analyzed at an equal level of detail throughout the EIR, with a summary comparison of the environmental effects of each provided in Section 6.0 (Alternatives). Separate impact statements and analyses are provided for each land use map option under each environmental issue area. The following is an example of the format of the impact statements:

Impact 4.7.1 Construction Water Quality Impacts

PP Slope and soil disturbance associated with construction activities for the Proposed Land Use Diagram could cause accelerated soil erosion and sedimentation or the release of other pollutants to adjacent waterways. This would be a **significant** impact.

AA Slope and soil disturbance associated with construction activities for the Existing Martis Valley General Plan Land Use Map could cause accelerated soil erosion and sedimentation or the release of other pollutants to adjacent waterways. This would be a **significant** impact.

AB Implementation of the Alternative 1 Land Use Map would result in the same project design as the Existing Martis Valley General Plan Land Use Map and would involve on-site construction activities. This alternative would have the same impacts as Alternative AA on accelerated soil erosion and sedimentation, as well as the release of other pollutants to adjacent waterways. This would be a **significant** impact.

AC Implementation of the Alternative 2 Land Use Map would result in a similar project design as Alternative AA. This alternative would have the similar impacts as Alternative AA on accelerated soil erosion and sedimentation, as well as the release of other pollutants to adjacent waterways as a result of onsite construction. This would be a **significant** impact.

(analysis of impacts)

PP Proposed Land Use Diagram

Construction would consist of substantial grading and vegetation removal.

AA Existing Martis Valley General Plan Land Use Map

Construction would consist of substantial grading and vegetation removal.

AB Alternative 1 Land Use Map

The Alternative 1 Land Use Map would have nearly the same amount of required infrastructure as the Existing Martis Valley General Plan Land Use Map…..

AC Alternative 2 Land Use Map

The Alternative 2 Land Use Map would have…..

This approach will allow the County to choose among the three land use maps without resulting in the need for additional environmental review.

BUILDOUT ASSUMPTIONS

Tables 3.0-2 through **3.0-5** identify land use acreages and estimated number of residential dwelling units to occur under each of the land use map options. The environmental analysis provided in the Draft EIR generally assumes that 20 percent of the residential units identified in **Tables 3.0-2** through **3.0-5** would be permanent residents, while the remaining 80 percent would be second/vacation homes. This assumption is based on resort/tourist nature of the region and demographic data obtained from available Census data (complete 2000 Census data was not available at the time of preparation of this EIR), consultation with local agencies (Placer County, Town of Truckee) and other available sources.

GENERAL LAND DISTURBANCE ASSUMPTIONS FOR THE THREE LAND USE MAP SCENARIOS

Figures 3.0-5 through **3.0-8** identify areas anticipated to be developed that would be disturbed as a result of implementation of the Martis Valley Community Plan Update. Anticipated impacts to vegetation communities in the Plan area under the Proposed Land Use Diagram and the 3 land use map alternatives is identified in Section 4.9 (Biological Resources). The analysis also takes into account proposed (under application) and conceptual golf courses within the Plan area in areas designated as Open Space or Forest. These specific areas include the proposed Hopkins Ranch project with an 18-hole golf course (see map section 24 [DMB/Highlands Group, LLC] of **Figure 3.0-2**), the proposed Eaglewood project with an 18-hole golf course (see map section 23 [Martis Valley Associates LLC] of **Figure 3.0-2**), conceptual consideration of an 18-hole golf course at Waddle Ranch (see map sections 20 and 21 [Waddle Ranch LLC] of **Figure 3.0-2**), and conceptual consideration of an 18-hole and 9-hole golf courses at Siller Ranch (see map sections 26, 31, 35, and 36 [DMB/Highlands Group, LLC] of **Figure 3.0-2**). The proposed pattern of development illustrated in **Figures 3.0-5** through **3.0-8** is the basis to evaluate project-specific and cumulative environmental effects of the proposed Martis Valley Community Plan Update in relation to all potential foreseeable development in the Plan area that could occur directly or indirectly from adoption of the Community Plan.

In addition to the above, the analysis takes into account concept plans for development and/or the expansion of existing developed areas that have been presented to the public (e.g., "Completing the Vision at Northstar" see **Figures 4.0-1** and **4.0-2**); roadway and trail extensions under consideration as part of the Community Plan; and land ownership (e.g., private versus public ownership [U.S. Forest Service]).

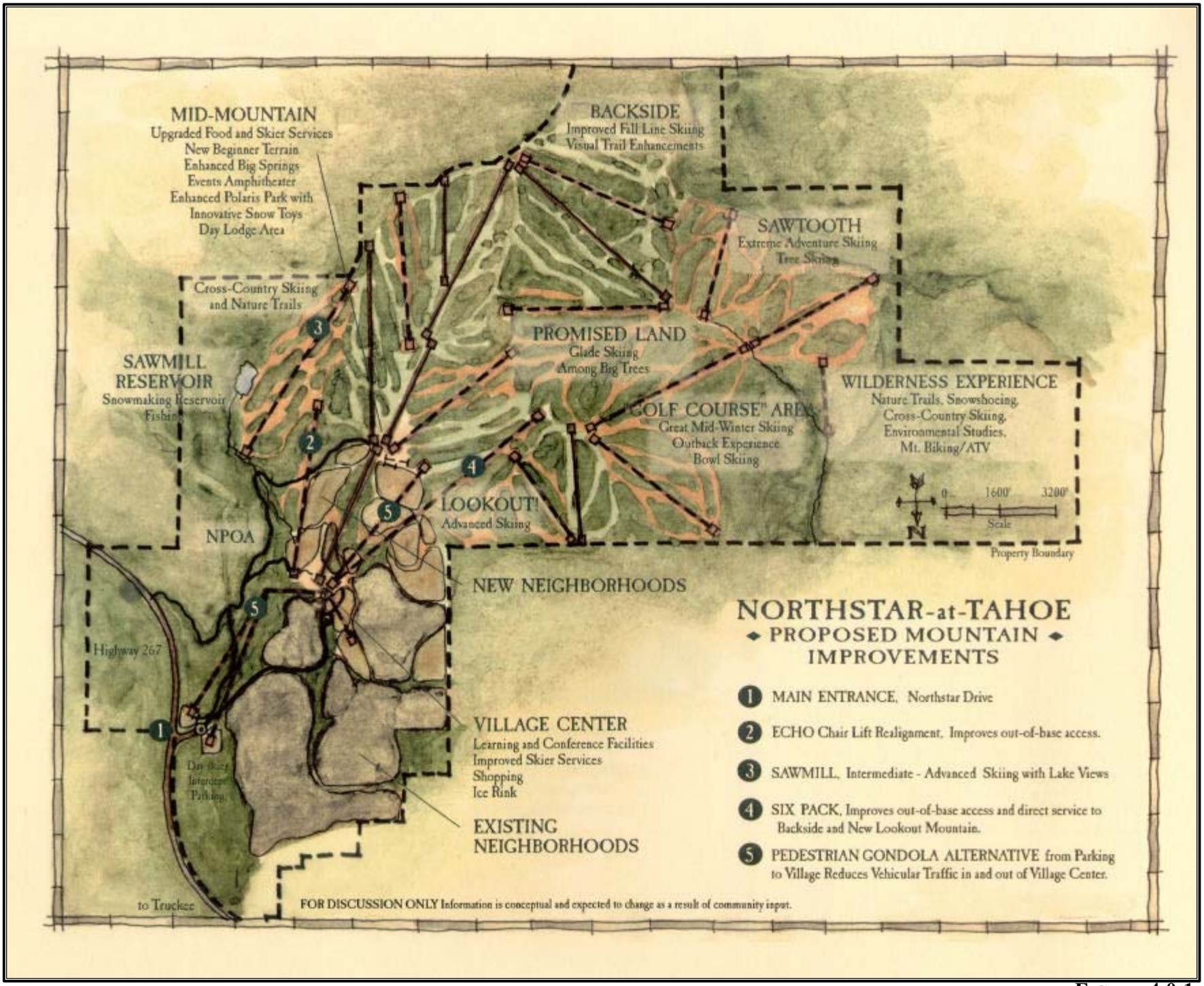

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FIGURE 4.0-1

NORTHSTAR-AT-TAHOE COMPLETING THE VISION OVERVIEW MAP

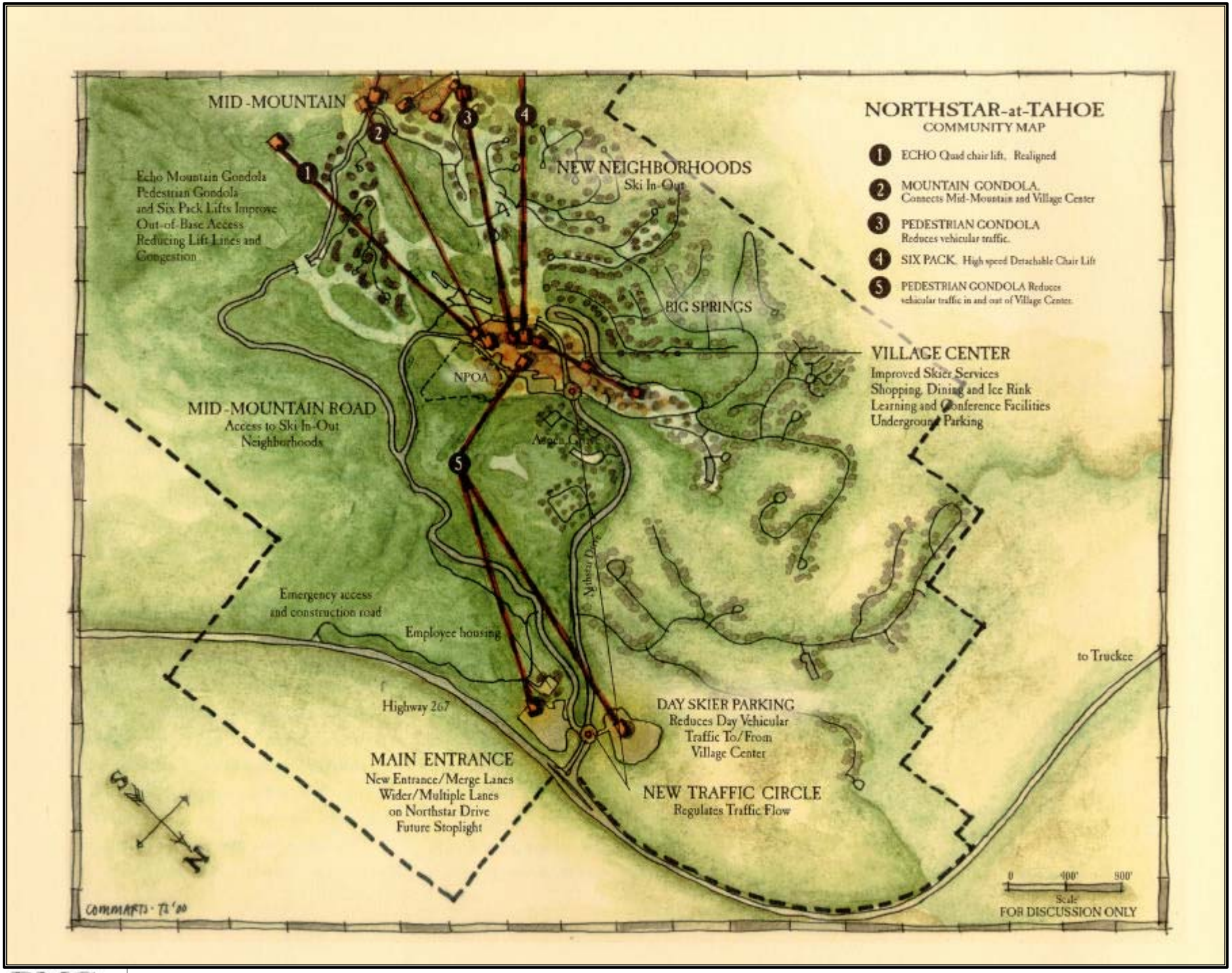

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FIGURE 4.0-2
NORTHSTAR-AT-TAHOE COMPLETING THE VISION CONCEPTUAL DEVELOPMENT MAP

While **Figures 3.0-5** through **3.0-8** identify land areas anticipated to experience substantial disturbance, land disturbance activities (e.g., rural residential development and timber production) in the remaining areas designated "Forest" would also occur. It should be noted that this information was generated to assist in qualitatively assessing overall environmental impacts to the Plan area and is not considered an exact description of future land disturbance in the Plan area. The exact extent of land area disturbance will be further defined as subsequent development projects are proposed.

GENERAL ASSUMPTIONS UTILIZED FOR EVALUATING CONSTRUCTION, PHASING AND OPERATIONAL IMPACTS OF THE IMPLEMENTATION OF THE MARTIS VALLEY COMMUNITY PLAN

The environmental analysis in this Draft EIR does consider environmental effects associated with construction and operation of proposed land uses in the Plan area. The extent and rate of development of the Plan area is currently unknown, and no phasing plan of development is proposed as part of the Martis Valley Community Plan Update. It is anticipated that the rate of development will be driven by market conditions. However, it is generally assumed that the first "phase" of development would likely consist of projects currently being processed by the County. These projects include Eaglewood, Hopkins Ranch, Martis Creek Estates, Village-at-Northstar, Coyote Run, Northstar-at-Tahoe Employee Housing, Northstar-at-Tahoe Unit 7A, and Schaeffer's Camp Restaurant.

APPROACH TO THE CUMULATIVE IMPACT ANALYSIS

CEQA Guidelines Section 15130 requires that EIRs include an analysis of the cumulative impacts of a project when the project's effect is considered cumulatively considerable. In general, the cumulative analysis provided in this Draft EIR is based on the existing land use plans provided by Placer County (via the Placer County General Plan and the Zoning Ordinance), the Town of Truckee (Town of Truckee General Plan and Zoning Ordinance), Nevada County (Nevada County General Plan and Zoning Ordinance), and the U.S Forest Service (Sierra Nevada Framework for Conservation and Collaboration), as well as by consideration of large-scale proposed and approved development projects listed in **Table 3.0-1**. Each technical section of the Draft EIR includes a description and analysis of the cumulative setting and potential environmental cumulative impacts specific to the environmental issue area (e.g. traffic, biological resources, air quality) that the proposed Martis Valley Community Plan Update would contribute to. Section 5.0 (Cumulative Impacts Summary) provides a summary of the cumulative impacts associated with the project.

TERMINOLOGY USED IN THE DRAFT EIR

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

AA: Existing Martis Valley General Plan Land Use Map Alternative.

AB: Alternative 1 Land Use Map.

AC: Alternative 2 Land Use Map.

Cumulative Significant Impact: A cumulative significant impact would result in a new substantial change in the environment from effects of the project when evaluated in the context of cumulative conditions in the surrounding area.

Less Than Significant Impact: A less than significant impact would cause no substantial change in the environmental (no mitigation required).

Martis Valley: The term Martis Valley refers to an area of land that is approximately 70 square miles (44,800 acres) in the central Sierra Nevada Mountains and is located within both Placer and Nevada Counties (see **Figure 3.0-1**).

Plan Area: The proposed Martis Valley Community Plan area, which consists of portions of Martis Valley within Placer County.

PP: *Proposed Land Use Diagram for the Martis Valley Community Plan.*

Significant Impact: A significant impact would cause (or would potentially cause) a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects using specified standards of significance. Identified "significant" impacts are those where the project has resulted in an impact that can be measured or quantified, while identified "potentially significant" impacts are those impacts where an exact measurement of the project's effect cannot be made but substantial evidence indicates that the impact would exceed standards of significance. Mitigation measures and/or project alternatives are identified to reduce project effects to the environment.

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

Standards of Significance: A set of criteria used by the lead agency to determine at what level or "threshold" an impact would be considered significant. Significance criteria used in this EIR include the CEQA Guidelines; factual or scientific information; regulatory performance standards of local, State, and Federal agencies; and, County goals, objectives, and policies. Specified criteria are identified at the beginning of the impact analyses of each technical section of the EIR.

Subsequent Projects: Anticipated development projects (e.g., residential, commercial, park, recreational) that would occur under the Martis Valley Community Plan. This would include public and utility extension projects including, but not limited to, roadway widenings and extensions, intersection improvements, water distribution improvements and trail extensions.

SECTION 4.1
LAND USE

This section of the Draft EIR describes the existing land uses in the Martis Valley Community Plan area, characterizes surrounding land uses, and discusses the Martis Valley Community Plan area in the context of the Placer County General Plan and other adopted plans and policies pertinent to the area.

4.1.1. EXISTING SETTING

REGIONAL SETTING

The Truckee-Tahoe region is composed of areas of Nevada and Placer Counties, the Town of Truckee, and part of the State of Nevada's Washoe County. Land use in the region is primarily associated with leisure, tourism, and outdoor recreational activities. The region is dominated by National Forests, Lake Tahoe, and several large state parks, although regional attractions also include the Town of Truckee, the Truckee River, the Truckee-Tahoe Airport, Donner Lake, Squaw Valley, and Alpine Meadows. The Town of Truckee, with the highest density of historic sites in California, initially developed around the emigrant trail, served soon after as a station for the Transcontinental Railroad, and was later known for logging and winter sports (Town of Truckee 1996).

Lake Tahoe, often referred to as the Jewel of the Sierra, attracts visitors from around the world. World-class ski resorts in the area, including Northstar-at-Tahoe, Heavenly Valley, Boreal Ridge, Squaw Valley, and Alpine Meadows, offer a variety of winter recreational activities. In addition, a wide variety of summer activities can be found in the region, including world-class golf, water sports, hiking, fishing, and mountain biking.

The region also contains many residential developments, a large concentration of secondary or recreational homes, public and private recreational areas and facilities, and commercial and industrial areas. See Section 4.2 (Population/Housing) for demographic information.

LOCAL SETTING

Martis Valley is located in both Nevada and Placer Counties, encompassing approximately 44,800 total acres. Within Placer County, however, Martis Valley consists of approximately 25,570 acres, or roughly 57 percent of the total acreage of the valley. Land use patterns consist of a wide range of urban and commercial areas, forest lands, public and private recreational areas and facilities, as well as areas designated for airport use. The Placer County portion of Martis Valley utilizes land use designations contained in the 1975 Martis Valley General Plan (see **Figure 3.0-6).**

Existing Land Use

A wide range of existing land uses characterize the Martis Valley Community Plan area (Plan area), including residential developments, public and private recreational areas and facilities, and commercial and industrial uses. The downtown area of the Town of Truckee is adjacent to the Plan area, as are areas of Truckee that contain existing residential developments. Several noteworthy land areas in the Placer County portion of Martis Valley include Martis Reservoir and the Martis Lake Creek National Recreation Area, the Northstar-at-Tahoe Ski Resort and Community, the Lahontan residential community, and the Truckee-Tahoe Airport.

The 20,000 acre-foot capacity Martis Reservoir, located within the Martis Creek Lake National Recreation Area, was completed in 1971 by the U.S. Army Corps of Engineers to provide flood protection for the Reno-Sparks area. The recreation area extends up the Martis Creek corridor and consists of approximately 1,800 acres designated as Open Space under the existing General Plan. Both the reservoir and the recreation area are managed by the U.S. Army Corps of Engineers.

Martis Reservoir Area

The Lahontan residential community consists of approximately 732 acres. Recreational activities include cross-country skiing, hiking, mountain biking, and golf, and General Plan designations include Medium Density Residential, Rural Residential, Open Space, and Recreation areas. Lahontan is a private community approved for 464 residential dwelling units. Lahontan 2, adjacent the northern boundary of Lahontan, is residential community of 164 acres approved for 73 single-family units and a nine-hole golf course.

Additional urban residential development areas in Martis Valley are associated with and located in close proximity to the Town of Truckee. Ponderosa Palisades, Sierra Meadows, Ponderosa Ranchos, and Martiswood Estates subdivisions are located in the northwest portion of Martis Valley and are accessed by roadways from within the Town of Truckee. Although the Placer County/Nevada County line divides the development area, the subdivisions do not stop at County lines and instead form one continuous developed area. Containing approximately 468 parcels within Placer County, these subdivisions serve more as primary homes to year-round residents of the area, whereas the Lahontan and Northstar developments are characterized by a large percentage of vacation or secondary homes.

Existing Residential Areas

The Northstar-at-Tahoe resort community provides year-round recreational activities, including skiing, hiking, mountain biking, and golf. Existing accommodations at Northstar consist of approximately 1,424 private homes and condominiums, some of which serve as rental properties. The Northstar area currently consists of 1,673 acres. General Plan Land Use designations in Northstar include Medium Density Residential, High Density Residential, Ski-Base Commercial, and Forest areas.

The Truckee-Tahoe Airport is the primary airport serving the entire north Lake Tahoe region, the Truckee area and the Donner Summit area of Northern California. The airport encompasses approximately 931 acres and is located near the center of Martis Valley approximately two miles southeast of the Town of Truckee along State Route 267. Only a small portion of the airport is within the Plan area. Airport facilities currently consist of two runways, the airport administration building, aircraft storage and maintenance hangars, an aircraft parking area, and fueling facilities. As specified by the Airport Comprehensive Land Use Plan (CLUP), runway climb-out extensions are directed over Forest and Open Space areas to limit noise impacts and address safety concerns in Martis Valley.

The airport is utilized by a wide-range of general aviation aircraft from single and multi-engine piston-powered aircraft to turboprop and business jet aircraft. The airport is used extensively for glider rides in the summer months, which make up 45 percent of the airport's summer use. The airport is not currently served by scheduled airline service. However, the airport could

accommodate commercial flights if needed in the future, although a larger terminal would be needed. (Truckee-Tahoe Airport Master Plan dated 1998 and adopted in 2000).

The Martis Valley General Plan recognizes the significance of the role played by the Airport as the "hub" of recreational air traffic for the north Lake Tahoe Resort area, as well as its own right as a commercial facility. Airport funding is provided from the Placer County selective taxes for special districts.

Timber/Forest

In the Martis Valley Community Plan area, there are approximately 10,882 acres in the Timber Production Zone (TPZ). Timber harvesting occurs in the Plan area, with recent timber harvesting occurring in 2000 on Siller Ranch, Trimont (Northstar), and Eaglewood properties.

Total forest lands in Placer County totaled 421,000 acres in 1996. Ownership of these lands includes 244,000 acres in national forests, 15,000 acres in other public lands, 69,000 acres owned by forest industries, and other private owners have 87,000 acres.

There are 115,983 acres designated TPZ (Timber Production Zone) in Placer County. There are five site classes for TPZ with "I" indicated best potential timber production and "V" indicating worst potential timber production. Of TPZ land, 4,130 acres are in the "I" category, 25,490 acres are in class "II," 38,471 acres designated 'III", 13,506 acres classed as "IV," and the remaining 34,386 acres are ranked "V" (CDF, 2001).

Land Ownership

Sierra Pacific is the largest single landowner within the Placer County portion of Martis Valley, with approximately 7,343 acres (29 percent). The 1975 Martis Valley General Plan designated the majority of land use in these areas as Forest, although some sections were designated as Low Density Residential and Commercial. However, a subsequent zoning designation of Timberland Production (TPZ) was applied to the area owned by Sierra Pacific.

Booth Creek Holdings owns and operates the Northstar-at-Tahoe Ski Resort and development area. According to Placer County, the Northstar area currently consists of approximately 1,673 acres (6.5 percent). The 1975 Martis Valley General Plan designates land use in the Northstar area as Medium Density Residential, High Density Residential, Ski-Base Commercial, Forest, and Open Space.

The Trimont Land Company holdings in the Placer County portion of Martis Valley consist of approximately 5,955 acres (23 percent) adjacent to Northstar. The 1975 Martis Valley General Plan designates these lands as Forest, Open Space, and Residential areas.

The United States Forest Service presently manages approximately 3,093 acres (12 percent) within the Placer County portion of Martis Valley. These areas consist of several small divided land parcels of various sizes, all of which lie within the Tahoe National Forest. These areas are designated as Open Space, Forest, and Recreation areas by the existing Martis Valley General Plan.

Siller Brothers (Siller Ranch) holdings within the Placer County portion of Martis Valley consist of approximately 2,328 acres (9 percent). The existing Martis Valley General Plan designates these lands as Commercial, Open Space, and Low, Medium, and Rural Residential.

The Lahontan residential community consists of approximately 896 acres, including Lahontan 2, (3.5 percent) within the Placer County portion of Martis Valley. The existing Martis Valley General Plan designates a variety of uses for Lahontan, including Open Space, Resort/Recreation, and Low, Medium, and Rural Residential. This development, originally known as Gooseneck Ranch and later as Lahontan, has a total potential development capacity of 464 D.U., of which 349 D.U. currently exist. Lahontan 2 has development capacity for 73 D.U. and a 9-hole golf course, which has been recently completed.

The Waddle Ranch holdings consist of approximately 598 acres (2 percent) within the Placer County portion of Martis Valley. The 1975 Martis Valley General Plan designates these areas as Commercial, Open Space, and medium and Low Density Residential.

Martis Valley Associates, L.L.C., (Eaglewood) holdings with the Placer County portion of Martis Valley consist of approximately 475 acres (2 percent), often referred to as Joerger Ranch. The 1975 Martis Valley General Plan designates the area as Commercial, Open Space, and Low, Medium, and Rural Residential.

Hopkins Ranch consists of approximately 285 acres (1.1 percent) within the Placer County portion of Martis Valley. The 1975 Martis Valley General Plan designates the area as Open Space and Low and Medium Density Residential.

As previously noted, the Truckee-Tahoe Airport encompasses 931 acres within Martis Valley. However, only 351 (1.3 percent) acres are within Placer County. The existing Martis Valley General Plan designates Commercial, Industrial, and Open Space areas adjacent to the airport, while the current Truckee-Tahoe Airport Comprehensive Land Use Plan suggests that planning around the airport should be done in a manner that is consistent with airport noise and safety concerns.

Approximately 2,930 additional acres (11 percent) exist within the Placer County portion of Martis Valley. These areas are predominantly characterized by existing residential developments adjacent to the Town of Truckee, as well as undeveloped holdings under various ownership. The residential development areas are designated as Low, Medium, and Rural Residential under the 1975 Martis Valley General Plan while other private holdings are designated as Forest areas.

Figure 4.1-1 depicts land ownership and existing subdivisions in Martis Valley.

4.1.2 REGULATORY FRAMEWORK

FEDERAL

U. S. Forest Service

Divisions of the United States Forest Service that operate in the Truckee-Tahoe Region include the Tahoe National Forest, the El Dorado National Forest, and the Lake Tahoe Basin Management Unit. Although individual activities consistent with the National Forest Management Act of 1976 exist in each district, long-range comprehensive management plans were developed for the Sierra Nevada National Forests in 1998. This management plan, encompassing 10 Sierra Nevada U.S. Forest Service districts and the Lake Tahoe Basin Management Unit, is known as the Sierra Nevada Framework for Conservation and Collaboration. The plan incorporates the latest scientific information into national forest management through broad public and intergovernmental participation in natural resource planning (USFS, 2000). The U.S. Forest Service is responsible for managing its land holdings within the Plan area.

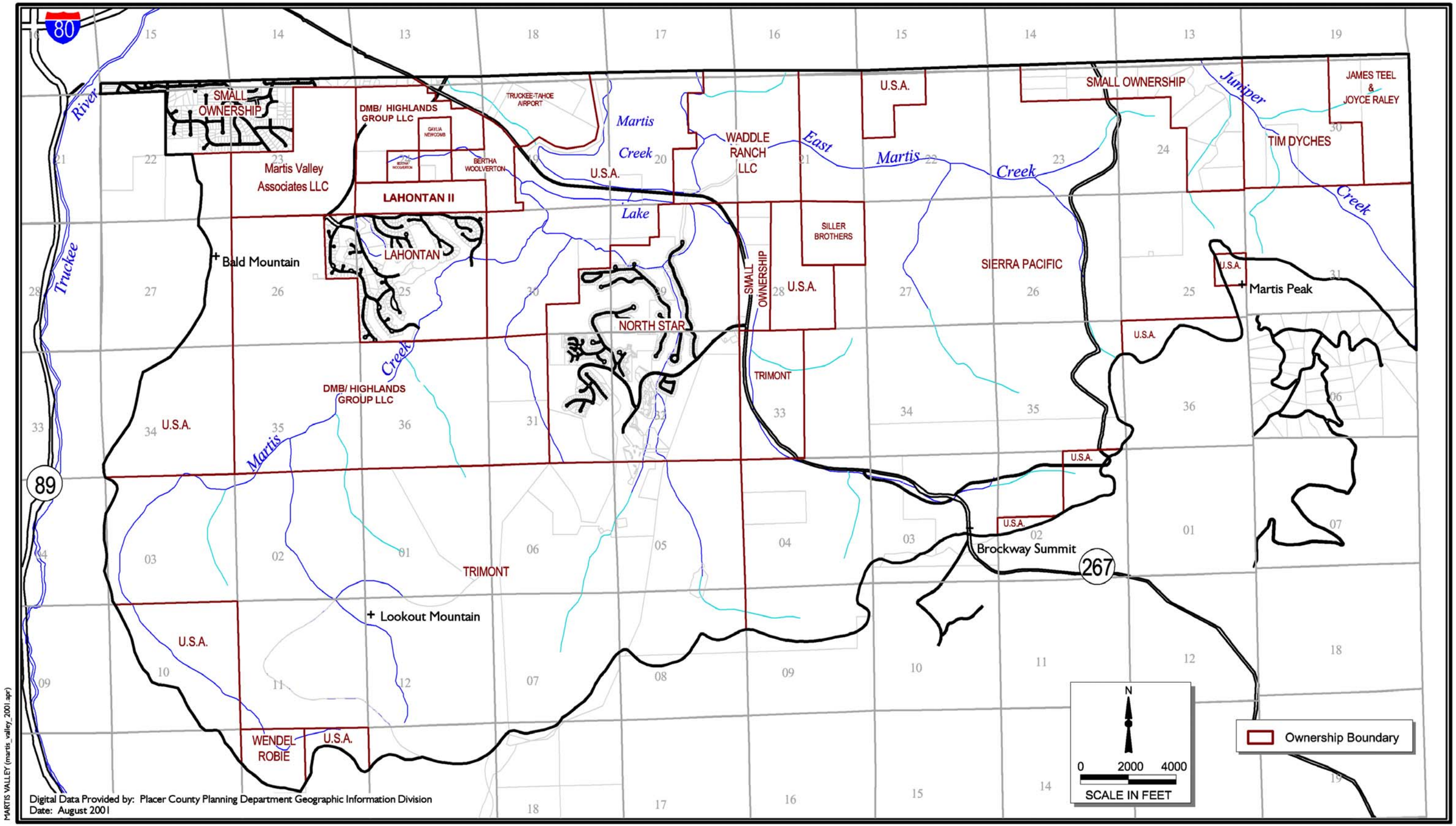

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FIGURE 4.1-1
MARTIS VALLEY OWNERSHIP

Federal Aviation Administration

Federal law sets forth standards contained in Federal Aviation Regulations (F.A.R.) Part 77, "Objects Affecting Navigable Airspace". This regulation requires FAA notification of any construction or alteration located within a series of imaginary surfaces established in FAR Part 77. The law was established for use by local authorities to control the height of objects near airports. The Part 77 Airspace drawing included in the 1998 Truckee Tahoe Airport Master Plan is a graphic depiction of this regulatory criterion. Encroachment of a structure into the imaginary surfaces constitutes an obstruction. Not all obstructions are a hazard to air navigation. The FAA presumes it to be a hazard, until a FAA aeronautical study determines that it does not have a substantial adverse effect on the safe and efficient use of navigable airspace.

The FAA cannot prohibit the construction of any structure determined to be a hazard. However, State law goes further and prohibits the construction of any structure that would penetrate any of a series of imaginary surfaces defined in FAR Part 77 unless the State Division of Aeronautics has issued a permit allowing its construction. As further discussed in Section 4.3 (Human Health/Risk of Upset), the Part 77 Airspace drawing for the Truckee-Tahoe Airport includes land area within the Plan area that would be subject to the associated standards.

STATE

California Department of Forestry

The California Forest Practice Act was adopted in 1973, resulting in a comprehensive forest regulation process. The California Department of Forestry (CDF) oversees enforcement of California's forest practice regulations. Under the Forest Practice Act, Timber Harvesting Plans (THPs) are submitted to CDF for commercial timber harvesting on all non-federal timberlands. The plans are reviewed for compliance with the Forest Practice Act and rules adopted by the State Board of Forestry and Fire Protection as well as other state and federal laws that protect watersheds and wildlife. CDF foresters also do on-site inspections of proposed logging sites. CDF has jurisdiction over all timber and forestlands, regardless of whether the land is zoned TPZ. Future development within the Plan area in timber areas would be required to obtain a Timberland Conversion Permit from CDF.

LOCAL

Martis Valley General Plan

A task force composed of representatives of Federal, State, and Local agencies, small and large landowners, and other concerned parties developed the Martis Valley General Plan to address future land use in Martis Valley. The plan, adopted in 1975, used a set of physical constraints to identify lands with development potential within Martis Valley; these constraints included slopes in excess of 30 percent, slopes with low stability, areas difficult to access, and areas of ecological value, including important wildlife habitats and open space area (Placer County, 1975).

The 1975 Martis Valley General Plan identifies and encourages specific policies regarding Martis Valley and its future development. These policies reinforce goals and recommend ways to achieve objectives discussed in the Plan (Placer County, 1975). The following policies are relevant to land use:

Environmental Resource Policies

Policy 1 Timber croplands, watershed lands, and urban forest lands must be managed and harvested on a coordinated basis and according to the recommendations of professional foresters.

Policy 2 Riparian vegetation areas and timberlands must be spared from urban encroachment.

Policy 3 Martis Creek and Truckee River should be protected by retention of natural areas along the channels (stream environment zones) either by acquisition or zoning protection. Roads, bridges, or any type of man-made improvements in these zones should be kept at an absolute minimum. Only those necessary to serve development and designed to provide maximum protection of the stream and riparian vegetation may be built. Truckee River and its tributary water sources should be retained at or near present flows and not used for domestic water supplies in order to protect the ecology of the stream and its environment.

Policy 4 Maintain sufficient groundwater recharge areas to allow the groundwater source to be perpetually available for domestic use.

Policy 10 Development should occur in areas of non-extreme climatic conditions to ease cost burdens of construction and maintenance.

Community Development and Transportation Policies

Policy 1 The flexibility to adjust the location of residential development within the developable lands is an integral part of this plan.

Policy 5 Limit annexations and encourage detachments of public service agencies in areas not formally committed to development. (This policy may not apply in Nevada County.)

Policy 14 No land development can be allowed or urban services provided outside developable lands depicted on Plate 3.

Policy 15 A variety of cluster and condominium housing to be conveniently served by the transportation system and designed to best fit development into the landscape with minimum disturbance of the natural features must be encouraged.

Policy 16 More ski lifts and runs to realize the full potential of the ski slopes should be developed; ski lift development must be kept in balance with the base facilities. Aerial construction techniques must be used in developing ski lift facilities, whenever feasible, so that construction roads will be limited in number.

Placer County General Plan

The 1994 Placer County General Plan describes assumptions, goals, and planning principles that provide a framework for land use decisions throughout the County, and is based on the belief that Placer County will experience continued growth and economic development because of its desirable climate, physical setting, plentiful resources, and proximity to the Sacramento metropolitan area (Placer County 1994). The General Plan acknowledges that public services

and recreational facilities will need to be expanded to accommodate this growth, and offers four planning principles as guidelines:

- A balance should be encouraged between jobs and labor force.
- Residential densities should decrease as a function of distance from urban areas.
- Compact and diverse business areas should be established that are easily accessible from primary transportation routes.
- Industrial areas should be located on large tracts of land near transportation facilities, and insulated from conflicting uses.

Within the General Plan, individual community plans are prepared for use within several different unincorporated areas of the County. These community plans, which address unique characteristics, concerns, and issues relevant to their respective areas, contain specific goals, policies, and programs. In addition, these community plans address land use, circulation, housing, public services, and other issues specific to the community. Martis Valley is one of 22 community plan areas within Placer County.

Land use policies within the Placer County General Plan pertinent to Martis Valley include:

Policy 1.A.1 The County will promote the efficient use of land and natural resources.

Policy 1.A.2 The County shall permit only low-intensity forms of development in areas with sensitive environmental resources or where natural or human-caused hazards are likely to pose a significant threat to health, safety, or property.

Policy 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.

Policy 1.A.4 The County shall promote patterns of development that facilitate the efficient and timely provision of urban infrastructure and services.

Policy 1.B.2 The County shall encourage the concentration of multi-family housing in and near village centers, major commercial areas, and neighborhood commercial centers.

Policy 1.B.3 The County shall encourage the planning and design of new residential subdivisions to emulate the best characteristics (e.g., form, scale, and general character) of existing, nearby neighborhoods.

Policy 1.B.4 The County shall ensure that residential land uses are separated and buffered from such major facilities as landfills, airports, and sewage treatment plants.

Policy 1.B.5 The County shall require residential project design to reflect and consider natural features, noise exposure of residents, visibility of structures, circulation, access, and the relationship of the project to surrounding uses.

Policy 1.B.6 The County shall require new subdivided lots to be adequate in size and appropriate in shape for the range of primary and accessory uses designated for the area.

Policy 1.B.7 The County shall require multi-family developments to include private, contiguous, open space for each dwelling.

Policy 1.B.8 The County shall require residential subdivisions to be designed to provide well-connected internal and external street and pedestrian systems.

Policy 1.B.9 The County shall discourage the development of isolated, remote, and/or walled residential projects that do not contribute to the sense of community desired for the area.

Policy 1.B.10 The County shall require that all residential development provide private and/or public open spaces in order to ensure that each parcel contributes to the adequate provision of light, air, and open space.

Policy 1.D.1 The County shall require that new commercial development be designed to encourage and facilitate pedestrian circulation within and between commercial sites and nearby residential areas rather than being designed primarily to serve vehicular circulation.

Policy 1.D.2 The County shall require new commercial development to be designed to minimize the visual impact of parking areas on public roadways.

Policy 1.D.3 The County shall require that new community commercial centers locate adjacent to major activity nodes and major transportation corridors. Community commercial centers should provide goods and services that residents have historically had to travel outside of the area to obtain.

Policy 1.D.5 The County shall encourage existing and new village centers to provide a variety of goods and services, both public and private.

Policy 1.D.6 The County shall promote use of first floor space in new buildings in village centers for retail, food service, financial institutions, and other high-volume commercial uses.

Policy 1.D.7 The County shall encourage new village centers and new commercial projects and areas to be designed to maintain a continuous retail facade on all street frontages, except for public plazas and pedestrian passages between the front and rear of buildings.

Policy 1.D.8 The County shall require minimal, or in some cases no, building setbacks for commercial and office uses in new village centers.

Policy 1.D.9 The County shall encourage parking in village centers to be consolidated in well-designed and landscaped lots or in well-located parking structures.

Policy 1.D.10 The County shall encourage the preservation of historic and attractive buildings in existing village centers, and encourage new development to enhance the character of village centers.

Policy 1.D.11 The County shall require that existing and new village centers and development within them be designed to integrate open spaces into the urban fabric where possible, especially taking advantage of any natural amenities such as creeks, hillsides, and scenic views.

Policy 1.F.1 The County will encourage the concentration of public and quasi-public facilities. New and expanded government offices and other professional offices should be encouraged to locate on land near existing government offices.

Policy 1.F.2 The County shall seek to locate new public facilities necessary for emergency response, health care, and other critical functions outside areas subject to natural or built environment hazards.

Policy 1.F.3 The County shall require public facilities, such as wells, pumps, tanks, and yards, to be located and designed so that noise, light, odors, and appearance do not adversely affect nearby land uses.

Policy 1.G.1 The County will support the expansion of existing winter ski and snow play areas and development of new areas where circulation and transportation system capacity can accommodate such expansions or new uses and where environmental impacts can be adequately mitigated.

Policy 1.G.2 The County shall strive to have new recreation areas located and designed to encourage and accommodate non-auto mobile access.

Policy 1.G.3 The County shall continue to require the development of new recreational facilities as new residential development occurs.

Policy 1.I.1 The County shall require that significant natural, open space, and cultural resources be identified in advance of development and incorporated into site-specific development project design. The Planned Development and Commercial Planned Development provisions of the Zoning Ordinance can be used to allow flexibility for this integration with valuable site features.

Policy 1.I.2 The County shall require that development be planned and designed to avoid areas rich in wildlife or of a fragile ecological nature (e.g., areas of rare or endangered plant species, riparian areas). Alternatively, where avoidance is infeasible or where equal or greater ecological benefits can be obtained through off-site mitigation, the County shall allow project proponents to contribute to off-site mitigation efforts in lieu of on-site mitigation.

Policy 1.K.1 The County shall require that new development in scenic areas (e.g., river canyons, lake watersheds, scenic highway corridors, ridgelines and steep slopes) is planned and designed in a manner which employs design, construction, and maintenance techniques that:

a. Avoids locating structures along ridgelines and steep slopes;

b. Incorporates design and screening measures to minimize the visibility of structures and graded areas; and

c. Maintains the character and visual quality of the area.

Policy 1.K.3 The County shall require that new development in rural areas incorporates landscaping that provides a transition between the vegetation in developed areas and adjacent open space or undeveloped areas.

The proposed Martis Valley Community Plan policy document contains includes goals, policies and implementation programs that are consistent with the policy provisions of the Placer County General Plan.

Placer County Zoning Ordinance

The Placer County Zoning Ordinance, Chapter 30 of the Placer County Code was adopted by the Placer County Board of Supervisors in July of 1995 and was amended in 2001. The Zoning Ordinance, which is consistent with the General Plan and applicable community plans, regulates the use of land, buildings and structures, and establishes minimum regulations and standards for the development of land within Placer County. **Figures 4.1-2** through **4.1-2c** depicts zoning classifications in Martis Valley.

The zoning ordinance establishes 22 zones and 13 combining districts that are applied Countywide, with the exception of areas covered by the Squaw Valley Land Use Ordinance, the Tahoe City Community Plan, and the Tahoe City Area General Plan. **Table 4.1-1** lists the zoning classifications and combining districts applicable to Placer County and Martis Valley.

TABLE 4.1-1
ZONING CLASSIFICATIONS IN PLACER COUNTY

Zone	Map Code
Resource and Open Space Districts	
Forestry	F
Open Space	O
Timberland Production Zone	TPZ
Water Influence	W
Commercial and Industrial Districts	
Airport	AP
Commercial Planned Development	CPD
General Commercial	C2
Highway Services	HS
Neighborhood Commercial	C1
Office and Professional	OP
Residential Districts	
Residential Forest	RF
Residential Multi-Family	RM
Residential Single-Family	RS
Combining Districts	
Agricultural	-AG
Building Site	-B
Conditional Use Permit Required	-UP
Design Review	-Dc, -Dh, -Ds
Development Reserve	-DR
Planned Residential Development	-PD

Town of Truckee General Plan

Land use planning activities in and around the Town of Truckee are governed by the 1995 General Plan, which is designed to accommodate projected growth through 2014. Guiding principles in the General Plan propose locating significant new development around existing developed areas, designating an adequate amount of land as Commercial to meet projected demand, limiting the locations of freeway oriented commercial development, discouraging future subdivision of estate type parcels within Town boundaries outside existing subdivisions, increasing infill development around Tahoe Donner, preventing "commercial sprawl," prohibiting mass parking areas and large single building forms, and allowing a mix of uses within commercial areas. To achieve these principles, the Town has identified specific areas for development, including the Downtown Study Area, the Donner Lake Community Area, the Tahoe-Donner Planned Community, three future planned communities, and one Special Study area.

Adjacent the Plan area, designated land uses in the Town of Truckee include Special Study Area, Planned Community-1, Public, Residential (1-2 D.U./acre), Residential Cluster-5, High Density Residential, Commercial, and Industrial.

Truckee-Tahoe Airport

Development of the Plan area is subject to height restrictions of Federal Aviation Regulations (FAR) Part 77 and the Tahoe Truckee Airport Comprehensive Land Use Plan (CLUP). The CLUP is adopted and administered by the Foothill Aviation Land Use Commission (ALUC). ALUC reviews development applications and determines the compatibility of the project to the height, noise and safety guidelines of the CLUP.

Truckee-Tahoe Airport Master Plan

Coffman Associates was retained by the Truckee-Tahoe Airport District to prepare an updated Airport Master Plan. The Truckee Tahoe Airport Master Plan, dated June 1998, was adopted in 2000 by the Truckee Tahoe Airport District. Under the 1998 Truckee Tahoe Airport Master Plan a third runway, new terminal building, parking, hangers and warehouses are identified. The plan predicts that aircraft operations at the Truckee-Tahoe Airport would consist of single and multi-engine business, charter and personal aircraft.

The 1998 Airport Master Plan illustrates that the operations characteristics of the airport have changed dramatically from what was presented in the earlier master plan. For instance the current flight paths of the airport are not consistent with flight paths projections. Also, the number of airport operations today is only around 75 percent of that projected by the earlier Master Plans and the mix of aircraft using the airport is also different.

Truckee Tahoe Airport Comprehensive Land Use Plan

The Foothill Airport Land Use Commission (ALUC) adopted a Comprehensive Land Use Plan (CLUP) in 1986. The Foothill Airport Land Use Commission prepared an update in 1990 to include revised noise contours. The CLUP suggests that land use policies and regulations in Martis Valley should be consistent with concerns to minimize public exposure to noise and safety hazards, provide for safe aircraft operations, and protect the airport as a public resource (CLUP, 1990). The plan established areas of influence within which airport operations are likely to affect other land uses, and proposes restraints to minimize conflicts within those boundaries (see **Figure 4.3-2**). The 1990 CLUP does not reflect the current actual airport operations and misidentifies the radius

at the end of runway 28 and the main runway (Truckee Tahoe Airport District, Janna Caughron, personal communication, July 2001).

Nevada County General Plan

The 1995 Nevada County General Plan indicates that the extent of public land located within Nevada County is a primary factor in determining the composition of the County's land use pattern. The County encompasses approximately 943 square miles; of that, the U.S. Forest Service, the Bureau of Land Management, and the Spenceville Wildlife and Recreation Area consist of approximately 314 square miles. In regards to the Truckee-Tahoe area, land uses in eastern Nevada County are concentrated around Donner Lake and subdivisions north of the Town of Truckee, with relatively few residential land uses outside of these established areas.

Rural-20, Planned Development (anticipated to include Estate, Forest-40, Forest-160, Residential, and Open Space uses), Open Space, Public, and Industrial are the land use designations in the portion of Nevada County adjacent the Plan area. These designations are shown on **Figure 3.0-3**.

4.1.3. IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A land use impact is considered significant if implementation of the project would result in any of the following:

1) Conflict with adopted land use general plan/community plan/specific plan designation(s) or zoning, or policies contained within such plans (e.g., Placer County General Plan, Martis Valley General Plan, Northstar at Tahoe Master Plan, Truckee Tahoe Airport Comprehensive Land Use Plan) that would result in a physical impact on the environment;

2) Be incompatible with existing land uses in the vicinity;

3) Affect timber resources or operations (e.g., conversion of designated timberland production areas, or impacts from incompatible land uses); or

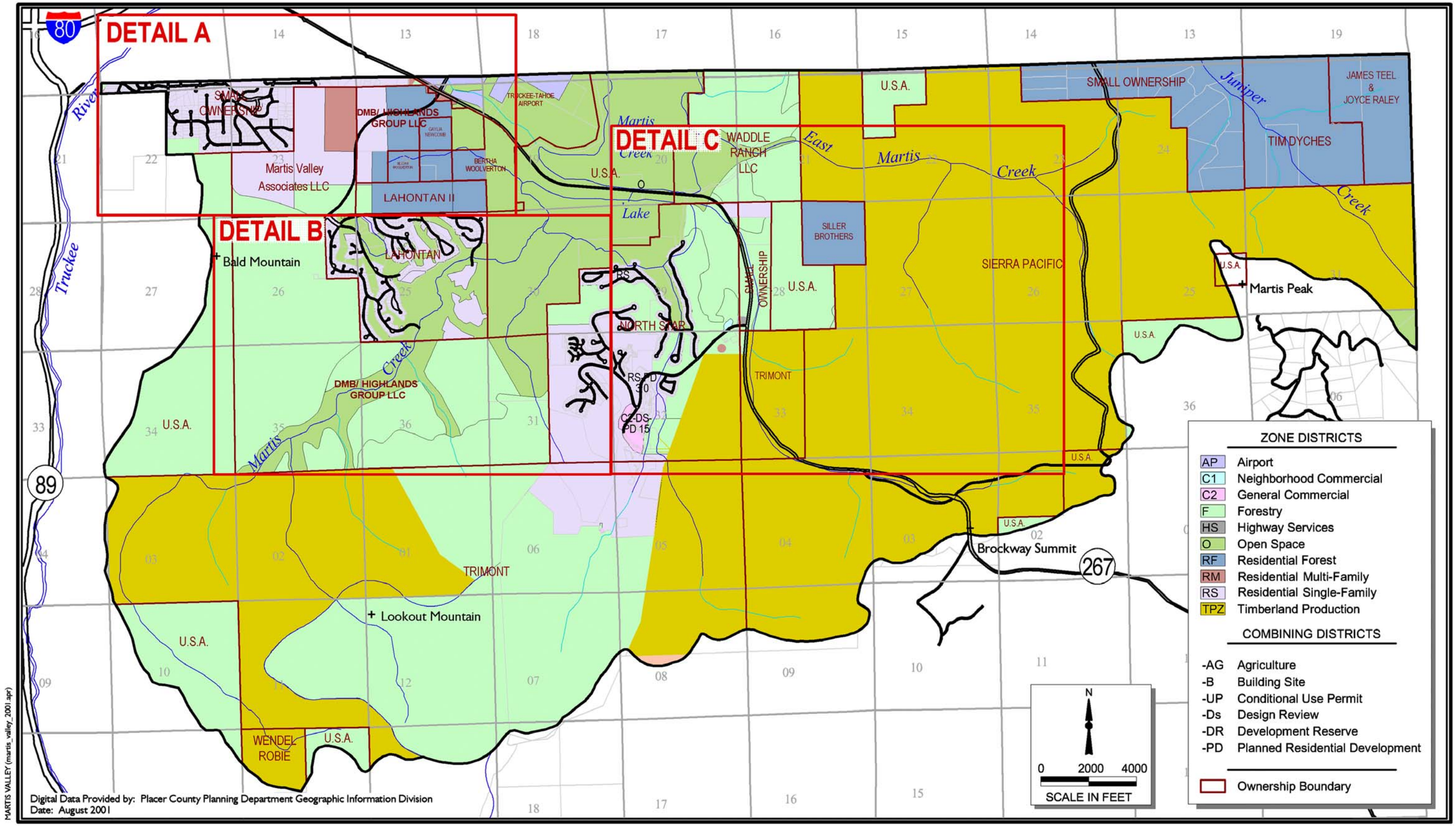
4) Result in a substantial alteration of the present and/or planned land use of an area.

The Notice of Preparation for this EIR indicated that the project would not disrupt or divide the physical arrangement of an established community. Thus, this issue is not discussed in this EIR.

METHODOLOGY

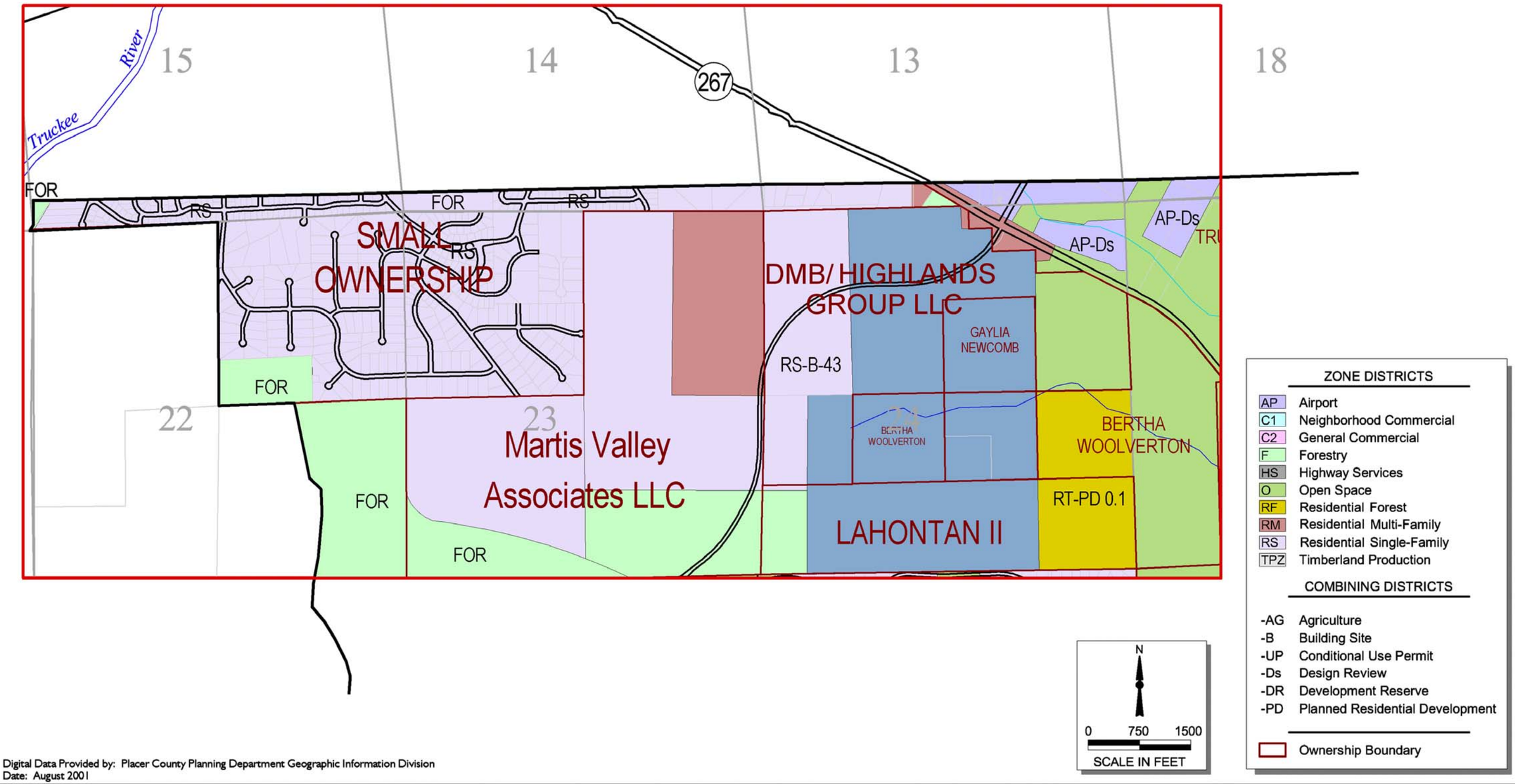
Evaluation of potential land use impacts of the proposed Martis Valley Community Plan, Proposed Land Use Diagram and the three land use map alternatives (AA, AB, AC) was based on review of planning documents pertaining to the Plan area, including the Placer County General Plan, Placer County Zoning Code, Martis Valley General Plan, Truckee General Plan, Truckee-Tahoe Airport Comprehensive Land Use Plan, Truckee-Tahoe Airport Master Plan, and Nevada County General Plan; consultation with appropriate agencies; and field review of the Plan area and surroundings.

The analysis contained herein is based on buildout conditions for Martis Valley as set forth in the planning documents of Placer County, Town of Truckee, and Nevada County. This analysis does not assess impacts associated with the phasing of projects or interim improvements.



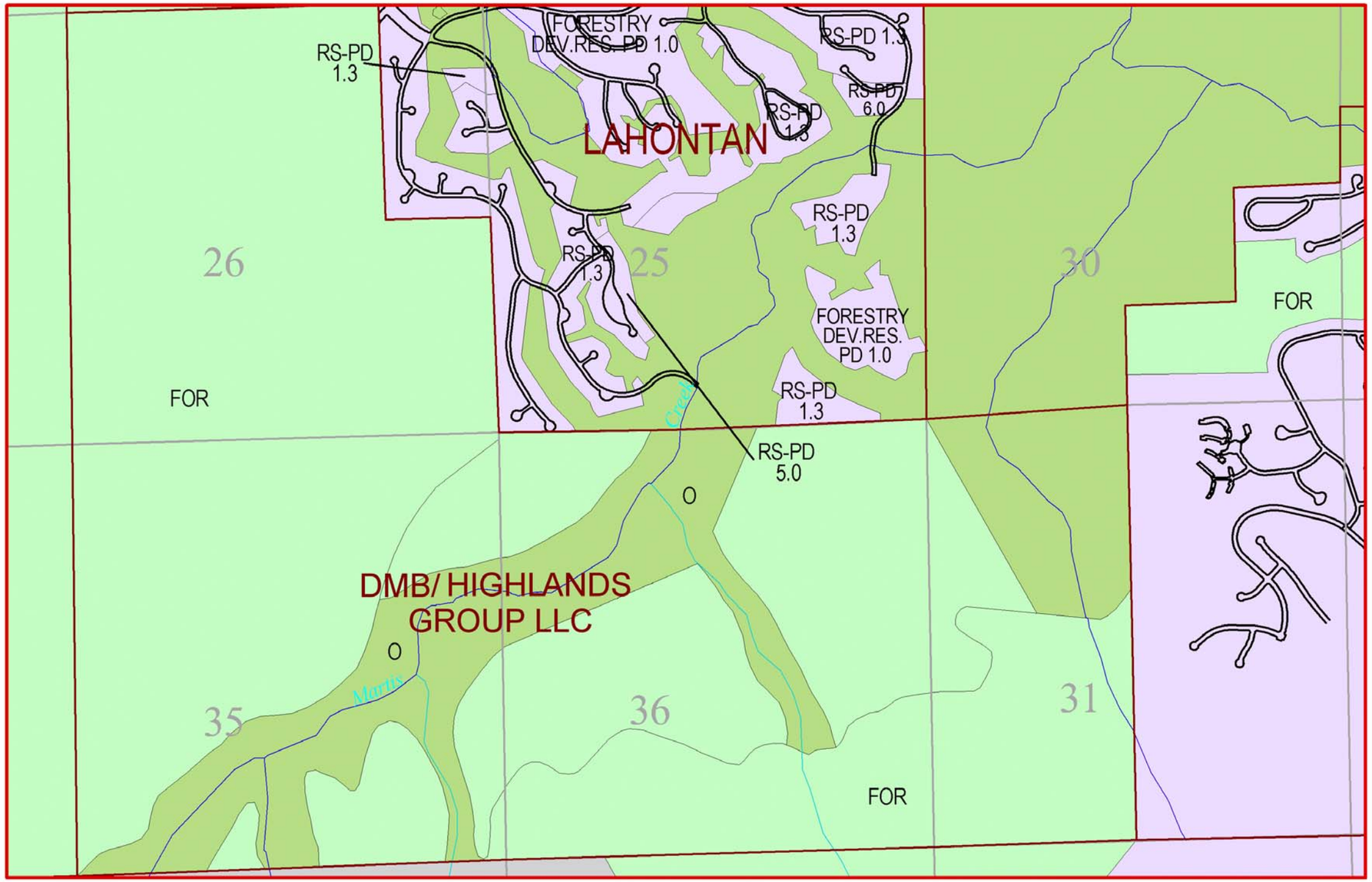
PMC
PACIFIC MUNICIPAL CONSULTANTS

FIGURE 4.1-2
MARTIS VALLEY ZONING DESIGNATIONS



PMC
PACIFIC MUNICIPAL CONSULTANTS

FIGURE 4.1-2A
MARTIS VALLEY ZONING DESIGNATIONS



ZONE DISTRICTS

- AP Airport
- C1 Neighborhood Commercial
- C2 General Commercial
- F Forestry
- HS Highway Services
- O Open Space
- RF Residential Forest
- RM Residential Multi-Family
- RS Single-Family Residential
- TPZ Timberland Production

COMBINING DISTRICTS

- -AG Agriculture
- -B Building Site
- -UP Conditional Use Permit
- -Ds Design Review
- -DR Development Reserve
- -PD Planned Residential Development

Ownership Boundary

N

0 750 1500

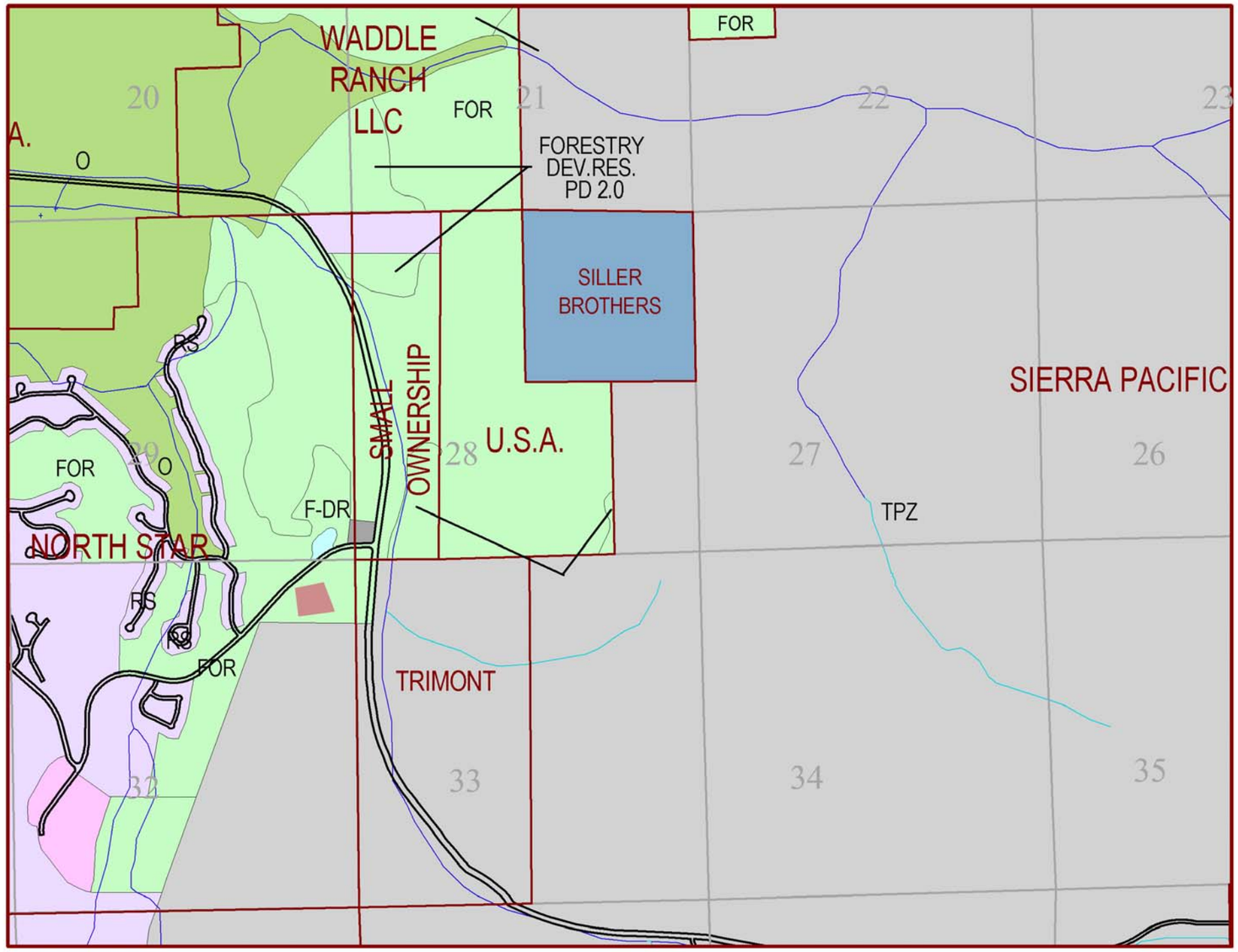
SCALE IN FEET

Digital Data Provided by: Placer County Planning Department Geographic Information Division
Date: August 2001

MARTIS VALLEY (martis_valley_2001.apr)

PMC
PACIFIC MUNICIPAL CONSULTANTS

FIGURE 4.1-2B
MARTIS VALLEY ZONING DESTINATIONS



ZONE DISTRICTS

AP	Airport
C1	Neighborhood Commercial
C2	General Commercial
F	Forestry
HS	Highway Services
O	Open Space
RF	Residential Forest
RM	Residential Multi-Family
RS	Residential Single-Family
TPZ	Timberland Production

COMBINING DISTRICTS

-AG	Agriculture
-B	Building Site
-UP	Conditional Use Permit
-Ds	Design Review
-DR	Development Reserve
-PD	Planned Residential Development

Ownership Boundary

N

0 750 1500

SCALE IN FEET

Digital Data Provided by: Placer County Planning Department Geographic Information Division
Date: August 2001

MARTIS VALLEY (martis_valley_2001.apr)

PMC

FIGURE 4.1-2C
MARTIS VALLEY ZONING DESIGNATIONS

The focus of this land use analysis is on land use impacts that would result from the new community plan policy document and land use map. Specific impacts and issues associated with biological resources, visual resources, noise, traffic, public services/utilities, hydrology, geology and other environmental issue areas are addressed in each technical section and the reader is referred to other EIR sections for detailed analysis of other relevant environmental effects as a result of Plan development.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.1.1 Consistency with Relevant Land Use Planning Documents

PP The Proposed Land Use Diagram would potentially conflict with land use planning documents relevant to the Plan area. This is a **significant** impact.

AA The proposed Existing Martis Valley General Plan Land Use Map Alternative would potentially conflict with land use planning documents relevant to the Plan area. This is a **significant** impact.

AB The proposed Alternative 1 Land Use Map would potentially conflict with land use planning documents relevant to the Plan area. This is a **significant** impact.

AC The proposed Alternative 2 Land Use Map would potentially conflict with land use planning documents relevant to the Plan area. This is a **significant** impact.

Placer County General Plan

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Land use designations within the proposed Martis Valley Community Plan policy document are Forest, Open Space, Water, Forest Residential, Rural Residential, Low Density Residential, Medium Density Residential, High Density Residential, General Commercial, Tourist/Resort Commercial, Professional Office and Public/Quasi Public. These designations are consistent with the 13 designations delineated within the County General Plan for the purpose of updating community plans. The proposed Martis Valley Community Plan policy document also includes goals, policies and implementation programs that are consistent with the policy provisions of the Placer County General Plan and further refine the previous provisions in the 1975 Martis Valley General Plan (see discussion below).

The Proposed Land Use Diagram and land use map Alternatives AA, AB, and AC would be consistent with applicable Placer County General Plan and existing Martis Valley General Plan policies pertaining to the type and location of proposed land uses. The Placer County General Plan defers to the Martis Valley General Plan Land Use Diagram to provide the specific land use designations. The Proposed Land Use Diagram and Alternatives AA through AC would generally result in minor modifications to the existing Martis Valley General Plan land use designations shown in **Figure 3.0-6**, and would not result in an increased intensification of land uses beyond what is currently allowed (see **Tables 3.0-2** through **3.0-6**).

In addition to the General Plan land use designations, the Placer County General Plan includes a Generalized Land Use Map that contains 5 general land use categories, Agriculture, Resource Protection, Rural Residential, Timberland, and Urban, that each correlate to 1 or more of the proposed Community Plan land use designations. The uses in Alternative AA are consistent with the Generalized Land Use Map. However, the Proposed Land Use Diagram and alternatives AB and AC deviate slightly from this map. Alternatives AB and AC designate Forest as a land use in

areas designated as Urban in the General Plan Generalized Land Use Map. Specifically, these areas are located in properties under the ownership of Sierra Pacific and Trimont. Alternative AC and the Proposed Land Use Diagram also proposes Rural Residential, Open Space, Tourist/Resort Commercial, and Professional Office uses in an area designated as Timberland in the Generalized Land Use Map; the loss of timberland is discussed in this section under Impact 4.1.3 Conversion of Timber/Forest Lands. This area is located in the Siller Ranch property which is adjacent to the Lahontan property on the south and west. Since the proposed Community Plan update includes a General Plan Amendment that will bring the community plan into consistency with the General Plan, impacts related to the Generalized Land Use Map resulting from Alternatives AB and AC are considered **less than significant**.

Existing Martis Valley General Plan

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

The existing Martis Valley General Plan policies directly applicable to land use include Environmental Resource Policies (ERP) 1, 2, 3, 10, and 11 and Community Development and Transportation Policies (CDTP) 1, 14, 15, and 16 which are listed under 4.2 Regulatory Framework. Policies 1 and 2 are discussed under Impact 4.1.3 Conversion of Timber/Forest Lands. Policies associated with traffic, air quality, noise, hydrology, geology, public services, utilities, parks and recreation, population and housing, and visual resources are discussed in their respective sections within this EIR. While these policies are not specifically stated in the proposed Martis Valley Community Plan, the proposed Community Plan policy document and PP and Alternatives AA, AB, and AC are consistent with, and expand upon, these land use policies.

The Proposed Land Use Diagram and Alternatives AA, AB, and AC designate the area surrounding Martis Creek and Martis Creek as well as areas designated for retention in the Martis Valley General Plan Open Space and Forest, consistent with ERP 3 and 11. PP and Alternatives AA through AC do not designate lands for development in areas of extreme climatic conditions, (i.e., it does not place residential uses on summits, with the exception of allowing ski-oriented commercial uses in areas with extreme climates, consistent with ERP 10). The Proposed Land Use Diagram and Alternatives AA, AB, and AC designate general areas for residential development within developable lands, as indicated on the Existing Martis Valley General Plan plates depicting the Summary of Environmental Sensitivity and Lands Having Development Potential; this is consistent with CDTP 1 and 14. Residential designations that would allow high density development and condominiums have been situated in areas that would be served by the transportation network within Martis Valley and where disturbance of natural features would be minimized in accordance with CDTP 15. The Proposed Land Use Diagram and alternatives would allow additional ski-based commercial development including runs and trails on the Siller Ranch property, thus accommodating additional ski facilities consistent with CDTP 16.

The Proposed Land Use Diagram and Alternatives AA through AC would continue environmental protection measures related to land use within the existing Martis Valley General Plan. The Martis Valley Community Plan policies and implementation programs listed below would serve to further reduce land use impacts associated with revising land use designations and adopting a new policy document for Martis Valley. Therefore, land use impacts regarding consistency with the existing Martis Valley General Plan are **less than significant** for PP and Alternatives AA, AB, and AC.

Town of Truckee General Plan

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Land uses in Truckee adjacent the Plan area include Special Study Area (adjacent Truckee River), Planned Community-1, Public, Residential (1-2 D.U./acre), Residential Cluster-5, High Density Residential, Commercial, and Industrial. The western portion of the Plan area has existing residential development bordering the Special Study Area, Residential Cluster-5, and Residential 1-2 uses in Truckee. Development proposed under the Proposed Land Use Diagram and Alternatives AA through AC would place land uses that would be compatible with existing and planned land uses in Truckee adjacent the Plan area. Therefore, this impact is **less than significant**.

Nevada County General Plan

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Development under the Proposed Land Use Diagram and Alternatives AA, AB, and AC would place Open Space east of the Truckee-Tahoe Airport surrounding Martis Creek Lake, adjacent to the Open Space designated in Nevada County to the north. The Existing Martis Valley General Plan Land Use Map designates Waddle Ranch, adjacent Nevada County, as Medium Density Residential and Forest while the Proposed Land Use Diagram and alternatives AB and AC propose Low Density Residential and Forest in this location that is adjacent a Planned Development designation that would allow Estate, Residential, Forest-40, and Open Space uses. The eastern portion of the Plan area is designated Forest, with 40 to 640 acre minimum parcel sizes under the Proposed Land Use Diagram and the 3 alternatives; this area borders Forest-160, Rural-20, Forest-40, and a Planned Development in Nevada County. Uses designated on the Proposed Land Use Diagram and the three land use map alternatives would be compatible with the Nevada County land uses bordering the Plan area, resulting in a **less than significant** impact.

Truckee-Tahoe Airport Comprehensive Land Use Plan and Airport Master Plan

PP Proposed Land Use Diagram

Development projects within the Plan area are subject to the review of the Foothill Airport Land Use Commission and the Airport's Comprehensive Land Use Plan. The policies and guidelines contained in the CLUP are intended to protect the safety and general welfare of people in the vicinity of the airport and assure the safety of air navigation. Specifically, the plan seeks to protect the public from the adverse effects of aircraft noise, to reduce the number of people exposed to airport-related hazards and to ensure that the height of structures will not affect navigable airspace.

The policies included in the CLUP for land use planning are directly related to noise and safety issues associated with development in the vicinity of the airport. Consistency with these policies is addressed in Sections 4.3 (Human Health/Risk of Upset) and 4.5 (Noise).

As proposed, the Community Plan document does not require consistency with policies included in the CLUP. Lack of consistency with the CLUP and Airport Master Plan is a potentially **significant** impact.

AA Existing Martis Valley General Plan Land Use Map Alternative

As discussed under PP, the Community Plan document does not require consistency with policies

included in the CLUP. Lack of consistency with the CLUP and Airport Master Plan is a potentially **significant** impact.

AB Alternative 1 Land Use Map

As discussed under Alternative AA, the Community Plan document does not require consistency with policies included in the CLUP. Lack of consistency with the CLUP and Airport Master Plan is a potentially **significant** impact.

AC Alternative 2 Land Use Map

As discussed under Alternative AA, the Community Plan document does not require consistency with policies included in the CLUP. Lack of consistency with the CLUP and Airport Master Plan is a potentially **significant** impact.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs would reduce potential impacts discussed regarding consistency of the project with planning documents applicable to the Plan area.

Policy 1.A.1 *The County will promote the efficient use of land and natural resources.*

Policy 1.A.2 *The County shall permit only low-intensity forms of development in areas with sensitive environmental resources or where natural or human-caused hazards are likely to pose a significant threat to health, safety, or property.*

Policy 1.B.3 *The County shall ensure that residential land uses are separated and buffered from such major facilities as landfills, airports and sewage treatment plants.*

Policy 1.B.4 *The County shall require residential project design to reflect and consider natural features, noise exposure of residents, visibility of structures, circulation, access, and the relationship of the project to surrounding uses.*

Policy 1.B.6 *The County shall require multi-family developments to include private, contiguous, open space for each dwelling.*

Policy 1.B.7 *The County shall require residential subdivisions to be designed to provide well-connected internal and external street and pedestrian systems.*

Policy 1.B.9 *The County shall require that all residential development provide private and/or public open spaces in order to ensure that each parcel contributes to the adequate provision of light, air, and open space.*

Policy 1.B.10 *The County shall require that significant natural, open space, and cultural resources be identified in advance of development and incorporated into site-specific development project design. The Planned Development and Commercial Planned Development provisions of the Zoning Ordinance can be used to allow flexibility for this integration with valuable site features.*

Policy 1.C.1 *The County shall require that new commercial development be designed to encourage and facilitate pedestrian circulation within and between commercial sites and nearby residential areas rather than being designed primarily to serve vehicular circulation.*

Policy 1.C.3 *The County shall identify any available opportunities for small commercial centers where some of the adjoining residents needs can be met without necessitating a trip outside the area.*

Policy 1.E.1 *The County will support the expansion of existing winter ski and snow play areas and development of new areas where circulation and transportation system capacity can accommodate such expansions or new uses and where environmental impacts can be adequately mitigated.*

Policy 1.F.1 *The County shall encourage the sustained productive use of forestland as a means of providing open space and conserving other natural resources.*

Policy 1.F.2 *The County shall recognize and acknowledge the multi-use management strategy adopted by the United States Forest Service for the Martis Valley/Tahoe National Forest area.*

Policy 1.F.3 *The County shall discourage development that conflicts with timberland management.*

Policy 1.F.4 *The County shall review development plans for all lands adjoining USFS lands for compatibility with the long-term maintenance and use of the forestlands.*

Policy 1.F.5 *The County shall work closely and coordinate with agencies involved in the regulation of timber harvest operations to ensure that County conservation goals area achieved.*

Policy 1.F.6 *The County shall support the continued use of Timberland Production zoning and its related tax benefits as a means of encouraging on-going private forest resource production efforts and management plans. The County shall also consider approval of all reasonable compatible uses of such lands as long as they meet the intent of maintaining such areas for the long-term production of timber.*

Policy 1.G.1 *The County shall support the preservation and enhancement of natural landforms, native vegetation, and natural resources as open space. The County shall permanently protect, as open space, areas of natural resource value, including open meadows, mixed conifer forests, high montane meadows, riparian corridors, and floodplains.*

Policy 1.G.2 *The County shall require that significant natural, open space, and cultural resources be identified in advance of development and incorporated into site-specific development project design. The Planned Residential Developments (PD) provisions of the Zoning Ordinance can be used to allow flexibility for this integration with valuable site features.*

Policy 1.G.3 *The County shall require that development be planned and designed to avoid areas rich in wildlife or of a fragile ecological nature (e.g., areas of rare or endangered plant species, riparian areas).*

Policy 1.G.4 *The County shall support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.*

Policy 1.G.5 *The County shall review development projects and ensure that areas of development are subordinate to the creation of interconnected greenbelts and open spaces, and areas, which tie together the large expanses of undeveloped lands in Martis Valley.*

Policy 1.G.6 *The County shall require that new development be designed and constructed to protect, enhance, rehabilitate, and restore the following types of areas and features as open space to the maximum extent feasible:*

a. High erosion hazard areas;

b. Scenic and trail corridors;

c. Streams, streamside vegetation;

d. Wetlands;

e. Other significant stands of vegetation; and,

f. Wildlife corridors

Policy 1.G.7 *The County shall prohibit the extraction of natural resources, except for water, from areas of dedicated open space except as meets resource management planning that protects, rehabilitates, and maintains and enhances the natural characteristics of such resources (i.e. fire protection, flood prevention, etc.)*

Policy 1.J.1 *The County shall encourage the preservation of timber producing lands as regional open space, and protect these areas from urban encroachments.*

Policy 5.E.1 *The County shall support the continued use of the Truckee-Tahoe Airport as a general purpose airport.*

Policy 5.E.2 *The County shall work with the Airport Land Use Commission in the planning of land uses around the Truckee-Tahoe Airport to ensure protection of airport operations from urban encroachment and establishment of compatible uses within the over-flight zones.*

Implementation Programs

1. *Review all development projects for compliance with the Environmental Review Ordinance and to determine that all feasible mitigation measures have been identified.*

   Responsible Agency/Department: Land Development Departments

Time frame: Ongoing
Funding: Application fees

2. *Review all development projects for compliance with the goals, policies and specific discussions contained in the Land Use section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors
   Time frame: Ongoing
   Funding: Application fees

3. *Provide appropriate land use designations and consistent zone districts to meet the intent of the Plan's goals, policies and specific discussions. The following chart (**Table 1.1**) "General Rules for Determining Zoning Consistency" shall be used in the implementation of the Plan.*

   Responsible Agency/Department: Planning Department
   Time frame: As a part of the MVCP update
   Funding: Application fees

4. *Encourage PDs, where appropriate, as a tool to promote environmentally sensitive land use which maximizes the creation of open space areas.*

   Responsible Agency/Department: Planning Department
   Time frame: On-going
   Funding: Permit Fees

5. *Use specific zoning classification to implement appropriate land use development criteria including minimum parcel size, setbacks, height restrictions, maximum lot coverage and limitations on the use of land.*

   Responsible Agency/Department: Planning Department
   Time frame: As a part of the MVCP update
   Funding: General Fund

6. *Require dedication of open space easements where appropriate within development projects to preserve and protect open space resources.*

   Responsible Agency/Department: Development Review Committee
   Time frame: Ongoing
   Funding: Permit Fees

Mitigation Measure

The following mitigation measures would apply to Alternatives AA, AB, and AC. Mitigation Measure MM 4.1.1a would be added as a land use policy under Goal 1.A. of the Community Plan document and Mitigation Measure MM 4.1.1b would be added as an implementation program under land use in the Land Use Section of the Community Plan.

MM 4.1.1a All development projects shall conform to the provisions of the Tahoe Truckee Airport District Comprehensive Land Use Plan to include, but not be limited to, land use and height restrictions of the CLUP.

MM 4.1.1b Review all development projects for consistency compliance with the goals, policies and specific requirements contained within the Comprehensive Land Use Plan and Airport Master Plan for the Truckee-Tahoe Airport.

Responsible Agency/Department: Planning Department
Time frame: Ongoing
Funding: Application fees

Implementation of the above mitigation measures would reduce impacts relating to consistency between Proposed Land Use Diagram and Alternatives AA, AB, and AC and Truckee-Tahoe Airport planning documents to **less than significant**.

Impact 4.1.2 Land Use Conflicts

PP Development under the Proposed Land Use Diagram would result in substantial change in land use in the Plan area. This is a **potentially significant** impact.

AA Development under the Existing Martis Valley Community Plan Land Use Map Alternative would result in substantial change in land use in the Plan area. This is a **potentially significant** impact.

AB Development under the Alternative 1 Land Use Map would result in substantial change in land use in the Plan area. This is a **potentially significant** impact.

AC Development under the Alternative 2 Land Use Map would result in substantial change in land use in the Plan area. This is a **potentially significant** impact.

Internal

PP Proposed Land Use Diagram

Development conditions under the Proposed Land Use Diagram would result in a substantial change in land use in the Plan area resulting from the removal of open space and wooded areas. In some cases, development would occur adjacent to existing residential, commercial, or timber harvest areas. Existing development on Northstar, Lahontan, Lahontan II, and the small ownership properties in the northwest area of the plan would be bordered by a similar level of residential development, or open space, as shown on **Figure 3.0-5** that depict the land use designations for the Proposed Land Use Diagram.

Environmental impacts, such as effects on biological resources, visual resources, traffic, noise, and air quality, resulting from changes to land use are discussed in their respective sections of this EIR.

This change from a rural area to a more suburban character is planned for and supported by the Placer County General Plan and the 1975 Martis Valley General Plan. In addition, the proposed Community Plan policy document includes general land use goals and policies regarding the wise, efficient, and environmentally sensitive use of lands in Martis Valley. However, implementation of the Proposed Land Use Diagram would result in conversion of land areas currently in open space and may result in conflicts with activities in areas designated Forest.

AA Existing Martis Valley General Plan Land Use Map Alternative

Development conditions under the Existing Martis Valley General Plan Land Use Map would result in a substantial change in land use in the Plan area resulting from the removal of open space and wooded areas, similar to the Proposed Land Use Diagram. In some cases, development would occur adjacent to existing residential, commercial, or timber harvest areas. Existing development on Northstar, Lahontan, Lahontan II, and the small ownership properties in the northwest area of the plan would be bordered by a similar level of residential development, or open space, as shown on **Figure 3.0-6** that depict the land use designations for the Existing Martis Valley General Plan Land Use Map.

Environmental impacts, such as effects on biological resources, visual resources, traffic, noise, and air quality, resulting from changes to land use are discussed in their respective sections of this EIR.

This change from a rural area to a more suburban character is planned for and supported by the Placer County General Plan and the 1975 Martis Valley General Plan. In addition, the proposed Community Plan policy document includes general land use goals and policies regarding the wise, efficient, and environmentally sensitive use of lands in Martis Valley. However, implementation of the Existing Martis Valley General Plan Land Use Map would result in conversion of land areas currently in open space and may result in conflicts with activities in areas designated Forest.

AB Alternative 1 Land Use Map

Development conditions under the Alternative 1 Land Use Map would result in a substantial change in land use in the Plan area resulting from the removal of open space and wooded areas, similar to the Proposed Land Use Diagram. However, this alternative would avoid conflicts associated with the elimination of residential development east of SR 267 associated with the Sierra Pacific property as compared to the Proposed Land Use Diagram. In some cases, development would occur adjacent to existing residential, commercial, or timber harvest areas. Existing development on Northstar, Lahontan, Lahontan II, and the small ownership properties in the northwest area of the plan would be bordered by a similar level of residential development, or open space, as shown on **Figure 3.0-7** that depict the land use designations for the Alternative 1 Land Use Map.

Environmental impacts, such as effects on biological resources, visual resources, traffic, noise, and air quality, resulting from changes to land use are discussed in their respective sections of this EIR.

This change from a rural area to a more suburban character is planned for and supported by the Placer County General Plan and the 1975 Martis Valley General Plan. In addition, the proposed Community Plan policy document includes general land use goals and policies regarding the wise, efficient, and environmentally sensitive use of lands in Martis Valley. However, implementation of the Alternative 1 Land Use Map would result in conversion of land areas currently in open space and may result in conflicts with activities in areas designated Forest.

AC Alternative 2 Land Use Map

Development conditions under the Alternative 2 Land Use Map would result in a substantial change in land use in the Plan area resulting from the removal of open space and wooded areas, similar to the Proposed Land Use Diagram. However, this alternative would avoid conflicts associated with the elimination of residential development east of SR 267 associated with the

Sierra Pacific property as compared to the Proposed Land Use Diagram. In some cases, development would occur adjacent to existing residential, commercial, or timber harvest areas. Existing development on Northstar, Lahontan, Lahontan II, and the small ownership properties in the northwest area of the plan would be bordered by a similar level of residential development, or open space, as shown on **Figure 3.0-8** that depict the land use designations for the Alternative 2 Land Use Map.

Environmental impacts, such as effects on biological resources, visual resources, traffic, noise, and air quality, resulting from changes to land use are discussed in their respective sections of this EIR.

This change from a rural area to a more suburban character is planned for and supported by the Placer County General Plan and the 1975 Martis Valley General Plan. In addition, the proposed Community Plan policy document includes general land use goals and policies regarding the wise, efficient, and environmentally sensitive use of lands in Martis Valley. However, implementation of the Alternative 2 Land Use Map would result in conversion of land areas currently in open space and may result in conflicts with activities in areas designated Forest.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs would reduce potential impacts discussed regarding land use conflicts.

Policy 1.A.5 *The County shall view development in the northwest portion of the plan area as a part of the Truckee community and make every attempt to integrate such development with development in the Town of Truckee. Development elsewhere in the plan area, including at Northstar-at-Tahoe, Waddle Ranch, Siller Ranch, and Lahontan, shall recognize that Truckee is a hub of the region where many of the necessary services and support facilities will continue to be located.*

Policy 1.B.2 *The County shall encourage the planning and design of new residential subdivisions to emulate the best characteristics (e.g., form, scale, and general character) of existing, nearby neighborhoods.*

Policy 1.B.3 *The County shall ensure that residential land uses are separated and buffered from such major facilities as landfills, airports, and sewage treatment plants.*

Policy 1.B.4 *The County shall require residential project design to reflect and consider natural features, noise exposure of residents, visibility of structures, circulation, access, and the relationship of the project to surrounding uses.*

Policy 1.B.5 *The County shall require new subdivided lots to be adequate in size and appropriate in shape for the range of primary and accessory uses designated for the area.*

Policy 1.B.8 *The County shall discourage the development of isolated, remote, and/or walled residential projects that do not contribute to the sense of community desired for the area.*

Policy 1.C.2 *The County shall require new commercial development to be designed to minimize the visual impact of parking areas on public roadways.*

Policy 1.C.5 *The County shall encourage compatible and complementary uses in the few remaining vacant commercial properties in and around the airport.*

Policy 1.C.6 *Large, single use commercial facilities (greater than 35,000 sq. ft. shall not be considered appropriate for the Martis Valley Community Plan area due to parcel sizes and location of suitable commercial land.*

Policy 1.C.13 *The County shall encourage new development to enhance the character of existing village centers such as at Northstar-at-Tahoe.*

Policy 1.C.14 *The County shall require that existing and new village centers and development within them be designed to integrate open spaces into the urban fabric where possible, especially taking advantage of any natural amenities such as creeks, hillsides, and scenic views and/or developing integrated outdoor recreational amenities.*

Policy 1.D.3 *The County shall require public facilities, such as wells, pumps, tanks, and storage yards, to be located and designed so that noise, light, odors, and appearance do not adversely affect nearby land uses.*

Policy 1.F.3 *The County shall discourage development that conflicts with timberland management.*

Policy 1.F.4 *The County shall review development plans for all lands adjoining USFS lands for compatibility with the long-term maintenance and use of the forestlands.*

Policy 1.F.5 *The County shall work closely and coordinate with agencies involved in the regulation of timber harvest operations to ensure that County conservation goals area achieved.*

Policy 1.F.6 *The County shall support the continued use of Timberland Production zoning and its related tax benefits as a means of encouraging on-going private forest resource production efforts and management plans. The County shall also consider approval of all reasonable compatible uses of such lands as long as they meet the intent of maintaining such areas for the long-term production of timber. (It is acknowledged that 705 acres of TPZ lands are designated for residential purposes with single-family residential-development reserve zoning, with such zoning fully effective after the removal of the TPZ designation.)*

Policy 1.J.1 *The County shall encourage the preservation of timber producing lands as regional open space, and protect these areas from urban encroachments.*

Policy 1.J.2 *The County shall assure that removal of economic mineral resources does not conflict with surrounding land uses or the stated desire for maintaining the natural environment.*

Implementation Programs

2. *Review all development projects for consistency with the goals, policies and specific discussions contained in the Land Use section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors
   Time frame: Ongoing
   Funding: Application fees

3. *Provide appropriate land use designations and consistent zone districts to meet the intent of the Plan's goals, policies and specific discussions. The following chart (Table 1.1) "General Rules for Determining Zoning Consistency" shall be used in the implementation of the Plan.*

   Responsible Agency/Department: Planning Department
   Time frame: As a part of the MVCP update
   Funding: Application fees

5. *Use specific zoning classifications to implement appropriate land use development criteria including minimum parcel size, setbacks, height restrictions, maximum lot coverage and limitations on the use of land.*

   Responsible Agency/Department: Planning Department
   Time frame: As a part of the MVCP update (2002)
   Funding: General Fund

Town of Truckee/Nevada County

As discussed under Impact 4.1.1, the land uses proposed under PP and Alternatives AA, AB, and AC would be compatible with adjacent land uses in the Town of Truckee and Nevada County. While development under each of the alternatives would change the character of the area by increasing urbanization, the type and level of development allowed under each alternative would not conflict with land uses in neighboring jurisdictions. This is a less than significant impact.

Truckee-Tahoe Airport

Development within the vicinity of the Truckee-Tahoe Airport clear, approach/departure, and overflight zones, depicted on **Figure 4.3-2,** as well as development within the airport noise contours, depicted on **Figure 4.5-2**, could experience land use conflicts with airport uses. The CLUP contains guidelines for land uses developed within these zones. Airport land use conflicts would be related to safety and noise issues and are discussed within Sections 4.3 (Human Health/Risk of Upset) and 4.5 (Noise) of this document. Implementation of mitigation measures MM 4.1.1a and b, MM 4.3.3a through c and MM 4.5.4a and b would reduce land use conflicts associated with the airport to less than significant.

Mitigation Measures

Implementation of the Proposed Land Use Diagram and Alternatives AA through AC and mitigation measures MM 4.1.1a and b, MM 4.3.3a through c and MM 4.5.4a and b would reduce potential land use conflicts to the Town of Truckee/Nevada County and the Truckee-Tahoe Airport to less than significant. However, implementation of the proposed Community Plan policies and implementation programs would not completely eliminate potential land use conflicts with Open Space and Forest designated areas and residential/commercial development. This would be a **significant and unavoidable** impact.

Impact 4.1.3 Loss of Forest and Timber Lands

PP Development under the Proposed Land Use Diagram could result in the loss of forestland. However, given the amount, location, and use of impacted forestland under the Proposed Land Use Diagram, this is a **significant** impact.

AA Development under the Existing Martis Valley General Plan Land Use Map Alternative does not change the impact to forest or timberland. This is a **significant** impact.

AB The Alternative 1 Land Use Map would reduce the allowed development of forestland and timber resources. This is a **significant** impact.

AC The Alternative 2 Land Use Map would allow development that could result in the loss of forestland. However, given the location, use, and no net loss of impacted forestland under this alternative, this is a **significant** impact.

PP Proposed Land Use Diagram

As shown in **Table 3.0-2**, the Proposed Land Use Diagram proposes to maintain 17,065 acres of the Plan Area as Forest, a portion of this area is currently zoned Timber Production (TPZ). However, the Proposed Land Use Diagram would result in loss of land area designated TPZ as well as additional areas that are forested but not zoned TPZ. Section 4.8 (Geology and Soils) identifies that soil capability for timber production. The environmental effects of this land conversion are addressed in the various environmental issue areas of Section 4.0 of this EIR.

In order to develop Plan areas zoned TPZ, a permit to convert timberland to a different use would need to be approved by the California Department of Forestry (CDF). Prior to issuance of a "permit to convert", a Timber Harvest Plan (THP) must be approved by the California Department of Forestry because the trees would be removed and sold. A Timber Harvest Plan (THP) must be prepared consistent with the rules and regulations of the Board of Forestry pursuant to the provisions of the Z'Berg-Nejedly Forest Practice Act of 1973.

CDF does not require mitigation for the loss of timberland at this time. If CDF requests that a portion of the site be left for timber production, it has been CDF's experience that homeowners will protest the removal of the timber on site in the future. Therefore, saving a portion of the timber is not a viable mitigation measure. Once the timber resource is lost it cannot be replaced and no viable mitigation measure is available (Dan Scatina, CDF, personal communication August 24, 2001).

Implementation of the Proposed Land Use Diagram would result in the conversion of timberland and forest resources and would affect future timber harvest operations. This is considered a significant impact.

AA Existing Martis Valley Community Plan Land Use Map Alternative

As shown in **Table 3.0-3**, the Existing Martis Valley General Plan Land Use Map proposes to maintain 13,692 acres of the Plan Area as Forest, a portion of this area is currently zoned Timber Production (TPZ). In addition, this alternative designates 6,439 acres as Open Space, which also includes some land area designated TPZ. However, the Existing Martis Valley General Plan Land Use Map would result in loss of land area designated TPZ as well as additional areas that are forested but not zoned TPZ. Section 4.8 (Geology and Soils) identifies that soil capability for timber production. The environmental effects of this land conversion are addressed in the various environmental issue areas of Section 4.0 of this EIR.

Implementation of the Existing Martis Valley General Plan Land Use Map would result in the conversion of timber land and forest resources and would affect future timber harvest operations. This is considered a significant impact.

AB Alternative 1 Land Use Map

As shown in **Table 3.0-4**, the Alternative 1 Land Use Map proposes to maintain 14,704 acres of the Plan Area as Forest, a portion of this area is currently zoned Timber Production (TPZ). In addition, this alternative designates 6,584 acres as Open Space, which also includes some land area designated TPZ. However, the Alternative 1 Land Use Map may result in loss of land area designated TPZ as well as additional areas designated Forest but not zoned TPZ. Section 4.8 (Geology and Soils) identifies that soil capability for timber production. The environmental effects of this land conversion are addressed in the various environmental issue areas of Section 4.0 of this EIR.

Implementation of the Alternative 1 Land Use Map would result in the conversion of timberland and forest resources and would affect future timber harvest operations. This is considered a significant impact.

AC Alternative 2 Land Use Map

As shown in **Table 3.0-5**, the Alternative 2 Land Use Map proposes to maintain 17,789 acres of the Plan Area as Forest, a portion of this area is currently zoned Timber Production (TPZ). However, the Alternative 2 Land Use Map may result in loss of land area designated TPZ as well as additional areas designated Forest but not zoned TPZ. Section 4.8 (Geology and Soils) identifies that soil capability for timber production. The environmental effects of this land conversion are addressed in the various environmental issue areas of Section 4.0 of this EIR.

Implementation of the Alternative 2 Land Use Map would result in the conversion of timberland and forest resources and would affect future timber harvest operations. This is considered a significant impact.

Policies and Implementation Measures

The following proposed Martis Valley Community Plan policies and implementation programs are intended to conserve Placer County's forest resources, enhance the quality and diversity of forest ecosystems, reduce conflicts between forestry and other uses, and encourage a sustained yield of forest products.

Policy 1.F.1 *The County shall encourage the sustained productive use of forestland as a means of providing open space, maintaining the quality of Martis Valley's scenic vistas, and to conserve other natural resources.*

Policy 1.F.2 *The County shall recognize and acknowledge the multi-use management strategy adopted by the United States Forest Service for the Martis Valley/Tahoe National Forest area.*

Policy 1.F.3 *The County shall discourage development that conflicts with timberland management.*

Policy 1.F.4 *The County shall review development plans for all lands adjoining USFS lands for compatibility with the long-term maintenance and use of the forestlands.*

Policy 1.F.5 *The County shall work closely and coordinate with agencies involved in the regulation of timber harvest operations to ensure that County conservation goals area achieved.*

Policy 1.F.6 *The County shall support the continued use of Timberland Production zoning and its related tax benefits as a means of encouraging on-going private forest resource production efforts and management plans. The County shall also consider approval of all reasonable compatible uses of such lands as long as they meet the intent of maintaining such areas for the long-term production of timber.*

Policy 1.J.1 *The County shall encourage the preservation of timber producing lands as regional open space, and protect these areas from urban encroachments.*

Policy 9.E.3 *The County shall support the conservation of a healthy forest including outstanding areas of native vegetation, including, but not limited to, open meadows, riparian areas, Great Basin Safe Scrub, Mixed Coniferous Forest, Montane Chaparral, Montane Meadow, and Red Fir Forest.*

Policy 9.E.4 *The County shall ensure that landmark trees and major groves of native trees are preserved and protected. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.*

Policy 9.E.6 *The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.*

Policy 9.E.7 *The County shall support the management of wetland and riparian plant communities and forested lands for passive recreation, groundwater recharge, nutrient catchment, and wildlife habitats. Such communities shall be restored to a healthy forest environment or expanded, where possible.*

Policy 9.E.8 *The County shall require that new development protect, restore, rehabilitate, and manage the native vegetative communities to the maximum extent possible.*

Policy 9.E.9 *The County shall require that development on hillsides be limited to maintain valuable native forest vegetation and Great Basin Sage scrub communities and to control erosion.*

Policy 9.E.12 *The County shall support the preservation of native trees and the use of native seed sources and seedlings and drought-tolerant plant materials in all revegetation/landscaping projects.*

Policy 9.E.14 *The County shall encourage the continued use of commercially viable timberlands for timber production and other multiple use functions. Conversion of such lands to other uses is discouraged, unless no other viable options exist for those uses.*

Policy 9.E.15 *The County shall support the on-going implementation of the Forest Practices Act at the State level to ensure that timber harvest operations are conducted in an environmentally sensitive manner.*

Mitigation Measure

While implementation of the above proposed policies would assist in minimizing impacts to timber production in the Plan area, the impact is considered **significant and unavoidable** for the Proposed Land Use Diagram and Alternatives AA through AC.

4.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

SETTING

The proposed Martis Valley Community Plan is part of the Martis Valley, which includes portions of Placer and Nevada Counties along with the Town of Truckee. The Martis Valley as a whole must be considered for the purpose of evaluation land use impacts on a cumulative level. Development in Martis Valley, including the planned and approved projects discussed under Section 3.0, would change the intensity of land uses in the Martis Valley region. In particular, this cumulative development scenario would increase development in the northeastern portion of the County, and provide additional housing, employment, shopping, and recreational opportunities. For timberland issues, the cumulative setting includes Placer County, Nevada County, and El Dorado County.

SETTING, IMPACTS, AND MITIGATION MEASURES

Impact 4.1.4 Consistency with Relevant Planning Documents

PP The Proposed Land Use Diagram would potentially conflict with land use planning documents relevant to the Plan area. This is a **less than significant** impact.

AA The proposed Existing Martis Valley General Plan Land Use Map Alternative would potentially conflict with land use planning documents relevant to the Plan area. This is a **less than significant** impact.

AB The proposed Alternative 1 Land Use Map would potentially conflict with land use planning documents relevant to the Plan area. This is a **less than significant** impact.

AC The proposed Alternative 2 Land Use Map would potentially conflict with land use planning documents relevant to the Plan area. This is a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Placer County would review individual projects within the Martis Valley Community Plan area against County Development Standards and the Environmental Review Ordinance. In addition, all developments proposed and constructed within the City are reviewed for consistency with countywide land use controls and development standards during the course of the project review and approval process. Each project processed under the Community Plan would be assessed against County development and design guidelines which regulate permitted uses, development density, building height, site and building design, transportation demand and neighborhood protection. In addition, mitigation measures are identified in within this EIR would apply to each project approved under the Martis Valley Community Plan.

Given the land use controls and development standards presently in use within the Placer County, cumulative land use impacts of development within Martis Valley related to consistency with relevant planning documents would be minimized to a level that is considered to be **less than significant**.

Mitigation Measures

None required.

Impact 4.1.5 Cumulative Land Use Conflicts

PP Development under the Proposed Land Use Diagram would result in substantial change in land use in the Plan area. This is a **cumulative significant** impact.

AA Development under the Existing Martis Valley Community Plan Land Use Map Alternative would result in substantial change in land use in the Plan area. This is a **cumulative significant** impact.

AB Development under the Alternative 1 Land Use Map would result in substantial change in land use in the Plan area. This is a **cumulative significant** impact.

AC Development under the Alternative 2 Land Use Map would result in substantial change in land use in the Plan area. This is a **cumulative significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

As described under Impact 4.1.3, development under the Proposed Land Use Diagram and Alternatives AA through AC would result in unavoidable land use conflicts with forest land uses. Given the development pressures in the Town of Truckee and Nevada and El Dorado counties, development under the proposed Community Plan would contribute to this land use conflict.

Policies and Implementation Measures

The reader is referred to the discussion under Impact 4.1.2 regarding applicable policies and implementation programs.

Mitigation Measures

Implementation of the proposed Community Plan policies and implementation programs would not completely eliminate potential land use conflicts with Open Space and Forest designated areas and residential/commercial development. This would be a **significant and unavoidable** impact for the Proposed Land Use Diagram and Alternatives AA through AC.

Impact 4.1.6 Cumulative Loss of Timber/Forest Resources

PP Development under the Proposed Land Use Diagram could result in the loss of forestland. However, given the amount, location, and use of impacted forestland under the Proposed Land Use Diagram, this is a **cumulative significant** impact.

AA Development under the Existing Martis Valley General Plan Land Use Map Alternative does not change the impact to forest or timberland. This is a **cumulative significant** impact.

AB The Alternative 1 Land Use Map would reduce the allowed development of forestland and timber resources. This is a **cumulative significant** impact.

AC The Alternative 2 Land Use Map would allow development that could result in the loss of forestland. However, given the location, use, and no net loss of impacted forestland under this alternative, this is a **cumulative significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

As described under Impact 4.1.3, development under the Proposed Land Use Diagram and Alternatives AA through AC would result in unavoidable conversion of timberland areas. Given the development pressures in the Town of Truckee and Nevada and El Dorado counties, development under the proposed Community Plan would contribute to this loss.

Policies and Implementation Measures

The reader is referred to the discussion under Impact 4.1.3 regarding applicable policies and implementation programs.

Mitigation Measures

While implementation of the above proposed policies would assist in minimizing impacts to timber production in the Plan area, the impact is considered **significant and unavoidable** for the Proposed Land Use Diagram and Alternative AA through AC.

REFERENCES

Brown-Sheridan. 2000. Northstar sales and rentals. www.brown-sheridan.com/sold

CALTRANS. 1993. *Airport Land Use Planning Handbook*. California Department of Transportation, Sacramento, California.

Lahontan. 2000. Residential sales in Lahontan development. www.tremblantimes.com/lahontan

Martis Valley Associates. 2000. Residential sales and rentals in Martis Valley www.martisvalley.com

Martis Valley Vacation Rentals. 2000. Residential sales and rentals in Martis Valley. www.mvvr.com

McCarthy, Dwight. Residential sales and rentals in Martis Valley, www.dwightmccarthy.com

Nevada County. 1995. *Nevada County General Plan, Volume I*. Nevada County Planning Department, Nevada City, California.

Placer County. 1994. *Countywide General Plan Policy Document*. Placer County Planning Department, Auburn, California.

Placer County. 1994. *General Plan Background Report Volume I*. Placer County Planning Department, Auburn, California.

Placer County. 1994. *General Plan Background Report Volume II*. Placer County Planning Department, Auburn, California.

Placer County. 1993. *Gooseneck Ranch Final Environmental Impact Report*. Placer County Planning Department, Auburn, California.

Placer County. 1999. *Lahontan II Final Environmental Impact Report*. Placer County Planning Department, Auburn, California.

Placer County. 1975. *Martis Valley General Plan*. Placer County Planning Department, Auburn, California.

Placer County. 1999. *Village at Squaw Valley USA Draft Environmental Impact Report*. Placer County Planning Department, Auburn, California.

Placer County. 1998. *Zoning Ordinance*. Edition #5. Placer County Planning Department, Auburn, California.

Soderquist, Peter R., General Manager, Truckee Tahoe Airport. Personal Communication with CS Consulting: July 2001.

Town of Truckee. 1996. *Town of Truckee General Plan, Volume I, Goals and Policies*. Town of Truckee Planning Department, Town of Truckee, California.

Town of Truckee. 2000. *Planned Community - 2 Specific Plan Draft Environmental Impact Report*. Town of Truckee Planning Department, Town of Truckee, California.

Truckee Tahoe Airport District. 1998. *Truckee Tahoe Airport Master Plan,* Truckee Tahoe Airport District, Placer County California.

SECTION 4.2
POPULATION/HOUSING/EMPLOYMENT

This section analyzes the socioeconomic conditions within the Martis Valley Community Plan area. Within this section are discussions on the population characteristics, housing, and employment opportunities within the planning region.

4.2.1 EXISTING SETTING

REGIONAL SETTING/LOCAL SETTING

The Plan area has remained relatively undeveloped aside from a few recreational and residential developments. The majority of the population within the Placer County portion of the Martis Valley is located in three primary development areas, including Northstar-at-Tahoe, Lahontan I, and the Ponderosa Palisades, Sierra Meadows, Ponderosa Ranchos, and Martiswood Estates subdivisions located adjacent to the Town of Truckee. Other than these three development areas, the majority of growth has occurred within Nevada County and the Town of Truckee.

Housing and development restrictions within the Lake Tahoe Basin as well as area housing costs, have created an affordable housing shortage within the area. Restrictions within the Lake Tahoe Basin were set up to manage the land use and resources of the Lake Tahoe region, based upon environmental protection and the encouragement of recreation-oriented land uses. Because of the restrictive nature of potential development within the Tahoe Basin, surrounding areas are absorbing the growth pressures. Housing projects in the area tend to be second home in nature (i.e., seasonal use) and are generally not considered affordable. Affordable housing developments are generally not proposed because of the high land values and the recreational oriented land use of the area.

Within the Tahoe Basin, a development right of one residential unit is given for each of the 16,000 parcels in the basin, unless otherwise restricted. This means that multi-family projects must obtain development rights for each additional unit proposed and further land subdivisions are prohibited. Because of the Tahoe Basin land restrictions and the high land values of the Martis Valley Community Plan area, affordable housing will continue to be limited (Placer County, 1994).

POPULATION

Population and growth projections for the Plan area are difficult to pinpoint based upon the recreational nature of the area and the use of the properties as secondary residences. Buildout figures from the 1975 Martis Valley General Plan, the 1994 Placer County General Plan, and recent development approvals have provided a varied array of population and housing figures for the area.

The 1975 Martis Valley General Plan was prepared for an area within both Placer and Nevada Counties. This planning document provided growth projections based upon demographic information at the time. Most of the population figures have not been met. The permanent resident population in the Martis Valley Community Plan area was estimated to be approximately 1,200 persons in 1975, with a relatively high percentage of second homes at approximately 80 percent. The average year round population was estimated based on three factors; 1) the seasonal nature of the job market associated with ski areas and construction work; 2) the tourist use and occasional rentals of condominiums; and 3) the intermittent occupancy of second homes (Placer County, 1975).

The permanent population projected to be within the Martis Valley Community Plan area for both Nevada and Placer Counties by 1990 was estimated to be 22,000 to 25,000 persons. This

estimate was based upon two methods for estimating permanent population. The first method was based upon the following assumptions 1) the primary homes of moderate cost and mobile homes will serve permanent residents of the area; 2) the rentals of moderate cost will serve transient employees of the area but would generate the equivalent of 80 percent occupancy by permanent residents, 3) there are 2,000 existing dwelling units which could serve a permanent population. This method of estimation results in a figure of 8,627 primary dwelling units or 25,881 permanent residents at 3.0 persons per dwelling unit. The second method for estimating permanent population was derived from the ratio of four secondary homes to three primary homes in the Tahoe Basin. The 1975 plan provided for 17,000 dwelling units of all types. Based on the Tahoe Basin ratio, the permanent population of the Martis Valley Community Plan area at complete buildout would approach 22,000 persons (Placer County, 1975).

The 1975 Martis Valley General Plan also projected the peak weekend population to be approximately 41,000 persons for the Martis Valley area within Nevada and Placer Counties based upon the continued demand for primary and second homes, a peak occupancy rate of 80 percent, and an average of 3.0 persons per dwelling unit (Placer County, 1975).

The rate and intensity of development expected within the Martis Valley portion of Placer County and analyzed within the 1975 Martis Valley General Plan has not taken place to date. The majority of growth since 1975 has occurred within the Nevada County portion of Martis Valley and the Town of Truckee, which was incorporated in 1993. The 1990 census identified census tract 220.01, containing Martis Valley, as having a permanent population of 4,013 persons. Developments within the Placer County portion of the Martis Valley Community Plan area since 1990 have not added an additional 5,000 permanent residents expected to occur in the Martis Valley Community Plan area.

Holding Capacity

Holding capacity is expressed as the total number of people that would be accommodated within a planning area if the land within that area were developed to the maximum potential allowed by land use designations in the general plan. Once potential buildout and dwelling units (D.U.) are projected, potential population can be determined.

Although residential development has occurred within the Placer County portion of Martis Valley adjacent to the Town of Truckee, the majority of the Martis Valley has remained relatively undeveloped. While holding capacity projections exist in both the 1975 Martis Valley General Plan and the 1994 Placer County General Plan, development in Martis Valley has not occurred in a manner consistent with these projections.

The 1975 Martis Valley General Plan was developed for the entire Martis Valley area, including land within both Nevada and Placer Counties, as well as lands that have since come under the jurisdiction of the Town of Truckee. Population for the entire Martis Valley area was projected between 22,000 and 25,000 persons; dwelling units were estimated between 8,627 primary D.U. and 17,100 D.U. of all types (Placer County). Buildout under the 1975 Martis Valley General Plan was anticipated to occur in 1990.

The 1994 Placer County General Plan identifies the holding capacity of Martis Valley Community Plan area at 25,262 persons, projecting 9,391 D.U. at buildout (Placer County does not differentiate between permanent and secondary residences within Martis Valley). The existing population, 1,000 persons, is calculated from the 1990 Census for unincorporated area within Placer County and the 1994 Department of Finance's estimates. The Martis Valley holding capacity is calculated as 80 percent of the maximum 1994 buildout capacity (Placer County, 1994), or 20,209 persons.

The Lahontan residential community, originally known as Gooseneck Ranch, was not included in the population or dwelling unit projections in the 1994 Placer County General Plan. According to GIS maps supplied by Placer County (May 2000), Lahontan consists of approximately 732 acres; the development has a total potential development capacity of 464 D.U., of which 349 D.U. currently exist. Construction activities currently continue, but it is important to note that development at Lahontan has occurred at a density below the maximum capacity identified in the approved development plan.

Placer County has identified other areas capable of substantial development within Martis Valley. These areas include:

- 5,955 acres owned by Trimont Land Company, adjacent to Northstar. Although potential development capacity has been identified at 2,636 D.U., no development is planned or anticipated at this time. Zoning includes Timberland Production (TPZ), Forestry (FOR), and Residential.

- 2,328 acres owned by Siller Ranch. Potential development capacity has been identified as 2,861 D.U., including 48 acres for commercial development.

- 598 acres of the Waddle Ranch property. Potential development capacity has been identified as 1,176 D.U., including 6.5 acres for commercial development. Although no development plans have been submitted, development on this site is anticipated in the future.

- 475 acres owned by Martis Valley Associates, L.L.C. Although potential development capacity has been identified as 1,250 D.U., this area is currently vacant and no development is planned or anticipated at this time. Zoning includes Open Space, Residential, and Commercial.

- 443 acres west of SR 267 and along both sides of Schaffer Mill Road, of which 164 acres is designated as part of the approved Lahontan II project and the remaining acreage is the Hopkins Ranch project. Potential development capacity has been identified as 361 D.U. for the entire area, and development on this property is expected to occur at a density below the maximum capacity.

DEMOGRAPHICS

Geographic Area

Demographical and employment data for the Martis Valley area is difficult to aggregate since Martis Valley is not a political entity nor a federally or regionally recognized area in terms of long-range planning or Census data collections. As such, very little data is available that is specific to Martis Valley.

In discussing demographics for the Martis Valley, data from five geographic areas in or relating to Martis Valley have been included. Not all data types (i.e., race, household income, or housing units) are available for each geographic area. The areas include:

Martis Valley

The Plan area does not have boundaries that are concurrent with any geographic or political area for which regional or Census data is aggregated. The only data available specifically for

the Placer County portion of Martis Valley is 1992 and 2000 population and 1992 housing unit estimates.

Martis Valley Census Tract and Block Group

The closest level of data aggregation to the Plan area is a Census block group; Census Tract 220.01, Block Group 5 (Martis Valley Block Group) does not fully coincide geographically with Martis Valley, but provides a close approximation for data purposes. Census Tract 220.01 (Martis Valley Census Tract) is a larger geographic unit, but fully encompasses Martis Valley.

The census tract and block group information for the Martis Valley Community Plan area does not portray an actual representation of the demographics for the area. The census information is completed by full-time residents and property owners of the area. A majority of the individuals that have property or houses in Martis Valley use the property for recreational/second houses. Census information includes housing unit data for seasonal use, but does not include any household size, income, employment, or other demographical data for seasonal residents.

Placer High Country Regional Analysis District

The Placer County portion of Plan area is within the Placer High Country Regional Analysis District (RAD). RADs are sub-County areas that the Sacramento Area Council of Governments (SACOG) estimates and projects population, household, housing unit, and employment data. The Placer High County RAD extends from east of the Colfax area to the northwestern border of Tahoe Basin, bordered to the north by Nevada County and to the south to the El Dorado County line. While the RAD is much larger than the Plan area, it includes data estimates that are more pertinent to the Plan area than Placer County data as a whole.

Placer County

1990 and 2000 Census data has been used to provide demographical information for Placer County.

Town of Truckee

Census data contained within the 1996 Town of Truckee General Plan and 2000 Census data have been used to provide demographics for the Town of Truckee.

Population Trends

As shown in **Table 4.2-1**, the permanent population in Martis Valley increased from 1,000 in 1992 to 1,185 in 2000, an increase of 18.5 percent. Persons in the RAD increased by 15.6 percent while the population of Truckee increased 55.6 percent.

TABLE 4.2-1
POPULATION TRENDS

	Martis Valley Plan Area[1]	Martis Valley Block Group[2]	Martis Valley Census Tract[2]	Placer High Country RAD[3]	Placer County[4]	Town of Truckee[5]
1990	1,000	701	4,013	5,211	172,796	8,912
2000	1,185	1,335	5,501	6,025	248,999	13,864
Change	*185*	*634*	*1,488*	*814*	*76,203*	*4,952*
Percent Change	18.5%	90.4%	37.1%	15.6%	44.1%	55.6%

Source:[1]Placer County General Plan; Placer County aggregation of 2000 Census data
[2]1990 Census; 2000 Census
[3]SACOG Population Estimates and Housing Unit Inventory, 2000; SACOG Projections, 2001
[4]1990 Census SF3A; Profiles of General Demographic Characteristics, 2000
[5]Truckee General Plan, 1994; Profiles of General Demographic Characteristics, 2000

Household Trends and Demographics

Households

During the decade from 1990 to 2000, households in the Martis Valley Census Tract increased by 39.8 percent, or 617 households, compared with increases of 69.2 percent and 57.4 percent in Martis Valley Block Group and the Town of Truckee, respectively. **Table 4.2-2** depicts household trends from 1990 to 2000.

TABLE 4.2-2
HOUSEHOLD TRENDS

	Martis Valley Block Group[1]	Martis Valley Census Tract[2]	Placer High Country RAD[3]	Placer County[4]	Town of Truckee[5]
1990	299	1,550	5,211	64,502	3,271
2000	506	2,167	5,803	93,382	5,149
Change	207	617	*592*	*28,880*	*1,878*
Percent Change	69.2%	39.8%	11.4%	44.8%	57.4%

Source: [1]1990 Census; PMC update based on SACOG RAD data
[2]SACOG Population Estimates and Housing Unit Inventory, 2000; SACOG Projections, 2001
[3]1990 Census SF3A; Profiles of General Demographic Characteristics, 2000
[4]Truckee General Plan, 1994; Profiles of General Demographic Characteristics, 2000
[5]1990 and 2000 Census tract 12.01, block groups 3, 4, 5, 6, and 7

Table 4.2-3 contains household size data. In the Martis Valley Block Group, the average persons per residence was 2.63. This rate is used throughout this section in determining the population based on number of units in the Plan area. In Truckee, the average persons per residence was 2.72, only 0.09 higher than the Plan area figure.

TABLE 4.2-3
HOUSEHOLD TRENDS – 2000 CENSUS

Status	Martis Valley Block Group		Martis Valley Census Tract		Town of Truckee	
	Number	Percent	Number	Percent	Number	Percent
1 Person	90	17.8%	484	22.3%	961	18.7%
2 Person	212	41.9%	833	38.4%	1,903	37.0%
3 Person	77	15.2%	359	16.6%	916	17.8%
4 Person	85	16.8%	303	14.0%	880	17.1%
5 Person	23	4.5%	123	5.7%	310	6.0%
6 or More Persons	19	3.8%	65	3.0%	101	2.0%
Total	506	100.0%	2,176	100.0%	78	1.5%
Persons/Household	2.63		2.52		2.68	

Source: 1990 Census STF3A; 2000 Census STF1
[1]Occupied dwelling unit

As shown in **Table 4.2-4**, the Martis Valley Block Group had a median income of $40,819 in 1990, $3,218 or 8.6 percent higher than the Placer County median income of $37,601. The median income in the Town of Truckee was $36,676 in 1990.

TABLE 4.2-4
MEDIAN INCOME – 1990 CENSUS

Status	Martis Valley Census Block Group 220.01 5	Martis Valley Census Tract 220.01	Placer County	Town of Truckee
Median 1989 Household Income	$40,819	$35,121	$37,601	$36,676

Source: 1990 Census STF3A; Town of Truckee General Plan

Tenure

Tenure describes the proportion of renters to owners; tenure rates for Martis Valley are in **Table 4.2-5**. In Martis Valley, the majority of households own their home, with 82.3 percent of households in the Martis Valley Block Group owning and 77.8 percent of households within the Census tract owning. Within the Martis Valley Block Group, renters only represent 17.7 percent of householders while in the Town of Truckee the renter rate is 47.5 percent higher at 26.1 percent.

TABLE 4.2-5
TENURE – 2000 CENSUS

Status	Martis Valley Census Block Group		Martis Valley Area Census Tract 220.01		Town of Truckee	
	Number	Percent	Number	Percent	Number	Percent
Owner	424	83.8%	1,675	77.3%	3,805	73.9%
Renter	82	16.2%	492	22.7%	1,344	26.1%
Total	506	100.0%	2,167	100.0%	5,149	100.0%

Source: 2000 Census STF1

Housing Units

The Plan area is estimated to have approximately 1,935 housing units in 2001. The Martis Valley Block Group had 1,545 housing units in 1990, which increased to 1,745 by 2000. Housing units in the Martis Valley Census Tract increased by 8.5 percent, 428 units, from 1990 to 2000 as depicted in **Table 4.2-6**. Placer County and the Town of Truckee both experienced high rates of development with respective increases of 37.8 and 40.8 percent.

TABLE 4.2-6
HOUSING UNIT TRENDS

	Martis Valley – Block Group[1]	Martis Valley – Census Tract[1]	Placer High Country RAD[2]	Placer County[3]	Town of Truckee[4]
1990	1,545	5,022	5,610	77,879	6,932
2000	1,756	5,450	6,489	107,302	9,757
Change	*211*	*428*	*879*	*29,423*	*2,825*
Percent Change	13.7%	8.5%	15.7%	37.8%	40.8%

Source:[1]1990 and 2000 Census
[2]SACOG Population Estimates and Housing Unit Inventory, 2000; SACOG Projections, 2001
[3]1990 Census SF3A; Profiles of General Demographic Characteristics, 2000
[4]Truckee General Plan, 1994; Profiles of General Demographic Characteristics, 2000

Housing Unit Occupancy

Table 4.2-7 contains occupancy data and further describes the type of occupancy or type of vacancy. Vacant homes in the Martis Valley area represent the majority of housing units, with 71.2 percent of homes in the Martis Valley Block Group vacant and 60.2 percent of homes in the Census tract vacant. In the Martis Valley Block Group there were 6 vacant homes for sale or rent during the 2000 Census. The vast majority of unoccupied homes were seasonal, recreational, or other types of vacancies. Only 59 vacant units, 1.8 percent, in the Census tract were available for sale or rent. Generally, a vacancy rate beneath 5 percent indicates a lack of choice in the housing market. In Truckee, year-round occupancy at 52.58 percent is higher than that of either the Martis Valley Census Tract or Block Group.

TABLE 4.2-7
HOUSING UNIT OCCUPANCY AND TYPE OF OCCUPANCY OR VACANCY

Status	Martis Valley Block Group		Martis Valley Census Tract		Town of Truckee	
	Number	Percent	Number	Percent	Number	Percent
Occupied	506	28.8%	2,167	39.8%	5,149	52.8%
Owner	*424*	*83.8%*	*1,675*	*77.3%*	*3,805*	*73.9%*
Renter	*82*	*16.2%*	*492*	*22.7%*	*1,344*	*26.1%*
Vacant	1,250	71.2%	3,283	60.2%	4,608	47.2%
Seasonal, Recreational	*1,209*	*96.7%*	*3,133*	*95.4%*	*4,326*	*44.3%*
For Sale or Rent	*6*	*0.5%*	*59*	*1.8%*	*101*	*2.2%*
Other Vacancy	*35*	*2.8%*	*91*	*2.9%*	*181*	*3.9%*
Total	1,756	100%	5,450	100%	9,757	100.0%

Source: 1990 Census STF3A; 2000 Census STF1; Town of Truckee General Plan, 1996

Housing Price and Availability

The recent developments within the Martis Valley Community Plan area cater to a second home or recreational home market. These projects are not designed to meet permanent housing needs. The developments are intended to provide seasonal activities that are oriented toward winter or summer.

The residential lots in the Lahontan development are broken down into the following price ranges: forest homesites are from $210,000.00 to $485,000.00; view homesites are from $500,000.00 to $1,000,000; and golf course homesites are from $475,000.00 to $800,000.00. A completed house and lot range from $1,000,000.00 to $2,500,000.00.

The Northstar development contains homes, condominiums, and lots for sale. The following prices are from a listing of Northstar properties sold from 1999 through April 2000. The houses sold ranged in price from $355,000.00 to $1,924,500.00. The condominiums sold ranged in price from $115,000.00 to $425,000.00. The lots sold ranged in price from $174,500.00 to $410,000.00 (Brown-Sheridan, 2000).

Rental rates within Martis Valley for a seven night stay range from $945.00 for a one-bedroom condo to $5,000.00 for a seven-bedroom house. These rental rates reflect prices for the month of May, which is considered part of the slow rental season. These rental rates increase during the winter ski and summer vacation months (Martis Valley Vacation Rentals, 2000).

The 1990 census indicated that the median value of owner occupied housing in Truckee was $132,866.00 with the average home price in Ponderosa Palisades at $250,000.00. The rents for one-bedroom apartments in Truckee currently range from $600.00 to $800.00 per month. Currently, renters who seek to limit their expenditures on rent to one-third of their income would have to earn roughly $14.00 per hour, which is double what most recreational service jobs in the local area pay (Sacramento Bee, 1999).

Data provided by Placer County staff and used in the Lahontan I and II environmental documents show that the annual combined owner/renter occupancy rate between 1984 and 1990 ranged from a low of 32.5 percent in 1986 and a high of 43.6 percent in 1990. During this period, the highest occupancy rate was 76.6 percent.

A cursory review of the occupancy rates would indicate that residential units are available for rent within the Martis Valley Community Plan area. However, the occupancy figures do not take into account that many of the residences are secondary/recreational homes and that the property owners have no intention of occupying the residences on a full time basis. There is the potential that many of the residences are not available for rental purposes and that many residences that are offered for rent would not be available during the peak season (winter and summer months), when temporary or seasonal employees would need housing. The rental and housing prices within Martis Valley are also prohibitive for seasonal or temporary housing.

Using vacant residences for employee housing does not solve the problem of a lack of affordable housing in the Martis Valley Community Plan area. The high priced nature of the Martis Valley Community Plan area developments precludes employees generated by these projects from living in the area.

Most of the individuals that work and live full time in the Martis Valley area cannot afford to live in the Lahontan and Northstar developments. The property and housing prices in the Martis Valley Community Plan area would be prohibitive of most individuals that work in a vacation or resort industry.

The individuals or households that own property in Martis Valley can afford second residences that range from $400,000.00 to $2,000,000.00 in value. The census information that is currently available represents the labor force that serves the needs of the people that recreate in the Martis Valley Community Plan area.

EXISTING LAND USE

Residential

The 1975 Martis Valley General Plan identifies that the housing demand in the Lake Tahoe basin is not being met. The plan identifies that nearly all residential development consists of high-priced luxury homes oriented to the second home/residential home market. The trend of exclusive housing has continued with the Northstar and Lahontan projects.

The housing stock within the Northstar development consists of approximately 1,424 private homes and condominiums, some of which serve as rental properties. The Lahontan developments (I and II) consists of 537 residential parcels that surround an existing 18-hole golf course and a new 9-hole golf course that was recently constructed. The housing is designed to meet the recreational needs of second homebuyers. Lahontan was developed as a summer oriented golf community was not envisioned for permanent residences.

The Ponderosa Palisades, Sierra Meadows, Ponderosa Ranchos, and Martiswood Estates subdivisions are located in the northwest portion of Martis Valley and accessed by roadways from within the Town of Truckee. The Ponderosa Palisades, Sierra Meadows, Ponderosa Ranchos, and Martiswood Estates subdivisions contain approximately 468 parcels within Placer County. These subdivisions provide for permanent residences as well as recreational homes.

These developments have generally been designed to meet the demand for high-end vacation homes. These projects were not designed to meet the housing needs of low and middle-income families working in the area. These projects create a greater need for affordable housing than what is provided within the developments. These recreational developments create low to moderate paying seasonal jobs, while requiring high-income jobs to reside there.

Approved and Proposed Housing Projects

Current Affordable Housing Projects

New developments in Martis Valley and surrounding areas have left a void in affordable housing for employees of low and moderate income paying jobs created by these resort communities. The rise in rents and housing values has made it difficult to find housing. The Town of Truckee and Placer County take an active role in providing affordable housing in the area.

Placer County has created a Redevelopment Agency to coordinate Countywide affordable housing efforts. The Redevelopment Agency is responsible for the administration of the Community Development Block Grant (CDBG) Program. The Redevelopment Agency has currently secured approximately $1,80,000.00 in State funding for affordable housing projects in the unincorporated County. In the last two years, more than $800,000.00 has been committed for housing related projects located in the Tahoe area. The following affordable housing projects are being initiated for the Tahoe Basin region in Placer County.

- The Kings Beach Housing Rehabilitation Program, funded in 1998 and 2000 through CDBG and the Redevelopment Agency, was initiated to improve to improve affordable housing. The County contracted with Mercy Housing to administer and implement the

rehabilitation program. More than $400,000.00 has been committed to the efforts to package and receive loan approvals in the Tahoe area.

- Negotiation with developers of last significant multi-family zoned vacant property in Squaw Valley to include 80 units of affordable rental housing at or below 60 percent of median income; to include some large family units and a term of affordability of at least 30 years; this project is presently on hold.

- The County established an affordable housing in-lieu fee for certain projects within North Tahoe. The county has received $84,000.00 from one project and a commitment of up to $2,000,000.00 from another (Colwell, 2000).

- The Placer County Redevelopment Agency (RDA) entered into a Memorandum of Understanding with Affordable Housing Development Corporation (AHDC) in 2001 for the purpose of facilitating development of affordable housing. Once AHDC secures a site for development, the RDA provides financial assistance with the project.

- In the Dollar Hill area, the planned Nahas project would provide a project of market for-sale housing combined with 80 units of affordable senior housing.

- AHDC's Lake Forest project, provided through a Memorandum of Understanding with the County Redevelopment Agency would provide 12 to 20 units of affordable housing on 1.6 acres.

Some of the local ski resorts are also taking action. Sugar Bowl recently acquired Donner Summit Lodge to accommodate 80 of its employees, who will pay below-market rent. Northstar-at-Tahoe is leasing both the Hilltop Lodge and five houses in Truckee to accommodate 100 workers. Sawmill Heights, a mixed affordable/employee housing project, was approved at Northstar-at-Tahoe and will provide 96 units.

Within the Town of Truckee, there are several affordable housing projects that provide housing for low and medium income families. The Federally funded Truckee Pines development contains 104 units for low-income households. Riverview Homes consists of 39 detached rental units for low and medium income households. Sierra Village is a 72 unit complex and 57 of those units will be for low-income families.

The County of Placer requires new resorts in the Sierra Nevada and Lake Tahoe areas to provide for employee housing equal to 50 percent of the housing demand generated by the project. The Lahontan I and II projects were required to provide for 11 employees.

Employment

The Truckee-Tahoe economy is heavily dependent upon the vacation and resort industry. As a result of this emphasis, much of the ongoing development in the region is focused on the more affluent vacation and second home markets. In 1990, 436 employed persons resided in the Martis Valley Block Group and 2,082 lived in the Martis Valley Census Tract. **Table 4.2-8** contains the number of employed residents for the Placer High Country RAD, Placer County, and the Town of Truckee.

TABLE 4.2-8
EMPLOYMENT FIGURES

	RAD, Placer High Country[3]	Placer County[4]	Town of Truckee[5]
1990	368	82,920	4,961
2000	1,542	120,700	N/A
Change	*1,174*	*37,800*	*N/A*
Percent Change	319.0%	45.6%	N/A

Source: [1]SACOG Population Estimates and Housing Unit Inventory, 2000; SACOG Projections, 2001
[2]1990 Census SF3A; Profiles of General Demographic Characteristics, 2000
[3]Truckee General Plan, 1994; Profiles of General Demographic Characteristics, 2000

Employment by occupation is represented for the Martis Valley Block Group and Martis Valley Census Tract residents, as well as for Placer County residents, in **Table 4.2-9**. Ironically, most of the jobs created by the vacation and resort industry are seasonal and/or relatively low paying support or service positions that do not provide sufficient income to rent or purchase housing in the area. The lack of affordable housing has resulted in service workers finding housing outside of the region (e.g., Reno, Sparks, Auburn). However, information regarding place of residence that corresponds to place of employment is not readily available, so there is no quantification of the number of employees that reside outside of the Plan area or outside of Martis Valley.

TABLE 4.2-9
EMPLOYMENT BY OCCUPATION

Occupation	Martis Valley – Block Group[1]		Martis Valley – Census Tract[1]		Placer County[1]		Town of Truckee[1]	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Managerial and Professional	124	28.7%	461	22.1%	23,755	28.6%	1,551	31.3%
Technical, Sales, and Administrative Support	154	35.6%	715	34.3%	27,569	33.2%	1,377	27.8%
Service	66	15.3%	360	17.3%	9,823	11.8%	781	15.7%
Farming, forestry, and fishing	0	0.0%	21	1.0%	1,737	2.1%	72	1.5%
Precision production, craft, and repair	63	14.6%	291	14.0%	10,631	12.8%	733	14.8%
Operators, fabricators, laborers	29	6.7%	134	6.4%	9,405	11.3%	447	9.0%

Source:[1]1990 Census

Area Employment

The environmental impact report for the original Gooseneck Ranch project (Lahontan) estimated a total of 32 full and part time jobs would be created by the project. The full time positions include a property administrator with three staff, a golf pro, a grounds/maintenance supervisor, a manager for the golf shop/clubhouse restaurant, and a manager for a recreation center management. There would also be approximately 24 part-time employees including 10

positions in building, grounds, and golf course maintenance, 10 positions as clerks and waiter/waitresses at the clubhouse restaurant/pro shop, and 4 positions at a recreation center. It was anticipated that the employees of this project would not reside within the actual development, but would seek less expensive homes in portions of the area that are not oriented toward the resort and second home market.

The Northstar-at-Tahoe development is a second home or recreational community that has winter and summer sport opportunities. This vacation resort primarily creates part time or seasonal jobs. These jobs include, cashiers, ski instructors, lift operators, food service, retail sales, golf course maintenance, and other recreational/vacation resort style jobs. These seasonal jobs do not provide a level of income that allows workers to rent or purchase the housing units within the Northstar development. Northstar-at-Tahoe, in its Issue Briefing: Employee Housing dated July 2001, identified that Northstar employs 350 to 400 people permanently, with an increase to 1,100 employees during the winter ski season.

The current employment trend in Martis Valley is developments that require a seasonal, low paying labor force and exclusive housing that they cannot afford. Developments within Martis Valley will continue to contribute to the regional problem of affordable housing.

4.2.2 REGULATORY FRAMEWORK

MARTIS VALLEY GENERAL PLAN

The 1975 Martis Valley General Plan provides a list of goals and objectives designed to meet the population and housing demands within the Plan area.

Community Development Policies

The following Martis Valley General Plan policies pertain to housing.

Policy 1 Provide for a complete and comprehensive range of housing types, recognizing the immediate demand for homes for low and medium income families and the strong demand for second homes adjacent to Lake Tahoe.

Policy 2 Provide for a flexible and readily available source of housing for both a seasonal and transient work force.

PLACER COUNTY GENERAL PLAN

The Placer County General Plan contains the goals and policies relative to the maintenance, improvement, and development of housing along with providing a wide wage of housing and employment opportunities.

Placer County General Plan Policies

The Placer County General Plan includes the following policies pertaining to population, housing, and employment:

Policy 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.

Policy 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 exist.

Policy 2.A.11 All new housing projects of 100 or more units on land has received an increase in allowable density through either a public or privately initiated general plan amendment, community plan amendment, rezoning, or specific plan shall be required to provide at least 10 percent of the units to be affordable to low income households. The low income units shall be available concurrently with the market-rate units. All such units shall remain affordable for ate least 20 years.

In cases where developers actually construct the low income units, the projects shall be eligible for a 10 percent density bonus. The Land Use Element and Zoning Ordinance will be amended to avoid potential conflicts with minimum lot size standards in cases where the density bonus option is exercised.

In cases where the County determines that is impractical for the developer to actually construct the units on site, the County may as an alternative allow the dedication of land sufficient to accommodate at least 10 percent of the units for low-income households and/or the payment of an in-lieu fee. In cases where land dedication is deemed suitable, such land shall be offered in fee to the County or to another public or nonprofit agency approved by the county. The amount of the in-lieu fee shall be determined on a case-by-case basis. The County may require the developer to fund an analysis showing how contributions of in-lieu fees could be best utilized to create the desired number of low-cost units.

Policy 2.A.13 Inclusionary housing provisions shall be incorporated in all new or updated community plans.

Policy 2.A.18 The County shall require new resorts in the Sierra Nevada and Lake Tahoe areas to provide for employee housing equal to 50 percent of the housing demand generated by the project. Employee housing shall be provided for in one of the following ways (in order of preference):

a. Construction of employee housing onsite.

b. Construction of employee housing offsite.

c. Dedication of land for needed units.

d. Payment of an in-lieu fee.

Policy 2.A.19 Owners of vacation houses in the Lake Tahoe area shall be encouraged to rent to resort workers, especially in the North Tahoe area.

Policy 2.B.1 The County encourages residential development of high architectural and physical quality, compatible with neighboring land uses.

Policy 2.G.1 All new dwelling units shall be required to meet current state requirements for energy efficiency. The retrofitting of existing units shall be encouraged.

Policy 2.G.2 New land use patterns should encourage energy efficiency, to the extent feasible.

These policies of the Placer County General Plan are incorporated into the policies provided in the Martis Valley Community Plan Update.

PLACER COUNTY AFFORDABLE HOUSING STRATEGY

The Placer County Affordable Housing Strategy (AHS) identifies three priorities for affordable housing County-wide. These three priorities include: the preservation of existing housing stock through the rehabilitation of substandard housing, assisting in the production of new rental housing within target communities, and the delivery of first-time home ownership programs which target low- and moderate- income families. A variety of programs and funding sources are identified in the AHS to assist the County in developing and maintaining housing consistent with its priorities. The AHS also discusses the three redevelopment areas, which do not include Martis Valley. The Martis Valley Community Plan Update is generally consistent with the objectives identified within the AHS and would not impede its implementation in the plan area.

4.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A population and housing impact is considered significant if implementation of the project would result in any of the following:

1) Cumulatively exceed official regional or local population projections;

2) Induce substantial growth or concentration of population in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure);

3) Displace existing housing, especially affordable housing;

4) Displace a large number of people;

5) Inability (for new resorts) to provide for employee housing equal to 50 percent of the housing demand generated by the project (General Plan Policy 2.A.18); or

6) Indirect environmental effects associated with inability to provide for affordable and/or employee housing for employees generated by the project.

METHODOLOGY

PMC staff conducted research on demographic and housing conditions, utilizing existing documents and other information sources. Information was obtained from governmental agencies through their web sites. Among these agencies were the U.S. Bureau of the Census, the California Department of Finance, Sacramento Area Council of Governments, and the California Employment Development Department. The Housing Elements of Placer County and the Town of Truckee were additional sources of information on housing and socioeconomic conditions as well as housing policy. Staff contacted the Town of Truckee, Town of Mammoth Lakes, and Town of Vail to obtain employment generation factors and housing policy information for resort areas. Newspaper articles and contacts with local real estate agencies provided more current information on housing prices.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.2.1 Holding Capacity

PP Development under the Proposed Land Use Diagram could potentially exceed the holding capacity of Martis Valley. This is considered a **less than significant** impact.

AA Development under the Existing Martis Valley General Plan Land Use Map could potentially exceed the holding capacity of Martis Valley. This is considered a **less than significant** impact.

AB Development under the Alternative 1 Land Use Map could potentially exceed the holding capacity of Martis Valley. This is considered a **less than significant** impact.

AC Development under the Alternative 2 Land Use Map could potentially exceed the holding capacity of Martis Valley. This is considered a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

The Placer County General Plan identified the holding capacity of the Plan area as 25,262 persons, based on development of 9,391 dwelling units. As the General Plan does not distinguish between permanent and seasonal or part-time residences, the population is based on full-time occupancy of the residences. The 2000 population of the Plan area is approximately 1,185, based on Census block information. The average number of persons per residence in 2000 is approximately 2.63.

Table 4.2-10 depicts the holding capacity under each land use map option considered for the proposed Martis Valley Community Plan.

TABLE 4.2-10
HOLDING CAPACITY BY LAND USE MAP

Holding Capacity	Proposed Land Use Diagram	Existing MVGP Land Use Map	Alternative 1 Land Use Map	Alternative 2 Land Use Map
Gross Potential Dwelling Units	20,467	15,360	17,496	16,959
Adjusted Holding Capacity[1]	9,220	11,688	10,311	7,956

du: dwelling unit ac: acres

[1]: existing developed areas/proposed unit count and a standard 20 percent reduction applied, not at high end of density range for Medium Density Residential and Low Density Residential

[2]: Proposed Land Use Diagram: Lahontan I and II (537 units), Ponderosa Palisades/Sierra Meadows (449 units), Northstar-at-Tahoe (3,700 units), Martis Ranch (1,360 units), Hopkins Ranch (87 units), Siller Ranch (1,000 units), Eaglewood (506 units), Waddle Ranch (894 units), Waddle Road and SR 267 (105 units), SR 267 frontage (21 units), Northstar Drive (270 units), east of SR 267 (160 units), Joerger (51 units), County line (80 units).
Existing MVGP Land Use Diagram: Lahontan I and II (537 units), Sierra Meadows/Ponderosa Palisades (449 units).
Alternative 1 Land Use Diagram: Lahontan I and II (537 units), Sierra Meadows/Ponderosa Palisades (449 units), Northstar-at-Tahoe (4,332 units).
Alternative 2 Land Use Diagram: Lahontan I and II (537 units), Ponderosa Palisades/Sierra Meadows (449 units), Northstar-at-Tahoe (3,700 units), Hopkins Ranch (87 units), Siller Ranch (1,000 units), Eaglewood (506 units), Waddle Ranch (894 units), Waddle Road and SR 267 (135 units), SR 267 frontage (21 units), Northstar Drive (270 units), east of SR 267 (160 units), Joerger (51 units), County line (80 units).

The Proposed Land Use Diagram would result in the development of 9,220 units at build-out. If occupancy were to be year-round for all of the units, there would be a population of 24,249 in

the Plan area. However, the Plan area has a primarily seasonal population, as demonstrated in **Table 4.2-7**. Based on expected occupancy rates from 20.0 to 52.8 percent, 4,850 to 12,803 households, as shown on **Table 4.2-11**, are anticipated to reside in the Plan area, under the Proposed Land Use Diagram, on a full-time basis.

Under the Existing Martis Valley General Plan Land Use Map Alternative, development at build-out is expected to be 11,688 dwelling units as shown in **Tables 4.2-10** and **4.2-11**. Were the all of units to be occupied at one time, the resultant population would be 30,739 persons. However, Martis Valley has a primarily seasonal population, with approximately 20.0 to 52.8 percent units occupied year-round; this would provide a permanent population of 5,233 to 15,086 persons.

The Alternative 1 Land Use Map would accommodate 10,311 dwelling units as shown in **Table 4.2-10** and **4.2-11**. This would result in a peak population of up to 27,118 persons, if the all units were occupied year-round. However, the majority of Martis Valley residences are occupied on a seasonal or recreational basis, so the permanent population would be 6,891 to 14,318 persons.

Development under the Alternative 2 Land Use Map is anticipated to reach 7,956 dwelling units at build-out as shown in **Tables 4.2-10** and **4.2-11.** If these units were occupied concurrently, the population would be 20,924. Since Martis Valley is predominantly occupied on a seasonal basis, the permanent population under Alternative AC would range from 4,184 to 11,049 persons.

TABLE 4.2-11
OCCUPIED DWELLING UNITS AND POPULATION BY LAND USE DIAGRAM

Occupancy Rate	Proposed Land Use Diagram		Existing MVGP Land Use Map		Alternative 1 Land Use Map		Alternative 2 Land Use Map	
	Occupied Units	Population	Occupied Units	Population	Occupied Units	Population	Occupied Units	Population
100.0%	9,220	24,249	11,688	30,739	10,311	27,118	7,956	20,924
52.8%	4,868	12,803	6,171	16,230	5,444	14,318	4,201	11,049
39.8%	3,670	9,652	4,652	12,235	4,104	10,794	3,166	8,327
28.8%	2,655	6,983	3,366	8,853	2,970	7,811	2,291	6,025
20.0%	1,844	4,850	2,338	6,149	2,620	6,891	1,591	4,184

The increase in both the permanent resident population as well as the addition of a seasonal population would result in direct and indirect environmental effects such as noise, community services, traffic, and air quality, which are discussed in the relevant chapters of this EIR. However, the seasonal peak population of each alternative is a worst-case scenario, in the event that all dwelling units were occupied at the same time. Projected permanent occupancy for the project would be less than anticipated in the Placer County General Plan, ranging from 43.7 to 64.2 percent of the General Plan holding capacity for Martis Valley. Although the proposed project would result in population growth in the area, the Plan area is designated for such growth as a Community Plan area in the General Plan. Therefore, impacts relating to population growth are considered less than significant.

Mitigation Measure

None required.

Impact 4.2.2 Housing

PP Development under the Proposed Land Use Diagram would result in housing impacts through not providing sufficient affordable housing and creating an imbalance between employment and housing. This is a **potentially significant** impact.

AA Development under the Existing Martis Valley General Plan Land Use Map would result in housing impacts through not providing sufficient affordable housing and creating an imbalance between employment and housing. This is a **potentially significant** impact.

AB Development under the Alternative 1 Land Use Map would result in housing impacts through not providing sufficient affordable housing and creating an imbalance between employment and housing. This is a **potentially significant** impact.

AC Development under the Alternative 2 Land Use Map would result in housing impacts through not providing sufficient affordable housing and creating an imbalance between employment and housing. This is a **potentially significant** impact.

Housing

PP Proposed Land Use Diagram

Affordable housing is an issue of importance in a region containing many seasonal workers and workers unable to afford housing near their places of employment. The Regional Housing Needs Plan (RHNP) is a State-mandated plan prepared by SACOG. The RHNP allocates housing by income group goals to each jurisdiction within El Dorado-Placer- Sacramento-Yolo Housing Market Area. During the period from 2000 to 2020, areas in unincorporated Placer County should provide 23,231 housing units, with 23.4 percent very low income (0 to 50 percent of area median income), 21.9 percent low income (50 – 80 percent of area median income), 22.8 percent moderate income (80 to 120 percent of area median income), and 31.8 percent above moderate income (120 percent and above area median income).

Under PP, up to 9,220 housing units would be constructed; based on the 20.0 percent permanent occupancy assumption in the traffic model for the Plan area, up to 1,844 of these units may be occupied permanently. The RHNP does not include provisions for seasonal housing units, but its intent appears to be to provide a variety of housing types for permanent use. Based on this, development under the Proposed Land Use Diagram should provide RHNP ratios for the anticipated level of permanent housing units. This would result in 431 very low-income units and 404 units affordable to low income households or 4.7 percent of total development under the Proposed Land Use Diagram affordable to low income households and 4.4 percent affordable to very low-income households.

While some developments in the Plan area may be required to provide 10 percent affordable units or an in-lieu affordable housing fee (Policy 2.A.11), this fee would not result in sufficient affordable housing units to meet Martis Valley's share of affordable housing as described above. Therefore, the impact of the Existing Martis Valley General Plan Land Use Map Alternative on affordable housing opportunities is considered potentially significant.

Indirect effects associated with the lack of affordable housing are usually job-related and include traffic, air quality, and noise impacts associated with households having to travel outside of the area they work in to where they live. The traffic analysis (Section 4.4) and the associated analyses in air quality (Section 4.6) and noise (Section 4.5) in this EIR have considered the indirect

environmental effects of the potential deficiency of affordable and employee housing for the Proposed Land Use Diagram.

AA Existing Martis Valley General Plan Land Use Map

Under AA, up to 11,688 housing units would be constructed; based on the 20.0 percent permanent occupancy assumption in the traffic model for the Plan area, up to 2,338 of these units may be occupied permanently. The RHNP does not include provisions for seasonal housing units, but its intent appears to be to provide a variety of housing types for permanent use. Based on this, development under Alternative AA should provide RHNP ratios for the anticipated level of permanent housing units. This would result in 547 very low income units and 512 units affordable to low income households or 4.7 percent of total development under Alternative AA affordable to low income households and 4.4 percent affordable to very low income households.

While some developments in the Plan area may be required to provide 10 percent affordable units or an in-lieu affordable housing fee (Policy 2.A.11), this fee would not result in sufficient affordable housing units to meet Martis Valley's share of affordable housing as described above. Therefore, the impact of the Existing Martis Valley General Plan Land Use Map Alternative on affordable housing opportunities is considered potentially significant.

Indirect effects associated with the lack of affordable housing are usually job-related and include traffic, air quality, and noise impacts associated with households having to travel outside of the area they work in to where they live. The traffic analysis (Section 4.4) and the associated analyses in air quality (Section 4.6) and noise (Section 4.5) in this EIR have considered the indirect environmental effects of the potential deficiency of affordable and employee housing for the Existing Martis Valley General Plan Land Use Map.

AB Alternative 1 Land Use Map

Alternative AB would result in the construction of up to 10,311 housing units and 2,062 of these may be occupied permanently. The RHNP does not include provisions for seasonal housing units, but its intent appears to be to provide a variety of housing types for permanent use. Based on this, development under Alternative AB should provide RHNP ratios for the anticipated level of permanent housing units. This would result in 483 very low income units and 452 units affordable to low income households or 4.7 percent of total development under AB affordable to low income households and 4.4 percent affordable to very low income households.

While some developments in the Plan area may be required to provide 10 percent affordable units or an in-lieu affordable housing fee (Policy 2.A.11), this fee would not result in sufficient affordable housing units to meet Martis Valley's share of affordable housing as described above. Therefore, the impact of the Alternative 1 Land Use Map on affordable housing opportunities is considered potentially significant.

Indirect effects associated with the lack of affordable housing are usually job-related and include traffic, air quality, and noise impacts associated with households having to travel outside of the area they work in to where they live. The traffic analysis (Section 4.4) and the associated analyses in air quality (Section 4.6) and noise (Section 4.5) in this EIR have considered the indirect environmental effects of the potential deficiency of affordable and employee housing for the Alternative 1 Land Use Map.

AC Alternative 2 Land Use Map

Development under Alternative AC would construct up to 7,956 housing units and up to 1,591 of these may be occupied permanently. The RHNP does not include provisions for seasonal housing units, but its intent appears to be to provide a variety of housing types for permanent use. Based on this, development under Alternative AC should provide RHNP ratios for the anticipated level of permanent housing units. This would result in 372 very low income units and 348 units affordable to low income households or 4.7 percent of total development under Alternative AC affordable to low income households and 4.4 percent affordable to very low income households.

While some developments in the Plan area may be required to provide 10 percent affordable units or an in-lieu affordable housing fee (Policy 2.A.11), this fee would not result in sufficient affordable housing units to meet Martis Valley's share of affordable housing as described above. Therefore, the impact of the Alternative 2 Land Use Map on affordable housing opportunities is considered potentially significant.

Indirect effects associated with the lack of affordable housing are usually job-related and include traffic, air quality, and noise impacts associated with households having to travel outside of the area they work in to where they live. The traffic analysis (Section 4.4) and the associated analyses in air quality (Section 4.6) and noise (Section 4.5) in this EIR have considered the indirect environmental effects of the potential deficiency of affordable and employee housing for the Alternative 2 Land Use Map.

Jobs-Housing Balance

PP Proposed Land Use Diagram

The commercial, ski mountain, residential, professional and public/quasi-public components proposed for the project, are expected to generate as many as 4,750 full-time employee equivalent jobs. These full-time employee equivalent takes into account both full-time and part-time jobs, as well as numerous secondary jobs that occur with the creation of primary employment.

Table 4.2-12 shows the amount of direct jobs that could be expected at buildout of the proposed project using the following ratios:

TABLE 4.2-12
PROPOSED LAND USE DIAGRAM EMPLOYMENT GENERATION

Land Use Type	Units	Employment Generation	Jobs
Single Family/Multifamily	8,416 dwelling units	0.00001 FTEE/s.f.	241
Townhome/Condominium	804 dwelling units	0.1 FTEE/d.u.	80
Public/Quasi-Public	337,590 s.f.	0.75 FTEE/1,000 s.f.	253
Professional	65,340 s.f.	3.35 FTEE/1,000 s.f.	219
General Commercial	339,768 s.f.	2.00 FTEE/1,000 s.f.	679
Tourist/Recreation Commercial	426,888 s.f.	2.50 FTEE/1,000 s.f.	1,067
Ski Mountain	26,764 skiiers	82.6/1,000 skiiers	2,211
Total			**4,750 jobs**

Source: Final Land Use Numbers, LSC, 2001; Town of Mammoth Lakes; Town of Vail, 1991; Placer County Mitigation Agreement, 2002
[1]Assuming average residence of 2,860 square feet

The Plan would include approximately 9,220 housing units at buildout. Using the occupancy rate of 20.0 percent, approximately 1,844 dwelling units would be occupied units (full-time residents).

Assuming that the percentage of employed residents within the Plan area is the similar to the Census Tract as a whole (51.9 percent), approximately 2,517 residents of the Plan area would be employed. This would result in an imbalance between the 4,750 jobs generated within the Plan area and the capacity of the Plan area to provide housing units for approximately 2,517 employees. The jobs-housing ratio would be 2.46 under this alternative (see **Table 4.2-13**).

Indirect effects associated with the lack of affordable housing are usually job-related and include traffic, air quality, and noise impacts associated with households having to travel outside of the area they work in to where they live. The traffic analysis (Section 4.4) and the associated analyses in air quality (Section 4.6) and noise (Section 4.5) in this EIR have considered the indirect environmental effects of the potential deficiency of employee housing for the Proposed Land Use Diagram.

TABLE 4.2-13
JOBS CREATED PER OCCUPIED HOUSEHOLD

Proposed Land Use Diagram	Number of FTEE Jobs Generated	Occupied Units	Jobs-Housing Ratio
	4,750	1,844	2.56

AA Existing Martis Valley General Plan Land Use Map

The commercial, ski mountain, residential, professional and public/quasi-public components proposed for the project, are expected to generate as many as 5,253 full-time employee equivalent jobs. These full-time employee equivalent takes into account both full-time and part-time jobs, as well as numerous secondary jobs that occur with the creation of primary employment.

Table 4.2-14 shows the amount of direct jobs that could be expected at buildout of the proposed project using the following ratios:

TABLE 4.2-14
EXISTING MARTIS VALLEY GENERAL PLAN EMPLOYMENT GENERATION

Land Use Type	Units	Employment Generation	Jobs
Single Family/Multifamily	10,607 dwelling units	0.00001 FTEE/s.f.	284
Townhome/Condominium	1,081 dwelling units	0.1 FTEE/d.u.	108
Public/Quasi-Public	723,096 s.f.	0.75 FTEE/1,000 s.f.	542
Professional	0 s.f.	3.35 FTEE/1,000 s.f.	0
General Commercial	226,512 s.f.	2.00 FTEE/1,000 s.f.	453
Tourist/Recreation Commercial	662,100 s.f.	2.50 FTEE/1,000 s.f.	1,655
Ski Mountain	26,764 skiiers	82.6/1,000 skiiers	2,211
Total			**5,253 jobs**

Source: Final Land Use Numbers, LSC, 2001; Town of Mammoth Lakes; Town of Vail, 1991; Placer County Mitigation Agreement, 2002
[1]*Assuming average residence of 2,860 square feet*

The project would include approximately 11,688 housing units at buildout. Using the occupancy rate of 20.0 percent, approximately 2,338 dwelling units would be occupied units (full-time residents).

Assuming that the percentage of employed residents within the Plan area is the similar to the Census Tract as a whole (51.9 percent), approximately 3,191 residents of the Plan area would be employed. This would result in an imbalance between the 5,253 jobs generated within the Plan area and the capacity of the Plan area to provide housing units for approximately 3,191 employees. The jobs-housing ratio would be 2.25 under this alternative (see **Table 4.2-15**).

Indirect effects associated with the lack of affordable housing are usually job-related and include traffic, air quality, and noise impacts associated with households having to travel outside of the area they work in to where they live. The traffic analysis (Section 4.4) and the associated analyses in air quality (Section 4.6) and noise (Section 4.5) in this EIR have considered the indirect environmental effects of the potential deficiency of employee housing for the Existing Martis Valley General Plan Land Use Map.

TABLE 4.2-15
JOBS CREATED PER OCCUPIED HOUSEHOLD

Alternative	Number of FTEE Jobs Generated	Occupied Units	Jobs-Housing Ratio
AA	5,253	2,338	2.25

AB Alternative 1 Land Use Map

The commercial, ski mountain, residential, professional and public/quasi-public components proposed for the project, are expected to generate as many as 5,016 full-time employee equivalent jobs. These full-time employee equivalent takes into account both full-time and part-time jobs, as well as numerous secondary jobs that occur with the creation of primary employment.

Table 4.2-16 shows the amount of direct jobs that could be expected at buildout of the proposed project using the following ratios:

TABLE 4.2-16
ALTERNATIVE 1 LAND USE PLAN EMPLOYMENT GENERATION

Land Use Type	Units	Employment Generation	Jobs
Single Family/Multifamily	9,255 dwelling units	0.00001 FTEE/ s.f.	265
Townhome/Condominium	1,056 dwelling units	0.1 FTEE/d.u.	106
Public/Quasi-Public	304,920 s.f.	0.75 FTEE/1,000 s.f.	229
Professional	10,890 s.f.	3.35 FTEE/1,000 s.f.	36
General Commercial	191,664 s.f.	2.00 FTEE/1,000 s.f.	383
Tourist/Recreation Commercial	714,384 s.f.	2.50 FTEE/1,000 s.f.	1,786
Ski Mountain	26,764 skiiers	82.6/1,000 skiiers	2,211
Total			**5,016 jobs**

Source: Final Land Use Numbers, LSC, 2001; Town of Mammoth Lakes; Town of Vail, 1991; Placer County Mitigation Agreement, 2002

[1]*Assuming average residence of 2,860 square feet*

The project would include approximately 10,311 housing units at buildout. Using the occupancy rate of 20 percent, approximately 2,062 dwelling units would be occupied units (full-time residents).

Assuming that the percentage of employed residents within the Plan area is the similar to the Census Tract as a whole (51.9 percent), approximately 3,576 residents of the Plan area (based on 2.63 residents per household) would be employed. This would result in an imbalance between the 5,016 jobs generated within the Plan area and the capacity of the Plan area to provide housing units for only 3,576 employees. Shown in **Table 4.2-17,** implementation of Alternative AB would result in 2.43 jobs for every occupied housing unit. This job-housing imbalance is potentially significant.

Indirect effects associated with the lack of affordable housing are usually job-related and include traffic, air quality, and noise impacts associated with households having to travel outside of the area they work in to where they live. The traffic analysis (Section 4.4) and the associated analyses in air quality (Section 4.6) and noise (Section 4.5) in this EIR have considered the indirect environmental effects of the potential deficiency of employee housing for the Alternative 1 Land Use Map.

TABLE 4.2-17
JOBS CREATED PER OCCUPIED HOUSEHOLD

Alternative AB	Number of FTEE Jobs Generated	Occupied Units	Jobs-housing Ratio
	5,016	2,062	2.43

Alternative 2 Land Use Map

The commercial, ski mountain, residential, professional and public/quasi-public components proposed for the project, are expected to generate as many as 5,850 full-time employee equivalent jobs. These full-time employee equivalent takes into account both full-time and part-time jobs, as well as numerous secondary jobs that occur with the creation of primary employment.

Table 4.2-18 shows the amount of direct jobs that could be expected at buildout of the proposed project using the following ratios:

TABLE 4.2-18
ALTERNATIVE 2 LAND USE MAP EMPLOYMENT GENERATION

Land Use Type	Units	Employment Generation	Jobs
Single Family/Multifamily	6,540 dwelling units	0.00001 FTEE/ s.f.	187
Townhome/Condominium	1,416 dwelling units	0.1 FTEE/d.u.	142
Public/Quasi-Public	252,648 s.f.	0.75 FTEE/1,000 s.f.	189
Professional	130,680 s.f.	3.35 FTEE/1,000 s.f.	438
General Commercial	252,648 s.f.	2.00 FTEE/1,000 s.f.	505
Tourist/Recreation Commercial	871,200 s.f.	2.50 FTEE/1,000 s.f.	2,178
Ski Mountain	26,764 skiiers	82.6/1,000 skiiers	2,211
Total			**5,850 jobs**

Source: Final Land Use Numbers, LSC, 2001; Town of Mammoth Lakes; Town of Vail, 1991; Placer County Mitigation Agreement, 2002

[1]*Assuming average residence of 2,860 square feet*

The project would include approximately 7,956 housing units at buildout. Using the occupancy rate of 20 percent, approximately 1,591 dwelling units would be occupied units (full-time residents).

Assuming that the percentage of employed residents within the Plan area is the similar to the Census Tract as a whole (51.9 percent), approximately 2,169 residents of the Plan area would be employed. This would result in an imbalance between the 5,850 jobs generated within the Plan area and the available housing within the Plan area for approximately 2,169 employees. Development under Alternative AC would result in 3.68 jobs per housing unit (see **Table 4.2-19**). This exceeds the average persons per household for the Martis Valley Block Group by 1.05. This job-housing imbalance is potentially significant.

Indirect effects associated with the lack of affordable housing are usually job-related and include traffic, air quality, and noise impacts associated with households having to travel outside of the area they work in to where they live. The traffic analysis (Section 4.4) and the associated analyses in air quality (Section 4.6) and noise (Section 4.5) in this EIR have considered the indirect environmental effects of the potential deficiency of employee housing for the Alternative 2 Land Use Map.

TABLE 4.2-19
JOBS CREATED PER OCCUPIED HOUSEHOLD

Alternative	Number of FTEE Jobs Generated	Occupied Units	Jobs-Housing Ratio
AC	5,393	1,541	3.50

Policies and Implementation Programs

The following policies and implementation programs from the Martis Valley Community Plan Update would serve to reduce the housing impacts related to the lack of affordable housing and employee-housing imbalance under the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Policy 3.A.1 *The County shall give the highest priority for permit processing to development projects that include a lower income residential component.*

Policy 3.A.2 *The County shall relax or reduce appropriate development standards for affordable/workforce/employee housing projects as an incentive for developers.*

Policy 3.A.3 *All new housing projects of 100 or more units on land that has received an increase in allowable density through either a public or privately initiated general plan amendment, community plan amendment, rezoning or specific plan (adopted since August 1994) shall be required to provide at least 10 percent of the units as affordable to low income households (less than 80% of area median income). The low income units shall be available concurrently with the market-rate units. All such units shall remain affordable for at least 20 years. In cases where developers construct the low income units, the projects shall be eligible for a 10 percent density bonus.*

In cases where the County determines that it is impractical for the developer to actually construct the units on site, the County may as an alternative, allow the dedication of land sufficient to accommodate at least 10% of the units for low-income households, and/or the payment of an in-lieu fee. In cases where land dedication is deemed suitable, such land shall be offered in fee to the County or to another public or nonprofit agency approved by the County. The amount of the in-lieu fee shall be determined on a case-by-case basis. The County may require the developer to fund an analysis showing how contributions of in-lieu fees could be best utilized to create the desired number of low-cost units.

All new housing projects of less than 100 units that have received an increase in allowable density through a general plan amendment, community plan amendment, rezoning or specific plan (since August 1994) shall be required to pay an in-lieu fee of one percent of the total estimated land and construction cost of the project, for use in producing affordable housing. Alternatively, the County may waive the fee in cases where lower income units are included in the project and the Board of Supervisors finds that the number of lower income units is commensurate with the numbers that could be built or leveraged through the fee.

Policy 3.A.4 *New or expanding resorts in the Martis Valley such as Northstar-at-Tahoe, Eaglewood, Siller Ranch, Hopkins Ranch, Martis Ranch, and Waddle Ranch shall be required to provide employee housing equal to 50 percent of the housing demand (based on the number of full-time equivalent employees) generated by the project. The housing is intended to serve the needs of the lower or moderate income level employee. Employee housing shall be provided in one of the following ways (in order of preference):*

a. Construction of employee housing onsite;
b. Construction of employee housing offsite;
c. Dedication of land for needed units; or
d. Payment of an in-lieu fee.

Policy 3.A.5 *Owners of vacation homes in Martis Valley shall be encouraged to rent to resort workers and to construct secondary dwellings or accessory apartments as a means of increasing the supply of rental units that serve the needs of the growing number of service workers.*

Policy 3.A.6 *The County shall continue to seek out opportunities for creative methods of encouraging and assisting in the financing of new workforce housing projects in the region.*

Policy 3.A.7 *The County shall review each new development project and identify suitable ways in which such projects can contribute to the supply of lower cost housing or the opportunity to set aside land for such purposes.*

Policy 3.A.8 *The County shall discourage the use of land for high-end residential development where the densities permitted by the Plan and the location in relation to the transportation system, jobs, the airport and necessary services are such that the land would be conducive to moderate or low cost housing.*

<u>Implementation Programs</u>

1. *As part of the Martis Valley Community Plan update, the County will review land use patterns, existing densities, the location of job centers and the availability of services to identify additional areas that may be suitable for higher density residential development.*

   Responsible Agency/Department: Planning Department
   Funding: General Fund

Time frame: 2002

2. *The County will continue to implement the permit streamlining program for residential projects.*

   Responsible Agency/Department: Planning Department
   Funding: General Fund
   Time frame: Ongoing

3. *The County will continue to implement the following incentive programs for the construction of affordable housing:*
   - *Allow second residential units with single family residences.*
   - *Allow manufactured housing in all residential zone districts.*
   - *Allow density bonuses for the construction of units for low and very low income residents, and for housing projects for seniors.*
   - *Consider amendments to the zoning ordinance so that employee housing constructed on-site is not deducted from allowable density within the project.*

   Responsible Agency/Department: Planning Department
   Time frame: Ongoing
   Funding: General Fund

4. *The County will continue to offer a density bonus which provides a 25 percent density bonus if 20 percent of the units are available to low income households.*

   Responsible Agency/Department: Planning Department
   Time frame: Ongoing
   Funding: Permit fees

6. *Private developers are encouraged to participate in Federal and State housing programs designed to provide for low and moderate income housing.*

   Responsible Agency/Department: Planning Department
   Time frame: Ongoing
   Funding: Public/Private

11. *The County shall review its interpretation and application of building codes to see that they are not acting as barriers to the development of innovative approaches to meeting the needs of fire resistant, low cost and/or energy-efficient housing.*

   Responsible Agency/Department: Building Department
   Time frame: Ongoing
   Funding: General Fund

<u>Mitigation Measures</u>

The following mitigation measure shall apply to Alternatives AA, AB, and AC. MM 4.2.2 shall be included as Implementation Program 15 in the Martis Valley Community Plan housing section.

MM 4.2.2 As a condition of approval of each housing development in Martis Valley, the project applicant shall construct 5 percent of units affordable to very low income households (0 to 50 percent of area median income) and 5 percent

of units affordable to low income households (50 to 80 percent of median income). Where practicable, the County shall require the future developer of each project site to construct affordable housing as early as possible. In instances where the County finds that it is not feasible to construct the affordable units, the developer shall be required to pay a fee as described in Policy 3.A.3.

Responsible Agency/Department: Planning Department
Time frame: Ongoing
Funding: General Fund

Policy 3.A.4 combined with the affordable housing requirements of mitigation measure MM 4.2.2 would reduce the affordable housing and employee-housing imbalance impacts of PP and Alternatives AA, AB, and AC to **less than significant**.

4.2.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

Planned and proposed developments in the area include Eaglewood, Northstar-at-Tahoe expansion and employee housing, Hopkins Ranch, Siller Ranch, and Martis Ranch along with developments in the Town of Truckee and the Nevada County portion of Martis Valley.

IMPACTS AND MITIGATION MEASURES

Impact 4.2.3 Cumulative Housing Impacts

PP Cumulative development under the Proposed Land Use Diagram could potentially exceed the holding capacity of Martis Valley as well as result in housing impacts. This is considered a **cumulative significant** impact.

AA Cumulative development under the No Project Alternative could potentially exceed the holding capacity of Martis Valley as well as result in housing impacts. This is considered a **cumulative significant** impact.

AB Cumulative development under the Alternative 1 Land Use Map could potentially exceed the holding capacity of Martis Valley as well as result in housing impacts. This is considered a **cumulative significant** impact.

AC Cumulative development under the Alternative 2 Land Use Map could potentially exceed the holding capacity of Martis Valley as well as result in housing impacts. This is considered a **cumulative significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Cumulative development in the vicinity of the project would increase the population and number of housing units within Placer County. However, development under the Martis Valley Community Plan is generally consistent with the land use designations and growth assumed of the Placer County General Plan. The General Plan has placed the Community Plan designation in that area in order to accommodate anticipated growth.

The project's contribution to population growth has been identified and considered within the General Plan EIR. The Martis Valley Community Plan includes policies and implementation

programs that serve to mitigate growth including employee housing and affordable housing programs.

As described under Impact 4.2.2, implementation of the Proposed Land Use Diagram or Alternatives AA through AC could result in generation of employment in numbers greater than the amount that could be housed in permanent housing anticipated in the Plan area. In addition, affordable housing in the area may not be sufficient to meet the Plan area's needs or its fair share of regional housing needs.

Mitigation Measures

Policy 3.A.4 addresses the need for employee housing in the Plan area. Mitigation measure MM 4.2.2 would further reduce the project's impacts to affordable housing and jobs-housing balance. Cumulative impacts are considered **less than significant**.

REFERENCES

Brown-Sheridan. 2000. Northstar sales and rentals. www.brown-sheridan.com/sold

Colwell, Richard. Deputy County Executive Officer Redevelopment, Placer County Redevelopment Agency. Letter dated May 15, 2000.

Ferraro, Cathleen. 1999 "Help! Sierra Communities Scramble to Find Workers and Housing." *Sacramento Bee*, November 16, 1999.

Lahontan. 2000. Residential sales in Lahontan development. www.tremblantimes.com/lahontan

Martis Valley Associates. 2000. Residential sales and rentals in Martis Valley www.martisvalley.com

Martis Valley Vacation Rentals. 2000. Residential sales and rentals in Martis Valley. www.mvvr.com

McCarthy, Dwight. Residential sales and rentals in Martis Valley, www.dwightmccarthy.com

Placer County. 1994. *Countywide General Plan Policy Document*. Placer County Planning Department, Auburn, California.

Placer County. 1994. *General Plan Background Report Volume I*. Placer County Planning Department, Auburn, California.

Placer County. 1994. *General Plan Background Report Volume II*. Placer County Planning Department, Auburn, California.

Placer County. 1993. *Gooseneck Ranch Final Environmental Impact Report*. Placer County Planning Department, Auburn, California.

Placer County. 1999. *Lahontan II Final Environmental Impact Report*. Placer County Planning Department, Auburn, California.

Placer County. 1975. *Martis Valley General Plan*. Placer County Planning Department, Auburn, California.

Placer County. 1999. *Village at Squaw Valley USA Draft Environmental Impact Report*. Placer County Planning Department, Auburn, California.

Sacramento Area Council of Governments. 2001. *March 2001 SACOG Projections by RAD*. www.sacog.org.

Town of Mammoth Lakes. 1999. *Mammoth Lakes Employee Housing Mitigation Policy*. Mammoth Lakes, California.

Town of Truckee. 1996. *Town of Truckee General Plan, Volume I, Goals and Policies*. Town of Truckee Planning Department, Town of Truckee, California.

Town of Truckee. 2000. *Planned Community - 2 Specific Plan Draft Environmental Impact Report*. Town of Truckee Planning Department, Town of Truckee, California.

Town of Vail. 1991. *Employee Housing Generation Rates*. Rosall Remen Cares. Vail, Colorado.

United States Bureau of the Census. 1990. *1990 U.S. Census.*

United States Bureau of the Census. 2001. *Profiles of General Demographic Characteristics, 2000 Census of Population and Housing, California*. Department of Commerce, United States of America.

Section 4.3
Human Health / Risk of Upset

This section provides information on safety hazards in the Plan area. The reader is referred to Section 4.8 (Geology and Soils) for information regarding impacts associated with geologic and seismic hazards, to Section 4.7 (Hydrology and Water Quality) for information regarding impacts associated with water quality and flooding, Section 4.5 (Air Quality) regarding air quality hazards, and Section 4.11 (Public Services) regarding wildland fire hazards.

4.3.1 EXISTING SETTING

HAZARDOUS MATERIALS DEFINED

A material is considered hazardous if it appears on a list of hazardous materials prepared by a Federal, State, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the California Code of Regulations (CCR) as:

> *…A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (California Code of Regulations,* Title 22, Section 66260.10).

Chemical and physical properties that cause a substance to be considered hazardous, including the properties of toxicity, ignitability, corrosivity, and reactivity, are defined in the CCR, Title 22, Sections 66261.20 - 66261.24. Factors that influence the health effects of exposure to hazardous material include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

PROJECT SETTING

The Plan area consists of an area of land that is approximately 25,570 acres near the Town of Truckee in the central Sierra Nevada Mountains. General geographic boundaries of the Martis Valley Plan area include the Placer County boundary to the north, the Truckee River to the west, the Lake Tahoe Basin to the south, and the California/Nevada State Line to the east. Natural features located within the Martis Valley area include the Truckee River, Martis Creek, Dry Lake, Gooseneck Lake, and steep terrain along with forested areas. Prominent land uses in the Martis Valley area include the Town of Truckee, Truckee-Tahoe Airport, existing residential communities consisting of Ponderosa Palisades, Martiswood Estates, Ponderosa Ranchos, Sierra Meadows and Lahontan, the Northstar-at-Tahoe resort community and the Martis Creek Lake Recreation Area.

Hazardous Substances and Uses

Sites In or Near the Plan Area

A hazardous material/waste database search conducted for the Plan area revealed hazardous material sites. Various databases were searched from inside the Plan area and to within 1/8 mile to 1 mile outside the Plan area boundary.

The first site, Truckee-Tahoe Airport, is located within the Plan area. The Airport site includes 9 underground tanks containing diesel, unleaded gasoline, aviation gasoline, or jet fuel. Three of

the tanks are closed or removed which includes all the diesel fuel tanks and one unleaded gasoline tank. The remaining 6 tanks, which store various fuels, continue to be in active service and identified as State Underground Storage Tanks (UST). None of these underground storage tanks are known to be leaking.

The second site, Henrickson Auto Wrecking Yard, is located outside of the Plan area (within ¼ to ½ mile) in Truckee. The wrecking yard is listed on the State Equivalent CERCLIS List (SCL) and the current state status is former annual workplan site and referred to Regional Water Quality Control Board (RWQCB).

The third site, Norcal Electric, is located outside of the Plan area (within ¼ to ½ mile) in Truckee. This site is listed under the Regional Leaking Underground Storage Tank (Regional LUST). One site tank contained diesel fuel and actions were taken to remove the tank; however, the aquifer was affected and a preliminary site assessment is underway by the Lahontan Regional Water Quality Control Board. The second tank, also listed as under the Regional LUST, contained diesel fuel and a site assessment began on June 20, 1999 and a leak report was released on July 19, 1995. This leaking tank affected the aquifer and the Lahontan Regional Water Quality Control Board remedied the event and the case was closed on November 8, 1999.

The fourth site, Department of Transportation Yard, is located outside of the Plan area (within ¼ to ½ mile) in Truckee. This site is listed on the Regional LUST and the State LUST. A report for the 2 leaking underground storage tanks containing miscellaneous motor vehicle fuel was released on March 23, 1992 and site assessment began the same day. These leaks affected the aquifer and the Lahontan Regional Board remediation involved excavation and disposal of the storage tanks. The last review for this site was conducted on December 2, 1999.

Additionally, the Plan area contains 3 sites that are listed in the California State Water Resources Control Board database. These 3 sites are be part of the database either because of an unauthorized release report was filed pursuant to Section 25295 of the Health and Safety Code or because a cease and desist order was issued pursuant to Section 13301 of the Water Code concerning the discharge of wastes which are hazardous materials. The sites, which are all located within the Northstar-at-Tahoe resort, include the Northstar-at-Tahoe Golf Course (1,000 underground storage tank removal, case considered closed), Northstar – Mid Mountain Maintenance Facility (removal of 2 underground storage tanks containing diesel fuel, remediation proposed, case is still open), and the Northstar Gasoline Station (removal of 3 underground storage tanks containing unleaded gasoline and diesel fuel, case is still open) (KEA, 2001).

Other Uses Known to Utilize Hazardous Materials

In addition to the listings mentioned above, the Truckee-Tahoe Airport has the potential for handling additional hazardous materials or wastes associated with operation. The operation of the existing golf courses located in the Plan area (Lahontan and Northstar-at-Tahoe) involves the storage of various chemicals used for maintaining the courses. Typical chemicals used and stored onsite may include herbicides, fungicides, pesticides, and motor vehicle products.

Airport Operations Hazards

The Truckee-Tahoe Airport is the primary general aviation airport serving the entire north Lake Tahoe region. The Truckee-Tahoe Airport is a public airport operated by the Truckee-Tahoe Airport District. The facility is located approximately 2 miles southeast from downtown Truckee

along State Route 267. The airport straddles the boundary between Nevada and Placer Counties. Aircraft utilizing the facility range from gliders to business jets and commuter planes. The most common aircraft are general aviation light single engine. The Truckee-Tahoe Airport Master Plan, dated November 1998, showed the total annual operations for the year 1996 as 32,900 total flights. The 1998 Airport Master Plan projected 34,500 flights (including permanently-based aircraft, itinerant aircraft, gliders, ultralights, and balloons) for the total annual operation in the year 2000; 41,000 flights for the year 2005; 46,900 flights for the year 2010; 54,000 flights for the year 2015; and 61,600 flights for the year 2020.

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Also included are potential airport operation hazards associated with incompatible land uses, such as power transmission lines, wildlife hazards (e.g., bird strikes), or tall structures in the vicinity of an airport.

Avalanche Hazards

The term avalanche, if unmodified, refers to down slope movements of a mass of snow and/or ice, and this mass of frozen water can also be accompanied by other materials. Avalanches are classified by the type of snow involved. These include climax, combination, damp snow, delayed action, direct action, dry snow, hangfire, and windslab avalanches. Sometimes the term avalanche is used to describe those landslides in which the material catches a pocket of underlying air thus reducing underlying friction and resulting in incredibly rapid downslope movement of snow and/or ice. As movement becomes much more rapid because of lower cohesion, higher water content and steeper slopes the definition for an avalanche can grade from debris slides to debris flows and from debris slide to debris avalanche. Debris slides and, less commonly, debris avalanches may have slump blocks at their heads. In debris slides, the moving mass breaks up into smaller and smaller particles as it advances toward the foot of the slope and the movement is usually slow. In debris avalanches, progressive failure is more rapid and the whole mass, either because it is quite wet or because it is on a steep slope, liquefies, at least in part and flows and tumbles downhill. These movements are commonly along a stream channel and may advance well beyond the foot of the slope. Debris avalanches generally take place along long narrow drainage ways and often leave a serrated or V-shaped scar tapering uphill at the head in contrast to the horseshoe-shaped scarp of a slump.

The setting in which conditions for avalanche are favorable consists of a combination of factors including steepness of slope, exposure, snow pack composition, wind, temperature, rate of snow fall, and other interacting factors outlined in the Placer County Code, Chapter 35, Section 35.01. Avalanches most frequently occur on northerly- and easterly-facing slopes inclined at angles greater than 29 degrees, but under the right combination of factors avalanches can be released under a wide variety of slopes with any aspect.

The Plan area has a typically maritime climate with generally deep snow packs, mild temperatures and strong southerly to southwesterly winds. Although avalanches have the potential to occur on steeper slopes in the Plan area, they are not likely to occur on the terrain that is dominated by more subtle surface features. There have been no records of avalanches occurring in the area (Placer County, 1993). Avalanche hazards are further addressed in Section 4.8 (Geology and Soils) of this Draft EIR.

Abandoned Mines and Tailings

The Northstar-at-Tahoe property contains an abandoned mine and mine tailings. The entrance to the mineshaft and most of the mine tailings are located in the middle of small-forested area between two existing ski runs near the existing Backside Express chairlift. The entrance of the mineshaft is covered by boulders and tree trunks cut and stacked in front of the mineshaft opening. Small openings to the entrance of the mineshaft are visible between the rocks and tree trunks. The tailings cover an area approximately 3,300 square feet in size with a depth varying from 2 to 3 feet. Mine drainage inundates a shallow depression that eventually drains to Martis Creek. Two water samples were collected from the depression in 2000. While concentrations of metals and pH in these samples were less than the total toxic threshold levels and corrosivity standards in Title 22, California Code of Regulations, Section 66261, the pH levels were measured from 3.53 to 3.72. (KEA, 2001)

Radon

Radon isotope-22 is a colorless, odorless, and tasteless radioactive gas that results form the natural decay of uranium. Uranium and radon are present in varying amounts in rocks and soils, and radon is present in background concentrations in the atmosphere. Current evidence indicates that increased lung cancer risk is directly related to radon-decay products.

Medical communities in the United States are currently conducting intense research into the radon potential of rocks and soils and indoor radon exposure levels. At this time, the EPA has recommended an "action" level for indoor radon concentrations at or exceeding 4 pico-curies per liter of air (pCi/l). The EPA has extrapolated that a 1 to 3 percent lung cancer mortality rate resulting from a lifetime of exposure at 4 pCi/l. In other words, it is estimated that 1 to 3 persons per 100 exposed to this concentration for life will die of lung cancer induced by radon. In 1993, surveys were conducted at 23 sites in Nevada County to determine indoor concentrations of radon gas. The surveys found concentrations below 4.0 pico-curies per liter of air (pCi/L). The level of recommended action for radon gas in structures is 4.0 pCi/L. Due to the location of the project site in relation to the Plan area, it can be concluded that the Plan area conditions are closely represented by the soil conditions of Nevada County (Black Eagle, 2000). Based on the findings of the surveys, the EPA designates Nevada County as having an intermediate potential health hazard due to indoor radon. Radon accumulation in structures can also be minimized through building design. Sampling for radon groundwater sources has been conducted in Northstar and wells at Lahontan. The Northstar Community Services District sampling has identified that the gross alpha concentration in the potable water supply at Northstar is 1/100. The State of California Maximum Contaminant Level of 15.0 picocuries per liter (KEA, 2001), while radon concentrations in the Lahontan wells range from 0.1 to 3.4 pCi/L and also meet the EPA proposed MCL for radon (Geo Trans, 2000).

4.3.2 REGULATORY FRAMEWORK

Many agencies regulate the various hazards associated with the Martis Valley Community Plan area. The following discussion contains a summary review of regulatory controls pertaining to hazardous materials, airport operations, avalanche hazards, and abandoned mines.

FEDERAL

Environmental Protection Agency

EPA provides leadership in the nation's environmental science, research, education and assessment efforts. EPA works closely with other federal agencies, state and local governments, and Indian tribes to develop and enforce regulations under existing environmental laws. EPA is responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes responsibility for issuing permits, and monitoring and enforcing compliance.

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

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

Table 4.3-1 lists federal, state, and local regulatory agencies that oversee hazardous materials handling and hazardous waste management, and the statutes and regulations that they administer.

TABLE 4.3-1
SUMMARY OF HAZARDOUS MATERIALS REGULATORY AUTHORITY

Regulatory Agency	Authority
Federal Agencies	
Department of Transportation (DOT)	Hazardous Materials Transport Act - Code of Federal Regulations (CFR) 49
Environmental Protection Agency (EPA)	Federal Water Pollution Control Act Clean Air Act Resource Conservation and Recovery Act (RCRA) Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Superfund Amendments and Reauthorization Act (SARA) Federal Insecticide, Fungicide and Rodenticide Act
Occupational Safety and Health Administration (OSHA)	Occupational Safety and Health Act and CFR 29
State Agencies	
Department of Toxic Substances Control (DTSC)	California Code of Regulations
Department of Industrial Relations (CAL-OSHA)	California Occupational Safety and Health Act, CCR Title 8
State Water Resources Control Board and Regional Water Quality Control Board	Porter-Cologne Water Quality Act Underground Storage Tank Law
Health and Welfare Agency	Safe Drinking Water and Toxic Enforcement Act
Air Resources Board and Air Pollution Control District	Air Resources Act
Office of Emergency Services	Hazardous Materials Release Response Plans/Inventory Law
Department of Fish and Game	Fish and Game Code
Department of Food and Agriculture	Food and Agriculture Code
State Fire Marshall	Uniform Fire Code, CR Title 19

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

Federal Aviation Administration

The mission of the Federal Aviation Administration (FAA) organization is to provide leadership in planning and developing a safe and efficient national airport system to satisfy the needs of aviation interests of the United States, with due consideration for economics, environmental compatibility, local proprietary rights, and safeguarding the public investment.

Protection of navigable airspace and avoidance of hazards to flight is achieved through implementation of Part 77 of the Federal Aviation Administration Regulations (FAR 77). The regulations identify three-dimensional imaginary surfaces on and around airports through which no object should penetrate. These surfaces include: the Primary, Approach, Transitional, Horizontal and Conical surfaces. Criteria utilized in determining the shape, size and position of the various surfaces are outlined in the federal regulations. Topographic obstructions are also typically identified on the FAR 77 airspace drawing (see **Figure 4.3-1**). Development under proposed Community Plan may be subject to review associated with Part 77 if obstruction into the navigable airspace is anticipated.

STATE

Environmental Protection Agency

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

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Subsequent development under the proposed Community Plan may subject to one or more of the above laws.

Department of Toxic Substances Control

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

California Division of Aeronautics

The California Division of Aeronautics fosters and promotes the development of a safe, efficient, dependable, and environmentally compatible air transportation system. The Division issues permits for and annually inspects hospital heliports and public-use airports; makes recommendations regarding proposed school sites within 2 miles of an airport runway; and authorizes helicopter landing sites at/near schools. Aviation system planning provides for the integration of aviation into transportation system planning on a regional, statewide, and national basis. The Division of Aeronautics administers noise regulation and land use planning laws that foster compatible land use around airports and encourages environmental mitigation measures to lessen noise, air pollution, and other impacts caused by aviation.

The Division prohibits the construction of any structure that would penetrate an imaginary surface, unless the State Division of Aeronautics has first issued a permit allowing its construction.

Surface Mining Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted in 1975 by the State of California. SMARA declared that the extraction of minerals is essential to the continued economic well-being of the state and to the needs of the society, and that the reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety. Specifically, the Act:

- Establishes prohibitions and requirements regarding the mining of minerals and reclamation of land for subsequent reuse;
- Establishes financial assurances required of operators for implementing an approved reclamation plan;
- Establishes and funds an abandoned minerals and mineral materials mine reclamation program that among other uses included the reclamation and restoration of abandoned mine areas; and
- Establishes liability limitations regarding beneficial uses pursuant to State Water Code Section 13397 for remediation/reclamation of abandoned mines.

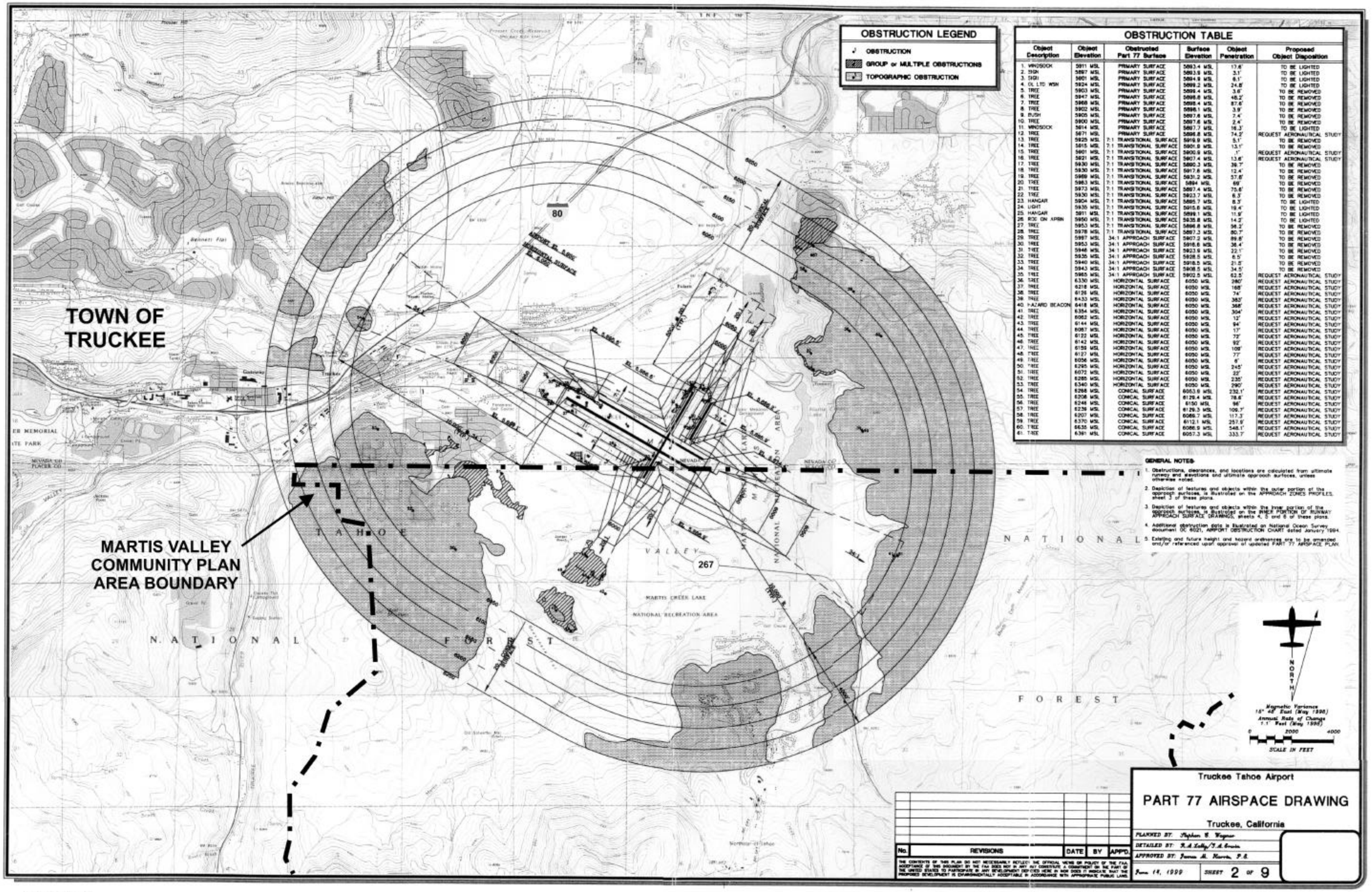
LOCAL

Martis Valley General Plan

The existing Martis Valley General Plan incorporates policies that pertain to safety hazards. These policies include the following.

Community Development and Transportation

Policy 18 The avalanche hazard areas for the ski slope and development areas must be precisely determined. Evaluation of the effectiveness of possible control measures, including recommendations on the absolute limits of development in various areas, must be made with each project report.



OBSTRUCTION TABLE

Object Description	Object Elevation	Obstructed Part 77 Surface	Surface Elevation	Object Penetration	Proposed Object Disposition
1. WINDSOCK	5911 MSL	PRIMARY SURFACE	5893.4 MSL	17.6'	TO BE LIGHTED
2. SIGN	5897 MSL	PRIMARY SURFACE	5893.9 MSL	3.1'	TO BE LIGHTED
3. SIGN	5901 MSL	PRIMARY SURFACE	5894.9 MSL	6.1'	TO BE LIGHTED
4. GL LTD WSN	5924 MSL	PRIMARY SURFACE	5899.2 MSL	24.8'	TO BE LIGHTED
5. TREE	5903 MSL	PRIMARY SURFACE	5899.4 MSL	3.6'	TO BE REMOVED
6. TREE	5947 MSL	PRIMARY SURFACE	5898.8 MSL	48.2'	TO BE REMOVED
7. TREE	5968 MSL	PRIMARY SURFACE	5898.4 MSL	67.6'	TO BE REMOVED
8. TREE	5902 MSL	PRIMARY SURFACE	5898.1 MSL	3.9'	TO BE REMOVED
9. BUSH	5905 MSL	PRIMARY SURFACE	5897.6 MSL	7.4'	TO BE REMOVED
10. TREE	5900 MSL	PRIMARY SURFACE	5897.6 MSL	2.4'	TO BE REMOVED
11. WINDSOCK	5914 MSL	PRIMARY SURFACE	5897.7 MSL	16.3'	TO BE LIGHTED
12. TREE	5971 MSL	PRIMARY SURFACE	5896.8 MSL	74.2'	REQUEST AERONAUTICAL STUDY
13. TREE	5925 MSL	7:1 TRANSITIONAL SURFACE	5919.9 MSL	5.1'	TO BE REMOVED
14. TREE	5915 MSL	7:1 TRANSITIONAL SURFACE	5901.9 MSL	13.1'	TO BE REMOVED
15. TREE	5901 MSL	7:1 TRANSITIONAL SURFACE	5900.9 MSL	1'	REQUEST AERONAUTICAL STUDY
16. TREE	5921 MSL	7:1 TRANSITIONAL SURFACE	5907.4 MSL	13.6'	REQUEST AERONAUTICAL STUDY
17. TREE	5930 MSL	7:1 TRANSITIONAL SURFACE	5890.3 MSL	39.7'	TO BE REMOVED
18. TREE	5930 MSL	7:1 TRANSITIONAL SURFACE	5917.6 MSL	12.4'	TO BE REMOVED
19. TREE	5969 MSL	7:1 TRANSITIONAL SURFACE	5931.2 MSL	37.8'	TO BE REMOVED
20. TREE	5963 MSL	7:1 TRANSITIONAL SURFACE	5894 MSL	69'	TO BE REMOVED
21. TREE	5973 MSL	7:1 TRANSITIONAL SURFACE	5897.4 MSL	75.6'	TO BE REMOVED
22. TREE	5930 MSL	7:1 TRANSITIONAL SURFACE	5923.7 MSL	6.3'	TO BE REMOVED
23. HANGAR	5904 MSL	7:1 TRANSITIONAL SURFACE	5895.7 MSL	8.3'	TO BE LIGHTED
24. LIGHT	5935 MSL	7:1 TRANSITIONAL SURFACE	5915.6 MSL	19.4'	TO BE LIGHTED
25. HANGAR	5911 MSL	7:1 TRANSITIONAL SURFACE	5899.1 MSL	11.9'	TO BE LIGHTED
26. ROC ON APRN	5950 MSL	7:1 TRANSITIONAL SURFACE	5935.8 MSL	14.2'	TO BE LIGHTED
27. TREE	5953 MSL	7:1 TRANSITIONAL SURFACE	5898.8 MSL	54.2'	TO BE REMOVED
28. TREE	5978 MSL	7:1 TRANSITIONAL SURFACE	5897.3 MSL	80.7'	TO BE REMOVED
29. TREE	5997 MSL	34:1 APPROACH SURFACE	5907.2 MSL	89.8'	TO BE REMOVED
30. TREE	5953 MSL	34:1 APPROACH SURFACE	5916.6 MSL	36.4'	TO BE REMOVED
31. TREE	5946 MSL	34:1 APPROACH SURFACE	5923.9 MSL	22.1'	TO BE REMOVED
32. TREE	5935 MSL	34:1 APPROACH SURFACE	5928.5 MSL	6.5'	TO BE REMOVED
33. TREE	5940 MSL	34:1 APPROACH SURFACE	5918.5 MSL	21.5'	TO BE REMOVED
34. TREE	5943 MSL	34:1 APPROACH SURFACE	5908.5 MSL	34.5'	TO BE REMOVED
35. TREE	5965 MSL	34:1 APPROACH SURFACE	5902.5 MSL	62.5'	REQUEST AERONAUTICAL STUDY
36. TREE	6330 MSL	HORIZONTAL SURFACE	6050 MSL	280'	REQUEST AERONAUTICAL STUDY
37. TREE	6218 MSL	HORIZONTAL SURFACE	6050 MSL	168'	REQUEST AERONAUTICAL STUDY
38. TREE	6126 MSL	HORIZONTAL SURFACE	6050 MSL	74'	REQUEST AERONAUTICAL STUDY
39. TREE	6433 MSL	HORIZONTAL SURFACE	6050 MSL	383'	REQUEST AERONAUTICAL STUDY
40. HAZARD BEACON	6418 MSL	HORIZONTAL SURFACE	6050 MSL	368'	REQUEST AERONAUTICAL STUDY
41. TREE	6354 MSL	HORIZONTAL SURFACE	6050 MSL	304'	REQUEST AERONAUTICAL STUDY
42. TREE	6062 MSL	HORIZONTAL SURFACE	6050 MSL	12'	REQUEST AERONAUTICAL STUDY
43. TREE	6144 MSL	HORIZONTAL SURFACE	6050 MSL	94'	REQUEST AERONAUTICAL STUDY
44. TREE	6067 MSL	HORIZONTAL SURFACE	6050 MSL	17'	REQUEST AERONAUTICAL STUDY
45. TREE	6122 MSL	HORIZONTAL SURFACE	6050 MSL	72'	REQUEST AERONAUTICAL STUDY
46. TREE	6142 MSL	HORIZONTAL SURFACE	6050 MSL	92'	REQUEST AERONAUTICAL STUDY
47. TREE	6159 MSL	HORIZONTAL SURFACE	6050 MSL	109'	REQUEST AERONAUTICAL STUDY
48. TREE	6127 MSL	HORIZONTAL SURFACE	6050 MSL	77'	REQUEST AERONAUTICAL STUDY
49. TREE	6056 MSL	HORIZONTAL SURFACE	6050 MSL	6'	REQUEST AERONAUTICAL STUDY
50. TREE	6295 MSL	HORIZONTAL SURFACE	6050 MSL	245'	REQUEST AERONAUTICAL STUDY
51. TREE	6072 MSL	HORIZONTAL SURFACE	6050 MSL	22'	REQUEST AERONAUTICAL STUDY
52. TREE	6285 MSL	HORIZONTAL SURFACE	6050 MSL	235'	REQUEST AERONAUTICAL STUDY
53. TREE	6340 MSL	HORIZONTAL SURFACE	6050 MSL	290'	REQUEST AERONAUTICAL STUDY
54. TREE	6288 MSL	CONICAL SURFACE	6053.9 MSL	232.1'	REQUEST AERONAUTICAL STUDY
55. TREE	6208 MSL	CONICAL SURFACE	6129.4 MSL	78.6'	REQUEST AERONAUTICAL STUDY
56. TREE	6246 MSL	CONICAL SURFACE	6150 MSL	96'	REQUEST AERONAUTICAL STUDY
57. TREE	6239 MSL	CONICAL SURFACE	6129.3 MSL	109.7'	REQUEST AERONAUTICAL STUDY
58. TREE	6207 MSL	CONICAL SURFACE	6089.7 MSL	117.3'	REQUEST AERONAUTICAL STUDY
59. TREE	6370 MSL	CONICAL SURFACE	6112.1 MSL	257.9'	REQUEST AERONAUTICAL STUDY
60. TREE	6635 MSL	CONICAL SURFACE	6086.9 MSL	548.1'	REQUEST AERONAUTICAL STUDY
61. TREE	6391 MSL	CONICAL SURFACE	6057.3 MSL	333.7'	REQUEST AERONAUTICAL STUDY

GENERAL NOTES:

1. Obstructions, clearances, and locations are calculated from ultimate runway and elevations and ultimate approach surfaces, unless otherwise noted.
2. Depiction of features and objects within the outer portion of the approach surfaces, is illustrated on the APPROACH ZONES PROFILES, sheet 3 of these plans.
3. Depiction of features and objects within the inner portion of the approach surfaces, is illustrated on the INNER PORTION OF RUNWAY APPROACH SURFACE DRAWINGS, sheets 4, 5 and 6 of these plans.
4. Additional obstruction data is illustrated on National Ocean Survey document OC 6021, AIRPORT OBSTRUCTION CHART dated January 1994.
5. Existing and future height and hazard ordinances are to be amended and/or referenced upon approval of updated PART 77 AIRSPACE PLAN.

THE CONTENTS OF THIS PLAN DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS DOCUMENT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HERE. IN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

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FIGURE 4.3-1
TRUCKEE TAHOE AIRPORT FAR PART 77 MAP

Placer County Avalanche Management Program

Placer County's avalanche management program defines Potential Avalanche Hazard Areas (PAHAs) as those areas where the minimum probability of avalanche occurrence is greater than 1 in 100 per year or where avalanche damage has already occurred. The Placer County Department of Public Works and property owners that rent their property to the public are required to post information, described below, in facilities located in PAHAs explaining avalanche hazards and available emergency services. The following are relevant Placer County General Plan policies related to avalanche hazards.

According to the Placer County Avalanche Management Ordinance (Ordinance No. 4331-B), specific project related information must include:

- Information that a structure is within a PAHA;
- A warning that avalanche control work, including the use of explosives, may be carried out and that avalanche control personnel may provide special advisories or instructions;
- A warning that authorities may attempt to contact property owners during periods of severe storm events, but that the responsibility of the occupants to use good judgment during such events; and
- Identification of local radio stations that provide weather information, phone numbers of the Office of Emergency Services and other local emergency offices, and available brochures about avalanches.

The County will not issue a building permit for construction in a PAHA without certifying that the structure will be safe under the anticipated snow loads and conditions of an avalanche, or as an alternative, without a recorded statement that discloses that special construction methods were not employed. In general, structures must be constructed of reinforced concrete or other reinforced masonry at least as high as the depth of an expected avalanche because constructing wood-frame structures that will withstand forces greater than 1 ton per square meter is considered economically infeasible. Currently, the Plan area is not covered in the Placer County Avalanche Management Ordinance.

Placer County Hazardous Waste Management Plan

Placer County adopted a Hazardous Waste Management Plan (HWMP) in January 1989 that was prepared according to guidelines established by state law (Section 25135 of the California Health and Safety Code, known as AB 2948).

The Placer County HWMP provides data on the quantity and types of hazardous waste currently generated within the county and within the 6 incorporated areas; evaluates the need for treatment, storage, or disposal (TSD) facilities through 2000 based on projected waste generation; and includes policies and implementation measures.

Truckee-Tahoe Airport Master Plan

Facility development for the Truckee-Tahoe Airport is currently guided by the 1988 Truckee-Tahoe Airport Master Plan. The Plan anticipates that parallel runways will be constructed

adjacent to both the primary and crosswind runways in the future. A number of new hangars are also planned southwest of Runway 10-28.

Truckee-Tahoe Airport Comprehensive Land Use Plan

In 1986, the Foothill Airport Land Use Commission (ALUC) adopted a Comprehensive Land Use Plan (CLUP) for the Truckee-Tahoe Airport. The Foothill Airport Land Use Commission prepared an update in 1990 to include revised noise contours. At present, the Truckee-Tahoe Airport is interested in undertaking another CLUP update to better address the relationship of the airport with the existing land uses and proposed development in the area.

The existing Truckee-Tahoe Airport CLUP (1990) suggests that land use policies and regulations in Martis Valley should be consistent with concerns to minimize public exposure to noise and safety hazards, provide for safe aircraft operations, and protect the airport as a public resource. The plan established areas of influence within which airport operations are likely to affect other land uses, and proposes restraints to minimize conflicts within those boundaries. ALUC reviews development applications and determines the compatibility of the project to the height, noise and safety guidelines of the CLUP. Development of the Plan area is subject to height restrictions of the Truckee-Tahoe Airport Comprehensive Land Use Plan (CLUP) as well as the Federal Aviation Regulations (FAR) Part 77. **Figure 4.3-2** shows the Truckee-Tahoe Airport Safety Zones.

The CLUP is intended to protect and promote the safety and welfare of residents near and users of Truckee-Tahoe Airport, while promoting the continued operation of the airport. Specifically, the plan seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace. In addition, the CLUP promotes compatible urban development and restricts incompatible development near the Truckee-Tahoe Airport. Three areas of compatibility are considered in the plan which include:

- Compatibility of surrounding land uses with airport noise levels;
- Compatibility of surrounding land uses with respect to the safety of persons on the ground and persons on board aircraft making controlled crash landings; and
- Protection of airspace needed for safe air navigation near the airport.

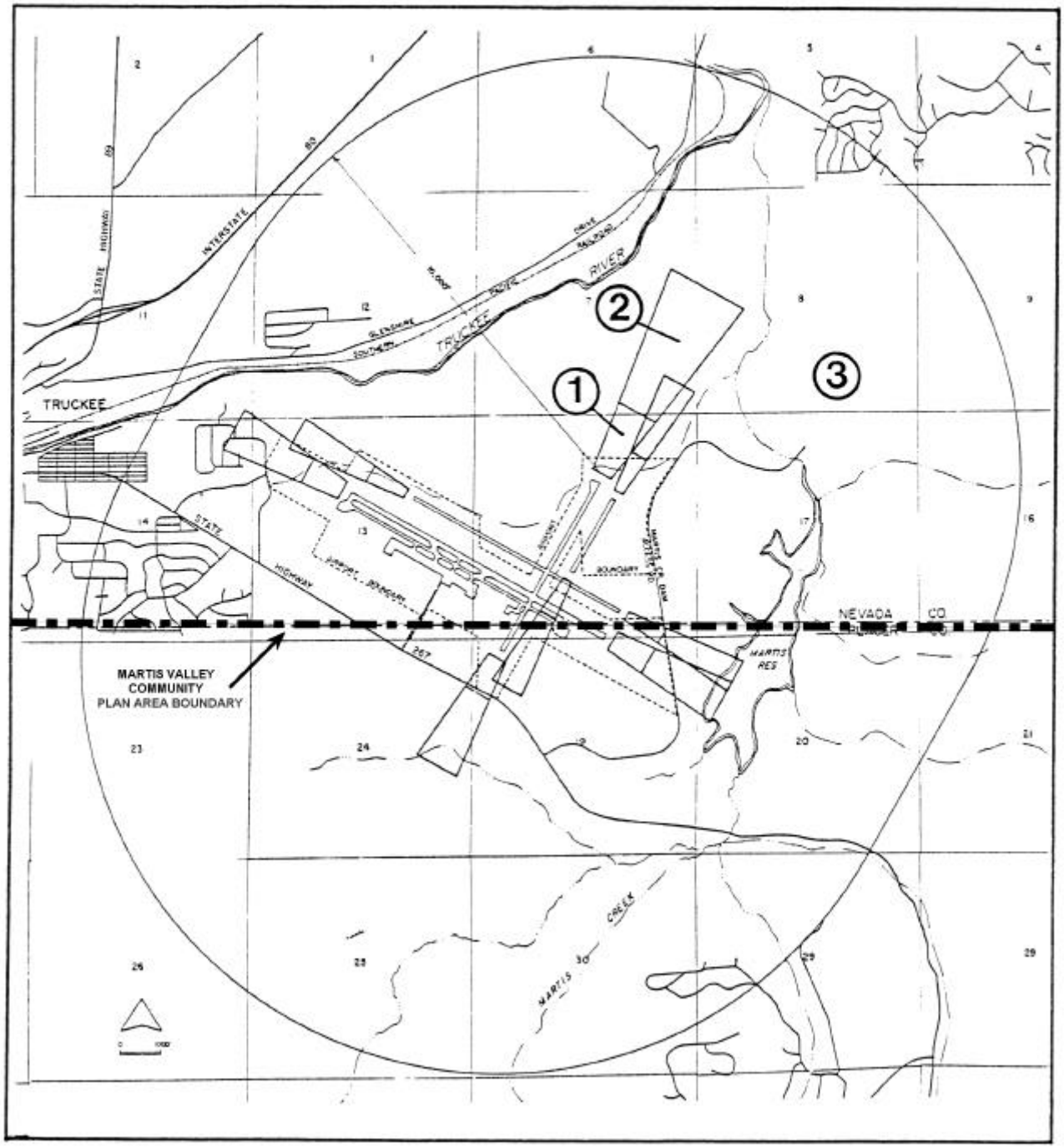
The most critical safety hazard involves the Clear Zone. This zone begins 200 feet from the end of the runway and extends out from 1,000 to 1,700 feet depending on the characteristics of the runway. The next most critical hazard area is described as the Approach/Departure Zone. This is where the aircraft are either climbing or descending and beginning their turning maneuvers. This Zone begins at the outer edge of the Clear Zone and extends out 2,000 to 3,400 feet depending on the characteristics of the runway. However, this CLUP figure incorrectly represents the location of the Overflight Zone. The Overflight Zone should be aligned with the runways, which run parallel to State Route 267. Subsequent development under the proposed Community Plan would generally be subject to review for compliance with the CLUP.

TRUCKEE-TAHOE AIRPORT SAFETY ZONES

① Safety Area 1 - Clear Zone

② Safety Area 2 - Approach/Departure Zone

③ Safety Area 3 - Overflight Zone



* Note: This figure is intended to illustrate safety area dimensions in a general manner only. The jurisdiction's planning department should be contacted to determine the precise safety area boundaries as they affect individual parcels.

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FIGURE 4.3-2
TRUCKEE TAHOE AIRPORT CLUP AIRPORT SAFETY ZONES

Placer County General Plan

The Placer County General Plan includes policies and programs, which call for the County to ensure that the planning of land uses, and new development be compatible with airport activities to minimize airport hazards. The County should recognize that such land uses would be subject to noise protection, location, use, and height restrictions. Specifically, Policy 8.D.1 ensures that new development around airports does not generate safety hazards such as lights from direct or reflective sources, smoke, electrical interference, hazardous chemical, or fuel storage that would affect the safety of the airport operations. In addition, Implementation Program 8.8 has the County review development projects within overflight zones of the airport for compatibility with applicable airport comprehensive land use plans (CLUPs).

Placer County General Plan Policies

The Placer County General Plan includes the following policies pertaining to hazards:

Policy 8.D.1 The County shall ensure that new development around airports does not create safety hazards such as lights from direct or reflective sources, smoke, electrical interference, hazardous chemicals, or fuel storage in violation of adopted safety standards.

Policy 8.D.2 The County shall limit land uses in airport safety zones to those uses listed in the applicable airport comprehensive land use plans (CLUPSs) as compatible uses. Exceptions shall be made only as provided for in the CLUPs. Such uses shall also be regulated to ensure compatibility in terms of location, height, and noise.

Policy 8.D.3 The County shall ensure that development within the airport approach and departure zones complies with Part 77 of the Federal Aviation Administration Regulations (objects affecting navigable airspace).

Policy 8.A.12 The County shall not issue permits for new development in potential avalanche hazard area (PAHA) as designated in the Placer County Avalanche Management Ordinance unless project proponents can demonstrate that such development will be safe under anticipated snow loads and conditions of an avalanche.

Policy 8.H.1 The County shall maintain maps of potential avalanche hazard areas.

Policy 8.H.2 The County shall require new development in areas of avalanche hazard to be sited, designed, and constructed to minimize avalanche hazards.

Policy 8.G.1 The County shall ensure that the use and disposal of hazardous materials in the county comply with local, state, and federal safety standards.

Policy 8.G.2 The County shall discourage the development of residences or schools near known hazardous waste disposal or handling facilities.

Policy 8.G.5 The County shall strictly regulate the storage of hazardous materials and wastes.

Policy 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 surrounding natural environment.

The proposed Martis Valley Community Plan policy document contains goals, policies and implementation programs that are generally consistent with the policy provisions of the Placer County General Plan.

4.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

For purposes of this EIR, the following criteria were used in determining whether the implementation of the proposed Community Plan would result in a significant impact:

1) An impact would be considered significant if subsequent land uses under the Martis Valley Community Plan may involve the use, production, or disposal of materials that pose a hazard to people, or to plant or animal populations in the area affected;

2) Exposure of people or property to hazardous including explosives, groundwater contamination, soil contamination;

3) Exposure of workers or residences to hazardous materials and health risks during construction or maintenance activities;

4) Expose future development to hazards related to abandoned mine features; or

5) Place land uses in designated hazardous areas inconsistent with applicable plans and policies of federal, state and local agencies.

Avalanche hazards are addressed in Section 4.8 (Geology and Soils) of this Draft EIR.

METHODOLOGY

This analysis is based on review of existing documentation, field review and consultation with local agencies. It is assumed that future commercial and office uses may utilize hazardous materials as part of their operation.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.3.1 Abandoned Mines and Tailings

PP The potential exists for abandoned mine shafts and openings in the Plan area to present a physical hazard for subsequent development under the Proposed Land Use Diagram. This is considered a **potentially significant** impact.

AA The potential exists for abandoned mine shafts and openings in the Plan area to present a physical hazard for subsequent development under the Existing Martis Valley General Plan Land Use Map. This is considered a **potentially significant** impact.

AB The potential exists for abandoned mine shafts and openings in the Plan area to present a physical hazard for subsequent development under the Alternative 1 Land Use Map. This is considered a **potentially significant** impact.

AC The potential exists for abandoned mine shafts and openings in the Plan area to present a physical hazard for subsequent development under the Alternative 2 Land Use Map. This is considered a **potentially significant** impact.

PP Proposed Land Use Diagram

As described in Section 4.10 (Cultural and Paleontological Resources), portions of the Plan area have historically been utilized for mining operations. The Northstar-at-Tahoe ski resort area contains known abandoned mine and mine tailings. Development under the Proposed Land Use Diagram could be affected by known and unknown mine features and open shafts that could represent potential safety hazards, such as in subsidence or collapse, contamination from tailings and that act as a conduit for groundwater contamination. It is unknown at this time whether the Plan area contains additional mineshafts and mine tailings in other locations that may support residential or recreational development.

AA Existing Martis Valley General Plan Land Use Map

Alternative AA has a similar land use pattern as compared to the Proposed Land Use Diagram and could result in the same hazards associated with abandoned mines.

AB Alternative 1 Land Use Map

Alternative AB has a similar land use pattern as compared to the Proposed Land Use Diagram and could result in the same hazards associated with abandoned mines.

AC Alternative 2 Land Use Map

Alternative AC has a similar land use pattern as compared to the Proposed Land Use Diagram and could result in the same hazards associated with abandoned mines.

<u>Policies and Implementation Programs</u>

The following Martis Valley Community Plan policies and implementation programs in Section IX (Natural Resources) would assist in reducing potential impacts discussed regarding consistency of the project with planning documents applicable to the Plan area.

Policy 9.A.1 The County shall require the preparation of a soils or geologic investigation prior to permitting development in areas of known or suspected geological or seismic hazards (i.e., seismically induced ground shaking, landslides, liquefaction, critically expansive soils, avalanche).

Implementation Programs

2. Require the preparation of a soils and/or geologic investigation prior to permitting development in areas of known or suspected geological or seismic hazards (i.e., seismically induced groundshaking, landslides, liquefaction, critically expansive soils).

Responsible Agency/Department: Department of Public Works
Time Frame: On-going
Funding: Permit Fees/ Plan Review Fees

Mitigation Measures

The following mitigation measures would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC as a new policy in Section IX (Natural Resources) under Goal 9.A in the proposed Community Plan.

MM 4.3.1 Upon the identification of mine facilities on a project site within the Plan area, the County shall require that a detailed survey of the mine features and a hazards assessment be performed and that remedial measures be undertaken in areas of waste rock, mine tailings, and other associated contamination areas. Remediation shall be undertaken in accordance with the requirements of the County, California Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board. Remedial measures that could be implemented include, but are not limited to, the following: 1) fencing the impacted area to prohibit public access, 2) removal of mine wastes to an appropriate landfill facility, 3) consolidate and encapsulate mine wastes, restore the area with vegetation, and re-route drainage, and 4) securing mine sites to restrict access and subsidence.

Implementation of the above mitigation measures would mitigate impacts associated with the abandoned mines located in the Plan area that present a physical hazard to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.3.2 Hazardous Materials Contamination

PP Implementation of the Proposed Land Use Diagram could result in potential disturbance and contamination of existing and future land uses resulting from the use of toxic chemicals, the storage and disposal of toxic chemicals, and other hazardous materials. This is considered a **potentially significant** impact.

AA Implementation of Existing Martis Valley General Plan Land Use Map could result in potential disturbance and contamination of existing and future land uses resulting from the use of toxic chemicals, the storage and disposal of toxic chemicals, and other hazardous materials. This is considered a **potentially significant** impact.

AB Implementation of Alternative 1 Land Use Map could result in potential disturbance and contamination of existing and future land uses resulting from the use of toxic chemicals, the storage and disposal of toxic chemicals, and other hazardous materials. This is considered a **potentially significant** impact.

AC Implementation of Alternative 2 Land Use Map could result in potential disturbance and contamination of existing and future land uses resulting from the use of toxic chemicals, the storage and disposal of toxic chemicals, and other hazardous materials. This is considered a **potentially significant** impact.

PP Proposed Land Use Diagram

As described in the existing setting, a hazardous material/waste database search was conducted for the Plan area that revealed hazardous material/waste sites. In addition, 3 sites located on the Northstar property are listed in the California State Water Resources Control Board database, including the Northstar-at-Tahoe Golf Course, Northstar – Mid Mountain Maintenance, and the Northstar Gasoline Station. Some of these sites as well as unknown contamination sites could potentially impact the land use capabilities of the properties located nearby, impact domestic groundwater use and place residents and the environment at risk. The Proposed Land Use Diagram designates commercial, public and office uses within the Plan area and adjacent to residential uses. Even though no industrial uses are permitted within the Plan area, commercial uses such as dry cleaning, auto repair shops and gas stations use hazardous materials in their daily operations. The use and disposal of hazardous materials is regulated by local, state and federal regulations. Additionally, businesses utilizing certain amounts and types of hazardous materials are required under federal, state and local standards to develop plans that would help to prevent an accidental release of hazardous materials. Because hazardous materials and contamination tends to be site-specific, contaminated sites would not impact the Plan area as a whole.

AA Existing Martis Valley General Plan Land Use Map

The Existing Martis Valley General Plan Land Use Map would result in a similar land use pattern and uses as compared to the Proposed Land Use Diagram and would result in the same hazards associated with hazardous materials contamination as described for the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

The Alternative 1 Land Use Map would result in a similar land use pattern and uses as compared to the Proposed Land Use Diagram and would result in the same hazards associated with hazardous materials contamination as described for the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

The Alternative 2 Land Use Map would result in a similar land use pattern and uses as compared to the Proposed Land Use Diagram and would result in the same hazards associated with hazardous materials contamination as described for the Proposed Land Use Diagram.

Policies and Implementation Programs

There are no policies or implementation programs in the Community Plan that pertain to this impact.

Mitigation Measures

The following mitigation measure would apply to Proposed Land Use Diagram and Alternatives AA, AB, and AC. Mitigation measure MM 4.3.2 shall be incorporated into the Community Plan as a policy in Section I (Land Use) under Goal 1.A.

MM 4.3.2 Prior to site improvements for properties that are suspected or known to contain hazardous materials and sites that are listed in the hazardous

material/waste database search or the California State Water Resources Control Board database, the County shall require that the soil and surrounding area shall be tested and remediated for potential hazardous materials in accordance with local, state, and federal regulations.

Implementation of the above mitigation measure would mitigate potential impacts resulting from hazardous materials to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.3.3 Airport Operations

PP The potential exists for safety hazards associated with airport operations to occur within the Plan area in areas proposed for development under the Proposed Land Use Diagram. This is considered a **potentially significant** impact.

AA The potential exists for safety hazards associated with airport operations to occur within the Plan area in areas proposed for development under the existing Martis Valley Community Plan Land Use Map. This is considered a **potentially significant** impact.

AB The potential exists for safety hazards associated with airport operations to occur within the Plan area in areas proposed for development under the Alternative 1 Land Use Map. This is considered a **potentially significant** impact.

AC The potential exists for safety hazards associated with airport operations to occur within the Plan area in areas proposed for development under the Alternative 2 Land Use Map This is considered a **potentially significant** impact.

PP Proposed Land Use Diagram

The Truckee-Tahoe Airport utilizes height restriction areas to insure that objects would not impair flight safety or decrease the operational capability of the airport. Specifically, Federal Aviation Regulations (FAR) Part 77 defines a series of imaginary surfaces surrounding all public use airports. Any proposed object or structure that would penetrate any of these imaginary surfaces as they apply to the Truckee-Tahoe Airport is considered by the Federal Aviation Administration (FAA) to be an obstruction to air navigation. An obstruction to air navigation may not be a hazard to air navigation, however, the FAA presumes it to be a hazard and treats it as such until an FAA aeronautical study had determined that it does not have a substantial adverse effect on the safe use of the navigable airspace by aircraft. The imaginary surfaces the FAA uses to determine whether or not a structure or an object would be an obstruction to air navigation includes the primary surface, approach surface, horizontal surface, conical surface, and transitional surfaces. **Figure 4.3-1** shows the Part 77 civil airport imaginary surfaces. The CLUP determines compatibility of surrounding land uses based upon noise levels associated with the airport operations and exposure of persons to crash hazards associated with aircraft and height restrictions. **Figure 4.3-2** shows the Truckee-Tahoe Airport Safety Zones associated with the CLUP.

The Proposed Land Use Diagram designates Open Space within the Clear Zone and Open Space and Residential Forest within the Approach/Departure Zone, consistent with the CLUP. Land uses designated within the Overflight Zone would also be generally consistent with the CLUP. However, development under the Proposed Land Use Diagram has the potential to place structures or objects in a height restriction area that may be considered an air navigation hazard

according to the Federal Aviation Regulations Part 77 or could result in the design of specific facilities that are inconsistent with the CLUP. This is a potentially significant impact.

AA Existing Martis Valley General Plan Land Use Map

Alternative AA has a similar land use pattern as compared to the Proposed Land Use Diagram and would also be generally consistent with the CLUP. However, like the Proposed Land Use Diagram, development under this alternative has the potential to place structures or objects in a height restriction area that may be considered an air navigation hazard according to the Federal Aviation Regulations Part 77 or could result in the design of specific facilities that are inconsistent with the CLUP. This is a potentially significant impact.

AB Alternative 1 Land Use Map

Alternative AB has a similar land use pattern as compared to the Proposed Land Use Diagram and would also be generally consistent with the CLUP. However, like the Proposed Land Use Diagram, development under this alternative has the potential to place structures or objects in a height restriction area that may be considered an air navigation hazard according to the Federal Aviation Regulations Part 77 or could result in the design of specific facilities that are inconsistent with the CLUP. This is a potentially significant impact.

AC Alternative 2 Land Use Map

Alternative AC has a similar land use pattern as compared to the Proposed Land Use Diagram and would also be generally consistent with the CLUP. However, like the Proposed Land Use Diagram, development under this alternative has the potential to place structures or objects in a height restriction area that may be considered an air navigation hazard according to the Federal Aviation Regulations Part 77 or could result in the design of specific facilities that are inconsistent with the CLUP. This is a potentially significant impact.

Policies and Implementation Programs

The following Martis Valley Community Plan policies would reduce potential impacts associated with airport operation hazards.

Policy 5.E.1 *The County shall support the continued use of the Truckee-Tahoe Airport as a general purpose airport.*

Policy 5.E.2 *The County shall work with the Airport Land Use Commission in the planning of land uses around the Truckee-Tahoe Airport to ensure protection of airport operations from urban encroachment and establishment of compatible uses within the over-flight zones.*

Mitigation Measures

The following mitigation measures would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC. Mitigation measures MM 4.3.3a and MM 4.3.3b shall be incorporated into the Community Plan as policies in Section V (Transportation and Circulation) under Goal 5.E.

MM 4.3.3a The County shall review all development projects in the overflight zones of the Truckee-Tahoe Airport for consistency with its Comprehensive Land Use Plan.

MM 4.3.3b The County shall limit land uses in airport safety zones to those uses listed in the applicable airport comprehensive land use plans (CLUPSs) as compatible uses. Exceptions shall be made only as provided for in the CLUPs. Such uses shall also be regulated to ensure compatibility in terms of location, height, and noise.

MM 4.3.3c The County shall ensure that development within the airport approach and departure zones complies with Part 77 of the Federal Aviation Administration Regulations (objects affecting navigable airspace).

Implementation of the above mitigation measures would mitigate potential impacts resulting from airport operation hazards to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.3.4 Radon Exposure

PP Development under the Proposed Land Use Diagram could be potentially exposed to radon. This is considered a **less than significant** impact.

AA Development under the existing Martis Valley Community Plan Land Use Map could be potentially exposed to radon. This is considered a **less than significant** impact.

AB Development under the Alternative 1 Land Use Map could be potentially exposed to radon. This is considered a **less than significant** impact.

AC Development under the Alternative 2 Land Use Map could be potentially exposed to radon. This is considered a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Radon emissions are a potential environmental condition for the Sierra Mountains. Radon vapors emit from three primary sources inside buildings that include soil beneath buildings, through water used for showering and other indoor uses, and construction materials. In most cases, the amount of radon entering a building through water and building materials is small compared to soil vapor. Soil vapor enters a building as a result of ambient air pressure inside the building being lower than the air pressure in soil beneath the building. In California, decomposed granite is a potential source of radon. However, soil types in Martis Valley suggest a low probability of generating radon vapor from the soil. In addition, sampling for radon groundwater sources conducted in Northstar and wells at Lahontan have identified low levels of radon. Therefore, impacts resulting from radon emissions are considered less than significant for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Mitigation Measures

None required.

4.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

SETTING

Implementation of the Proposed Land Use Diagram, the Existing Martis Valley General Plan Land Use Map or Alternatives AB and AC, in combination with proposed and planned development in the Martis Valley area could contribute to a cumulative increase of risk associated with abandoned mineshafts and tailings, hazardous materials, and incompatibilities between future land uses and airport operations in the Martis Valley area. Ski resort or residential development within the Plan area may uncover additional mineshafts and tailings, which would need to be sealed off. Future land uses may utilize hazardous materials during the course of daily operations, which could pose a threat to residents in the immediate area or the environment. However, there are no recognized region-wide hazards in Martis Valley that future development is expected to contribute to.

IMPACTS

Impact 4.3.5 Cumulative Hazard Impacts

PP Development under the Proposed Land Use Diagram could result in site-specific hazards for area residents. This is considered a **less than significant** cumulative impact.

AA Development under the existing Martis Valley Community Plan Land Use Map could result in site-specific hazards for area residents. This is considered a **less than significant** cumulative impact.

AB Development under the Alternative 1 Land Use Map could result in site-specific hazards for area residents. This is considered a **less than significant** cumulative impact.

AC Development under the Alternative 2 Land Use Map could result in site-specific hazards for area residents. This is considered a **less than significant** cumulative impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Impacts associated with health hazards and risk of upset would be site-specific. The project contains mitigation measures to abate the site-specific hazards, including mines and hazardous waste, so any potential cumulative impacts associated with the project would be expected to be decreased as the mines would be sealed off and harmful substances would have been removed from the vicinity, properly disposed of, and replaced with currently approved building materials. Additionally, the CLUP in addition to local regulations would determine appropriate land uses within the vicinity of the Truckee-Tahoe Airport's approach zone. As a result, the proposed project is not anticipated to contribute to cumulative human heath impacts. Impacts are considered to be less than significant.

Mitigation Measure

None required.

REFERENCES

GeoTrans, 2000. Geotrans, Inc. *Report on Groundwater Resource Potential Eaglewood Subdivision, Martis Valley, California*. November 14, 2000.

Placer County, 2000. *Martis Valley Community Plan Background Report*. Placer County. June 2000.

Placer County Government. Placer County. May 2000 <www.placer.ca.gov>.

Town of Truckee Government. Town of Truckee. May 2000 <Tahoe.ceres.ca.gov/truckee/>.

Placer County, 1975. *Martis Valley General Plan*. Placer County 1975.

Placer County, 1993. *Gooseneck Ranch Final EIR*. Placer County September 1993.

Placer County, 1993. *Big Springs at Northstar Revised Draft EIR*. Auburn, California. March 19, 1993.

Placer County, 1994. *General Plan Background Report, Volume II*. Placer County. August 1994.

Placer County, 1999. *Lahontan II Final Environmental Impact Report*. Placer County. September 1999.

Placer County, 1974. *Martis Valley General Plan Technical Supplement and Environmental Impact Report*. Placer County. August 1974.

Placer County, 1994. *Countywide General Plan Final Environmental Impact Report*. Placer County July 1994.

Airport Land Use Commission, 1990. *Truckee-Tahoe Airport Comprehensive Land Use Plan*. Auburn, California. February 1990.

KEA, 2001. KEA Environmental, Inc. *Hazardous Materials and Waste Baseline for Northstar-at-Tahoe*. March 2001.

California Department of Toxic Substances Control. *State of California Hazardous Waste and Substances Sites List*. April 1998.

Truckee Tahoe Airport District, 1998. *Truckee Tahoe Airport Master Plan*. 1998.

Section 4.4
Traffic and Circulation

This section presents an analysis of the traffic impacts associated with the implementation of the Martis Valley Community Plan. The analysis focuses on the potential impacts to the roadway, transit, bicycle, and pedestrian systems in the Martis Valley portion of Placer County, the Town of Truckee and along State Route 267 to Kings Beach. Traffic-related impacts are identified for the proposed land use diagram and each land use map alternative using the Town of Truckee's Transportation Model, which has been expanded to include the Martis Valley area. For each significant impact identified, potential mitigation measures are also identified to offset any significant impacts. All technical analysis related to this section is contained in **Appendix 4.4** and was prepared by LSC Transportation Consultants, Inc.

4.4.1 SETTING

The Martis Valley resides in a resort destination area that attracts tourists both during the summer and winter seasons. The area serves as a recreational and residential area, and also as a "gateway" between the Tahoe Region to the south and the Interstate 80 corridor to the north. As a result, traffic conditions in the area vary greatly over the seasons. Winter conditions can also create adverse driving conditions. The private automobile is the primary mode of travel in the area. Public and private transit services also serve the area, focusing on the Northstar-At-Tahoe ski area. Distance, roadway grades, and climate all make it difficult for non-motorized transportation to become a major mode of travel. However, the area does provide opportunity for bicyclists and hikers to enjoy these activities, if not for daily commuting purposes. A detailed description of the roadways in the study area is provided below.

ROADWAY SYSTEM

Interstate 80 (I-80)

Interstate 80 provides interregional highway connections east to Reno, Nevada and beyond, and west to Sacramento, California and the San Francisco Bay Area. The Martis Valley area lies to the south of I-80, 34 miles west of Reno and 90 miles east of Sacramento. This section of I-80 is currently a four-lane divided highway with limited truck climbing lanes, with speed limits posted at 65 mph. There are 5 interchanges serving Truckee on I-80. The peak month ADT along this roadway is approximately 40,000- 50,000 vehicles per day.

State Route 267 (SR 267)

State Route 267 (SR 267) is a 2-lane highway within the project vicinity, running in a general northwest-southeast alignment between Interstate 80 in Truckee and State Route 28 in Kings Beach. State Route 267 traverses southwesterly from Interstate 80 into downtown Truckee. Within downtown, capacity of this roadway is substantially limited by the existing unsignalized Bridge/Commercial Road intersection (where the SR 267 designation makes a 90-degree turn), as well as the existing at-grade crossing of the Union Pacific Railroad mainline. (This rail line currently serves roughly 21 trains per day.) From downtown Truckee, State Route 267 travels southeasterly across relatively level terrain to the base of a sustained grade near Northstar Drive up to an elevation of 7,199 feet at Brockway Summit. From Brockway Summit, the route descends 945 feet into the Tahoe Basin, ending at State Route 28 in Kings Beach. The route is of local and regional significance, providing access to residential, industrial, commercial and recreational land uses. It serves as the major access route between the Kings Beach and Incline Village communities near Lake Tahoe on the south and the I-80 corridor to the north. It also serves as the sole existing access to the Northstar-At-Tahoe ski area and adjacent residential neighborhoods.

This highway consists of 2 travel lanes, with a speed limit of 55 miles per hour in the rural sections. A southbound truck-climbing lane is provided for a portion of the southbound grade north of Brockway Summit. Traffic signals are currently installed at the Palisades Drive intersection in Truckee, as well as at the SR 28 intersection in Kings Beach. All other intersections are controlled by stop signs on the side street approaches, with the exception of the "3-way stop" intersection at Bridge Street/Donner Pass Road, which is controlled by stop signs on the west, east, and south approaches only. The peak day average daily trips (ADT) along this roadway is approximately 14,000–16,000 vehicles per day.

State Route 267 Bypass

The State Route 267 Bypass, currently under construction, is planned to connect SR 89 North to the north of Interstate 80 and the existing SR 267 alignment near the Tahoe–Truckee Regional Airport to the south. This roadway, which is currently planned for completion in 2002, will allow regional traffic to travel between the Martis Valley and Tahoe Basin to the south with the I-80 corridor on the north without impacting downtown Truckee. A new diamond-configuration interchange will be constructed on Interstate 80 approximately ½ mile east of the existing SR 89 North/SR 267 interchange. Both ramp intersections will be controlled by traffic signals. With completion of the Bypass, the existing SR 89 North segment north of Interstate 80 will curve to the east to a new intersection with a straight alignment of SR 89 North and the SR 267 Bypass. From the south, the Bypass will curve to the east to a signalized intersection with existing SR 267 (Brockway Road) on the west and Joerger Drive on the east. (Caltrans plans identify this east approach as Soaring Way, which would be an extension of the existing roadway off of Airport Road. As plans for this extension have not been finalized and as land uses along Joerger Drive will be the sole traffic generators using this approach under current approved plans, this east approach is designated as Joerger Drive for purposes of this study.) Between this signal and the I-80 interchange, the Bypass will be constructed as a 2-lane access-controlled roadway.

For purposes of this study the SR 267 Bypass will be referred to as SR 267 and the existing SR 267 will be referred to as Brockway Road for the portion from Joerger Drive to West River Street. The north-south portion of the existing SR 267 that lies north of West River Street will be referred to as Bridge Street. East of Bridge Street, the existing SR 267 will be referred to as Donner Pass Road. One travel lane will be provided in each direction on the new Bypass, and traffic signals will be provided at the I-80 Eastbound, I-80 Westbound, and Old SR 267/Joerger Drive intersections. (Note: While SR 267 has a northwest/southeast alignment, it is considered to run northbound/ southbound for the purposes of this study).

State Route 89 (SR 89)

SR 89 is one of the 3 primary California routes that access Lake Tahoe (the other 2 are SR 267 and US 50), providing access between Donner Pass Road in Truckee and Tahoe City (the "SR 89 South" segment). Starting at the Interstate 80/SR 267 interchange on the east side of Truckee, "SR 89 North" serves as a rural 2-lane highway connecting Truckee with Sierraville, Quincy, Mt. Lassen National Park and Mount Shasta to the north. The peak day ADT along this roadway is approximately 25,000 vehicles per day.

State Route 28 (SR 28)

State Route 28 is the major roadway serving Lake Tahoe's North Shore, linking SR 267 with Nevada to the east and Tahoe Vista and Tahoe City to the west. At the intersection with SR 267 in Kings Beach, SR 28 is a 4-lane facility with 2 lanes of travel in each direction. East of Kings Beach and west of Tahoe Vista, SR 28 is a 2-lane facility. The posted speed limit on this segment

of SR 28 is 35 miles per hour. The peak day ADT along this roadway is approximately 25,000 vehicles per day.

Northstar Drive

Northstar Drive provides access from SR 267 westward to the Northstar-At-Tahoe Ski Resort and associated residential and commercial areas. It is generally a 2-lane configuration, with an eastbound left-turn lane at the stop-sign-controlled T-intersection with SR 267. Both northbound left-turn and southbound right-turn lanes are provided on SR 267 at this intersection. Additionally, a traffic control program conducted by Northstar-at-Tahoe in association with California Highway Patrol is in place on peak days of winter traffic. Posted speeds are 35 miles per hour. Residential street intersections along Northstar Drive are controlled by stop signs on the side street approaches. The winter peak day ADT along this roadway is approximately 10,000 vehicles per day.

Airport Road and Schaffer Mill Road

Airport Road is a 2-lane roadway providing the main access to the Truckee Tahoe Regional Airport, as well as other industrial and commercial businesses on the northeast side of SR 267. A center left-turn lane is provided along most of this roadway. Schaffer Mill Road (also 2 lanes) extends southwest from the same point on SR 267, providing access to the Lahontan residential development and other parcels not currently developed. The SR 267/Airport Road/Schaffer Mill Road is controlled by stop signs on the side street approaches, and is situated just southeast of the point where the SR 267 Bypass will connect to the existing SR 267 alignment. The peak day ADT along these roadways is approximately 3,000 vehicles per day.

Developers of the Lahontan community are currently designing improvements at the intersection to the satisfaction of the Department of Public Works (DPW) and Caltrans. These improvements will include auxiliary turn lanes, tapers, easements, lighting, striping and signage as required. The construction of the signal is being funded by the developers of Lahontan as part of their conditions of approval. However, the developer has the right to request a reimbursement agreement.

Palisades Drive

Palisades Drive is a local residential street, which provides 1 of 2 primary accesses to the Ponderosa Palisades neighborhood. It travels northward from Ponderosa Road to its terminus at the existing SR 267 (Brockway Road), which is a signalized intersection. (However, for purposes of this study, this roadway is assumed to run east/west in all LOS calculations and turning-movement volume tables because SR 267 is considered to run north/south.) The peak Average Daily Traffic (ADT) along this roadway is approximately 4,400 vehicles per day.

Martis Valley Road

Martis Valley Road is a local residential street, which provides 1 of 2 primary accesses to the Ponderosa Palisades/Sierra Meadows neighborhood. This roadway travels northeast from Ponderosa Drive to a 2-way stop-controlled intersection with the existing SR 267 (Brockway Road). The traffic levels on this roadway are relatively low (less than 4,000 vehicles per day) but delays for left-turn movements from Martis Valley Road to SR 267 northbound often occur during the A.M. peak hour.

West River Street

West River Street provides east-west access between SR 89 on the west side of Truckee and SR 267 (Bridge Street) in the downtown area. West River Street provides access to a number of industrial, commercial, and residential land uses located along the Truckee River. West River Street (along with the McIver Crossing underpass) provides a potential diversion route around the Bridge Street at-grade rail/highway crossing for northbound SR 267 traffic. The peak Average Daily Traffic (ADT) along this roadway is approximately 5,500 vehicles per day.

Donner Pass Road

For purposes of this study, Donner Pass Road is defined to begin west of SR 89 South and travel eastward to the eastern I-80 ramp intersection (SR 89/SR 267). While Donner Pass Road is currently considered to end at its intersection with SR 267, when the SR 267 bypass is completed, the roadway will be maintained by the Town of Truckee and named Donner Pass Road. This roadway provides a vital link for local circulation by connecting the Gateway Center area of Truckee to the historic downtown area. This roadway provides a single through lane in each direction, with a continuous center left-turn lane in the Hilltop and Gateway areas. The peak day ADT along this roadway is approximately 17,500 vehicles per day.

TRAFFIC SAFETY

Between 1990-1999, the California Highway Patrol reported a total of 701 automobile collisions along the entire length of SR 267. Injury accidents accounted for 35.9 percent of those collisions; 1.1 percent of those collisions involved fatalities. **Table 4.4-1** shows accident data by year.

California Highway Patrol has several safety concerns on SR 267 (Sattler, John. Public Affairs and Community Outreach Officer, California Highway Patrol). First, severe traffic congestion often occurs during peak season travel times northbound on SR 267 into downtown Truckee, and southbound on SR 267 over Brockway Summit to Kings Beach. Frustrated with the congestion on Brockway Summit, some motorists choose to pass slower cars in no-passing zones, which creates hazards in both northbound and southbound directions. Finally, CHP has noted a tendency for motorists to speed on SR 267 once they reach the Martis Valley Flats area just east of Truckee. The posted speed limit is 55 miles per hour, but the average speed traveled in this area is reported to be between 60 and 65 miles per hour, with some motorists well exceeding 65 miles per hour.

TABLE 4.4-1
TRAFFIC ACCIDENTS ON SR 267 (1990-1999)

	Total Accidents	Fatality Accidents		Fatalities	Injury Accidents		Injuries
Year	Number	Number	Percent	Number	Number	Percent	Number
1990	78	4	5.1%	4	24	30.8%	36
1991	47	1	2.1%	2	16	34.0%	29
1992	59	0	0.0%	0	25	42.4%	55
1993	70	0	0.0%	0	21	30.0%	29
1994	58	0	0.0%	0	22	37.9%	31
1995	91	1	1.1%	1	39	42.9%	56
1996	75	0	0.0%	0	22	29.3%	32
1997	68	1	1.5%	4	20	29.4%	38
1998	85	0	0.0%	0	37	43.5%	63
1999	70	1	1.4%	1	26	37.1%	46
Average	70.1	0.8	1.1%	1.2	25.2	35.9%	41.5
SR 267 10-Year Total	*701*	*8*	--	*12*	*252*	--	*415*
Accidents by Intersection	**Total Accidents**	**Fatality Accidents**		**Fatalities**	**Injury Accidents**		**Injuries**
	Number	**Number**	**Percent**	**Number**	**Number**	**Percent**	**Number**
I-80 Interchange	15	0	0.0%	0	9	60.0%	11
Northstar Dr.	10	0	0.0%	0	4	40.0%	9

Source: California Highway Patrol Information Services Unit Accident Records, 1990 through 1999.

Table 4.4-2 compares SR 267 average accident rates for 1990-1999 with California State, Placer County, and Nevada County averages for similar roadways. As noted in the Table, accident rates and injury/fatality accident rates are higher on SR 267 when compared with California and Placer County averages. In light of the relative hazards associated with driving in mountainous winter conditions, this comparison indicates that there is no undue traffic accident history for SR 267 as a whole.

TRAFFIC CONDITIONS AND OPERATIONS

The traffic analysis largely is based upon the Town of Truckee Transportation Model, which has been expanded to include the Martis Valley area. Details regarding the expansion of the model and calibration along the SR 267 corridor may be found in **Appendix 4.4**. The model has been developed for a typical P.M. peak-hour of the week during the summer peak season conditions (usually a summer Friday P.M. peak hour), as the Town of Truckee General Plan identifies the summer weekday P.M. peak hour as the design period for all traffic analyses in the Town. The winter analysis does not directly use the model to develop traffic volumes, but rather is based upon a process of factoring summer model output.

TABLE 4.4-2
ACCIDENT DATA COMPARISON
SR 267, STATE OF CALIFORNIA, PLACER COUNTY, NEVADA COUNTY

		Travel	Accidents			Victims		Rates		Fatalities
Location/Area	Road Miles	(MVM) (1)	Total	Injury	Fatal	Killed	Injured	Acc/MVM	F+I/MVM	/100 MVM
10 Year Average for State Route 267	12.7	42.5	70.1	25.2	0.8	1.2	41.5	1.65	0.61	1.88
California (5)										
Rural (Outside City) 2 & 3 Lane	7,759.9	10,666.1	12,975	5,932	399	483	10,366	1.22	0.59	4.53
Statewide 2 & 3 Lane	8,431.1	13,492.3	18,640	8,265	460	551	14,236	1.38	0.65	4.08
Statewide Total	15,185.7	144,140.9	141,240	51,767	1,524	1,774	84,186	0.98	0.37	1.23
Placer County										
Rural (Outside City) 2 & 3 Lane	67.9	241.0	288	125	2	3	195	1.20	0.53	1.24
Countywide Total	155.7	1,437.0	1,049	431	11	15	708	0.73	0.31	1.04
Nevada County										
Rural (Outside City) 2 & 3 Lane	62.4	131.3	232	109	7	7	176	1.77	0.88	5.33
Countywide Total	122.7	562.4	594	259	12	13	454	1.06	0.48	2.31

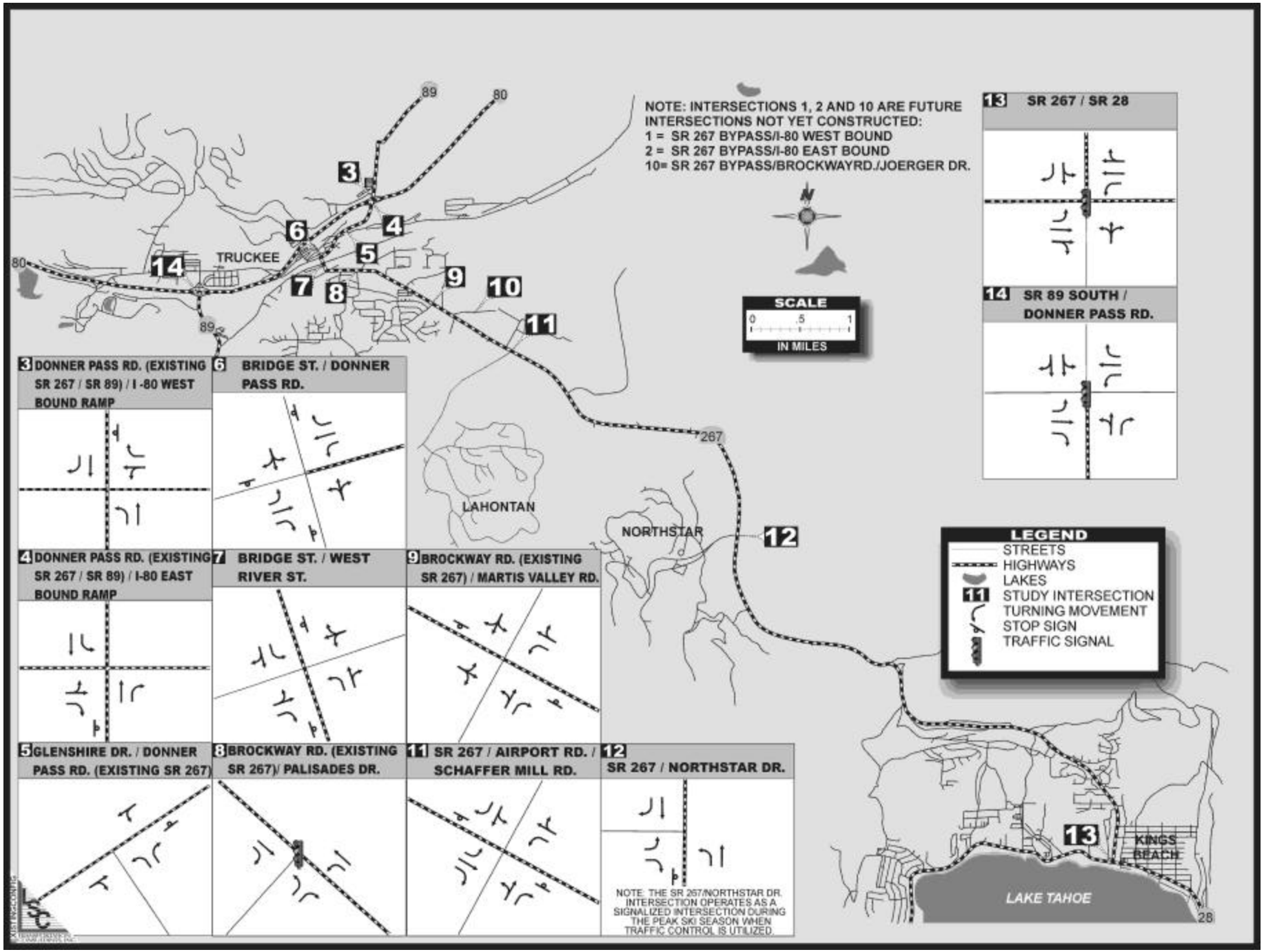
Note 1: MV = Million Vehicle Miles
Source: Based on 1994 Accident Data on California State Highway (Caltrans).

For this study, impacts on study roadways were determined by measuring the effect that project traffic has on traffic operations at key intersections and along roadways during the winter 30th highest winter peak and summer peak weekday P.M. peak-hour conditions. The following intersections and roadway segments were selected for analysis:

Study Intersections:

- SR 89/SR 267 Bypass/I-80 Westbound
- SR 89/SR 267 Bypass/I-80 Eastbound
- Donner Pass Road (Existing SR 267/SR 89)/I-80 Westbound
- Donner Pass Road (Existing SR 267/SR 89)/I-80 Eastbound
- Glenshire Drive/Donner Pass Road (Existing SR 267)
- Bridge Street/Donner Pass Road
- Bridge Street/West River Street
- Brockway Road (Existing SR 267)/Palisades Drive
- Brockway Road (Existing SR 267)/Martis Valley Road
- SR 267 Bypass/Brockway Road (Existing SR 267)/Joerger Drive
- SR 267/Airport Road/Schaffer Mill Road
- SR 267/Northstar Drive
- SR 267/SR 28
- SR 89/Donner Pass Road

The existing intersection configuration of these intersections is shown in **Figure 4.4-1**.



PMC

SOURCE: LSC, 2002

FIGURE 4.4-1
EXISTING INTERSECTION CONFIGURATIONS

Roadway Segments:

- SR 89 North of Bypass
- Donner Pass Road (Existing SR 89) North of I-80 (East)
- Donner Pass Road (Existing SR 267) South of I-80 (East)
- Donner Pass Road (Existing SR 267) East of Bridge Street
- Donner Pass Road West of Bridge Street
- Bridge Street (Existing SR 267) South of Donner Pass Road
- Brockway Road (Existing SR 267) South of West River Street
- Brockway Road (Existing SR 267) South of Palisades Drive
- Brockway Road (Existing SR 267) South of Martis Valley Road
- SR 267 Bypass South of I-80
- SR 267 South of Brockway Road and SR 267 Bypass
- SR 267 South of Airport Road/Schaffer Mill Road
- SR 267 South of Northstar Drive
- SR 267 North of SR 28
- SR 28 East of SR 267
- SR 28 West of SR 267
- West River Street West of SR 267
- Palisades Drive West of SR 267
- Martis Valley Road West of SR 267
- Schaffer Mill Road West of SR 267
- Airport Road East of SR 267
- Northstar Drive West of SR 267
- SR 89 S South of Donner Pass Road
- Donner Pass Road East of SR 89 South
- Donner Pass Road West of SR 89 South

Level Of Service (LOS) Criteria

The analysis of intersections relies on qualitative measures known as level of service (LOS) to describe traffic operating conditions. LOS is a quantitative measure of traffic conditions on isolated sections of roadway and intersections. LOS ranges from "A" (with no congestion) to "F" (where the system fails with gridlock or stop-and-go conditions prevailing). **Table 4.4-3** provides a more detailed description of the LOS criteria used for this study. LOS conditions were evaluated using the methodologies documented in the *Highway Capacity Manual 2000* (Transportation Research Board, National Research Council, 2000), as applied in the Traffix software (Dowling Associates, Version 7.5). Computer output of detailed LOS calculations is provided in **Appendix 4.4** of this report. The specific LOS standards of the various jurisdictions in the study area are discussed in Section 4.4.2, below.

Historical Traffic Data

Traffic along the highways near the study area was obtained from *Traffic Volumes on California State Highways* (Caltrans, 1990-2000) as presented in **Table 4.4-4**. As shown, annual average daily traffic (ADT) has grown between 4.2 percent and 1.2 percent annually on average within the region. Relatively high growth has occurred on SR 267 near the Placer/Nevada County Line and on Interstate-80 near SR 267.

TABLE 4.4-3
DESCRIPTIONS OF LEVELS OF SERVICE

Descriptions of Levels of Service

The concept of Level Of Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. A LOS definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations, from A to F, with LOS A representing the best operating conditions and LOS F the worst.

Level-Of-Service Definitions

In general, the various levels of service are defined as follows for uninterrupted flow facilities:

- **LOS A** represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.

- **LOS B** is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A, because the presence of others in the traffic stream begins to affect individual behavior.

- **LOS C** is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.

- **LOS D** represents high-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.

- **LOS E** represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

- **LOS F** is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount, which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. LOS F is used to describe the operating conditions within the queue, as well as the point of the breakdown. It should be noted, however, that in many cases operating conditions of vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, it is the point at which arrival flow exceeds discharge flow, which causes the queue to form, and LOS F is an appropriate designation for such points.

Existing Traffic Volumes

Existing traffic volumes at the study intersections and along the study roadway segments were estimated for 2001 30th highest winter peak hour and summer peak weekday P.M. peak-hour conditions in the steps described below:

Summer Peak Weekday

1) Existing observed summer peak weekday counts were identified.

2) Caltrans observed count data (July 18, 2001) were increased by the historic peak month ADT annual growth rate on Caltrans highways to reflect 2001 peak month conditions.

3) Turning-movement volumes to and from SR 28 and I-80 were adjusted by the Peak Month ADT annual growth rate for these other roadways, as well, to estimate 2001 conditions.

4) Counts on Northstar Drive were validated by loop detector counts provided by Northstar-At-Tahoe ski area for July 2000. To correct errors in these counts, the loop detector counts were adjusted to reflect ratio of detector counts to observed manual counts conducted by Northstar staff on January 20, 2001 and February 18, 2001, as documented in the *Northstar-At-Tahoe 2000/2001 Ski Season Traffic Monitoring Report* (LSC, 2001), as presented in **Appendix 4.4**.

5) Volumes were balanced conservatively along SR 267, such that the greater through volume (from each turning movement volume or link volume) was used to balance the remainder.

30th Highest Winter Hour Winter Traffic Volumes

1) Available observed turning-movement volumes at the SR 28/SR 267 (January 1994) and SR 267/Northstar Drive (January, 2001) were evaluated.

2) Hourly count data provided by Caltrans for January 14th to 16th, 2000 at 3 separate count locations on SR 267 was evaluated. However, data for Friday, January 14th and Saturday, January 15th, SR 89 was not used, as parallel SR 89 was closed for a portion of the day and this data was therefore considered not to be representative of typical peak conditions.

3) It was determined that the most representative count data is provided by the count conducted on Saturday, January 20, 2001 at the Northstar Drive/SR 267 intersection. This day exhibited the 2nd highest eastbound peak-hour volume on Northstar Drive, as recorded by the Northstar Drive loop detectors. These counts were increased based upon a comparison of the peak eastbound hourly traffic volume on Northstar Drive on January 20, 2001 and the peak day, Friday, February 23, 2001 to reflect the peak day conditions.

4) A comparison was made between summer peak weekday and winter weekend peak hour traffic volumes at the SR 89 South/I-80 ramp intersections and the SR 89 South/Donner Pass Road intersection, based upon the winter traffic count data presented in the *SR 89 Corridor Study* (LSC Transportation Consultants, Inc, 2000) and summer peak weekday P.M. peak-hour traffic volumes. Factors were developed using this data that compare winter weekend PM peak-hour volumes to summer peak weekday PM peak-hour volumes. For example, the winter traffic volumes turning left from SR 89 northbound to I-80 westbound were shown to be 291% of the summer peak weekday traffic volumes at the SR 89 South/I-80 westbound ramp.

TABLE 4.4-4
HISTORICAL TRAFFIC DATA ON CALIFORNIA HIGHWAYS WITHIN STUDY AREA

	State Route 267					Interstate 80		State Route 89		SR 28	
Year	South of Commercial/ Bridge in Truckee	South of Placer/ Nevada County Line	North of Northstar Drive	Brockway Summit	North of Kings Beach Jct. 28	East of 267	West of 267	South of I-80	North of I-80	East of 267	West of 267
Average Annual Daily Traffic Volumes											
1990	11,900	7,100	6,700	6,100	8,200	21,300	23,500	16,600	4,350	15,900	16,800
1991	12,500	8,600	7,300	6,700	8,000	23,100	23,500	16,600	5,300	17,100	16,800
1992	12,500	8,600	7,300	6,700	8,000	23,100	23,500	16,600	5,300	17,100	16,800
1993	12,500	8,600	7,300	6,700	8,000	23,100	23,500	17,200	5,300	17,100	16,800
1994	13,700	10,500	8,000	7,100	9,200	23,500	25,500	21,100	5,400	18,500	17,000
1995	13,700	10,500	8,000	7,100	9,200	23,000	25,000	20,900	5,400	18,100	17,000
1996	13,700	10,500	8,000	7,100	9,200	26,500	29,500	21,000	5,400	18,100	17,000
1997	15,400	11,500	8,700	7,600	9,200	26,500	28,000	21,000	6,300	19,400	18,400
1998	15,400	11,500	8,700	7,600	9,200	25,000	25,500	20,100	6,300	19,600	18,600
1999	15,400	11,500	8,700	7,600	9,200	29,500	30,000	20,600	6,300	19,100	18,100
2000	14,200	11,500	9,900	8,100	9,200	29,500	24,700	20,700	7,000	19,100	18,100
Change: 1991-2000	2,300	4,400	3,200	2,000	1,000	8,200	1,200	4,100	2,650	3,200	1,300
Total % Change	18.4%	51.2%	43.8%	29.9%	12.5%	35.5%	5.1%	24.7%	50.0%	20.1%	7.7%
Annual % Change AADT	*1.7%*	*4.2%*	*3.7%*	*2.6%*	*1.2%*	*3.1%*	*0.5%*	*2.2%*	*4.1%*	*1.9%*	*0.7%*
Peak Month Average Daily Traffic Volumes											
1990	15,100	9,100	8,600	8,100	10,500	29,000	31,000	21,100	6,400	22,100	22,500
1991	14,900	11,600	9,600	8,800	11,100	30,000	31,000	21,100	7,000	24,200	23,900
1992	14,900	11,600	9,600	8,800	11,100	30,000	31,000	21,100	7,000	24,200	23,900
1993	14,900	11,600	9,600	8,800	11,100	30,500	31,000	21,800	7,000	24,200	23,900
1994	16,900	13,800	10,200	9,200	11,900	31,000	34,000	25,500	7,400	24,200	23,900
1995	16,900	13,800	10,200	9,200	11,900	30,000	35,000	26,000	7,400	23,700	23,900
1996	16,900	13,800	10,200	9,200	11,900	34,500	40,500	23,000	7,400	23,700	23,900
1997	17,400	14,200	10,500	9,300	11,900	38,000	46,000	23,000	8,300	24,900	24,600
1998	17,400	14,200	10,500	9,300	11,900	37,500	42,500	22,600	8,300	24,700	24,400
1999	17,400	14,200	10,500	9,300	11,900	44,500	50,000	23,200	8,300	24,100	23,700
2000	16,100	14,200	11,400	9,900	11,900	31,000	41,000	24,600	8,800	24,100	23,700
Change: 1991-2000	1,000	5,100	2,800	1,800	1,400	2,000	10,000	3,500	2,400	2,000	1,200
Total % Change	6.7%	44.0%	29.2%	20.5%	12.6%	6.7%	32.3%	16.6%	34.3%	9.0%	5.3%
Annual % Change Peak Month ADT	*0.7%*	*3.7%*	*2.6%*	*1.9%*	*1.2%*	*0.6%*	*2.8%*	*1.5%*	*3.0%*	*0.9%*	*0.5%*
Peak Hour Traffic Volumes											
1990	1,800	1,100	*1,350*	970	1,650	3,100	3,600	2,400	600	2,100	2,200
1991	1,800	1,100	960	920	1,000	3,100	3,600	2,400	1,750	2,100	2,200
1992	1,800	1,100	960	920	1,000	3,100	3,600	2,400	1,750	2,100	2,200
1993	1,800	1,100	960	920	1,000	3,100	3,600	2,400	1,750	2,100	2,200
1994	1,800	1,400	790	720	880	3,100	3,600	2,600	900	2,100	2,200
1995	1,800	1,400	790	720	880	2,900	3,500	2,550	900	2,050	2,200
1996	1,800	1,400	790	720	880	3,550	4,100	2,700	900	2,050	2,200
1997	1,800	1,400	790	720	880	3,550	4,000	2,700	1,000	2,100	2,300
1998	1,800	1,400	790	720	880	3,550	2,400	2,600	1,000	2,100	2,300
1999	1,800	1,400	790	720	880	4,200	2,800	2,650	1,000	2,050	2,250
2000	1,400	1,400	1,450	1,150	880	3,500	2,800	2,400	830	2,050	2,250
Change: 1991-2000 (1)	-400	300	100	180	-770	400	-800	0	230	-50	50
Total % Change	-22.2%	27.3%	10.4%	19.6%	-77.0%	12.9%	-22.2%	0.0%	13.1%	-2.4%	2.3%
Annual % Change Peak Hour ADT	*-2.5%*	*2.4%*	*1.0%*	*1.8%*	*-13.7%*	*1.2%*	*-2.5%*	*0.0%*	*1.2%*	*-0.2%*	*0.2%*

Note 1: Outliers in 1990 at 267/Northstar Drive, 267/Jct. 28, and 89/North of I-80 are excluded from analysis.
Source: Traffic Volumes on California State Highways, 1990-2000. State of California Business, Transportation and Housing Agency. Department of Transportation.

Therefore, a factor of 2.91 was applied to the summer turning-movement volume from SR 267 northbound to I-80 westbound to estimate winter turning-movement volumes.

5) The difference between peak-hour and 30th peak-hour traffic volumes was determined for both north and south directions. Count data was obtained from Northstar-at-Tahoe for eastbound peak-hour volumes on Northstar Drive for every day in the 2000/2001ski season. Hourly count data for January 20th, 2001 and February 18, 2001 was then evaluated to identify those days on which the second-highest hour was also within the top 30 hours for the year. By considering both the observed peak-hour volumes and the estimated second-highest volumes on peak days, the actual 30th highest winter peak hour volume along Northstar Drive was estimated.

6) The February 18, 2001 turning movement volumes were factored down to reflect the 30th highest winter peak hour. The difference in volumes was only applied to the eastbound traffic exiting Northstar in an effort to remain conservative (inbound PM peak-hour traffic to the ski area was assumed to remain at the peak winter volume). The decrease in traffic was applied, based upon existing observed traffic volumes during periods of peak ski area exiting traffic activity.

Once these factors were applied, turning movements at the intersections were balanced. The existing 2001 turning-movement volumes for the summer peak weekday P.M. peak hour and 30th highest winter peak hour are shown in **Figures 4.4-2** and **4.4-3**, respectively.

The existing peak season ADT was estimated by applying a factor to the peak-hour volume on each roadway. This factor was determined by reviewing daily traffic count data along various roadways in the Town of Truckee and Martis Valley from 1997 to the present. A peak hour-to-ADT factor was determined for each study roadway segment and applied to the estimated summer peak-hour traffic volumes to determine the 2001 ADT, with the following exceptions:

- The average of the ADT factor along SR 267 south of Bridge Street and at the County line was averaged and applied to all segments of SR 267 located between these two locations.

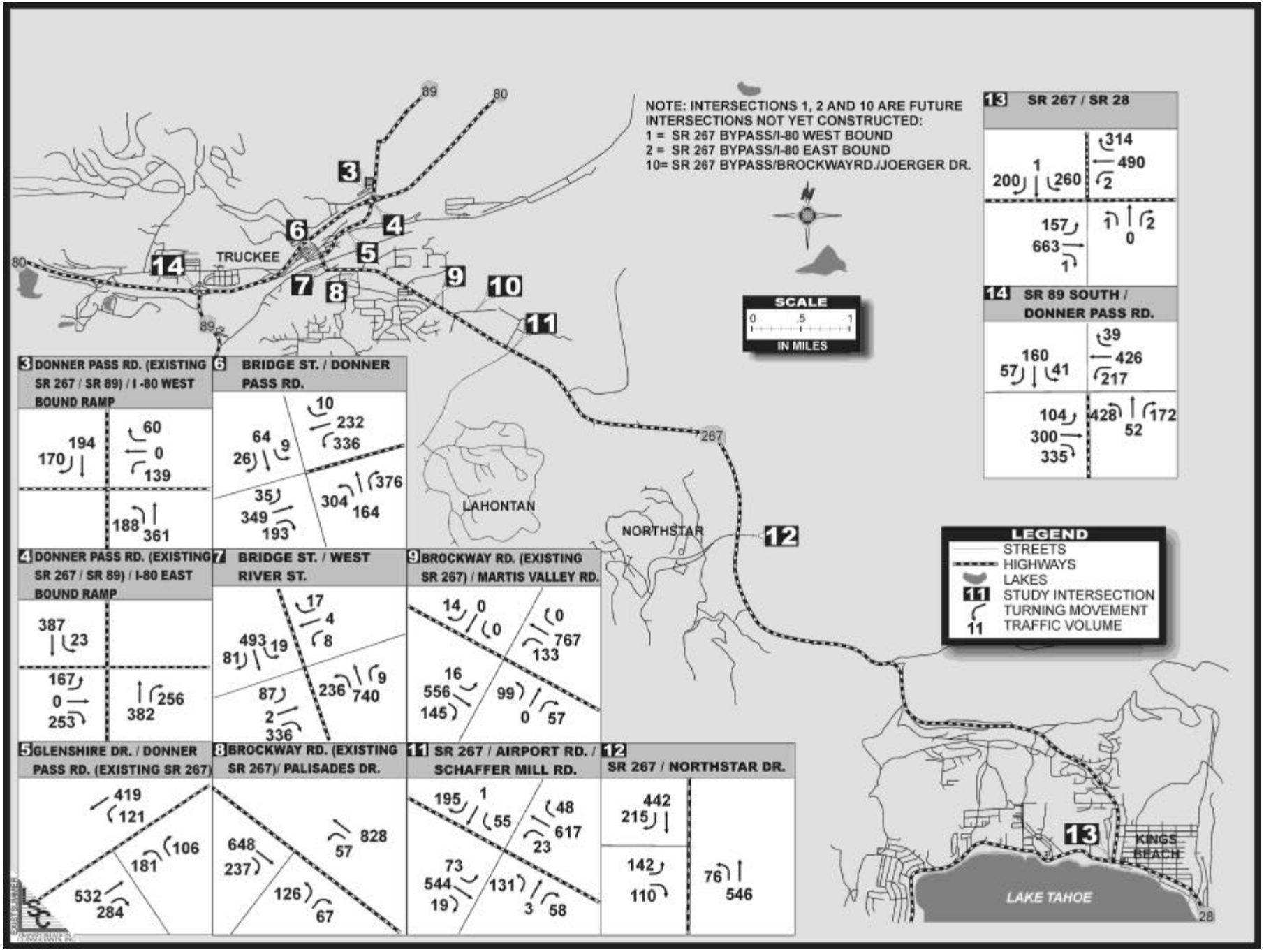
- The factor for Palisades Drive was assumed to equal that observed along Martis Valley Road.

- The factor along Northstar Drive West of SR 267 was based upon the data recorded as part of the Northstar Traffic Monitoring Program.

- The factor along Schaffer Mill Road was assumed to be equal to that along Northstar Drive.

- The factor along Donner Pass Road east of SR 89 South was increased from 10.6 (observed west of SR 89 South) to 12.0, to reflect the high level of commercial land uses along Donner Pass Road east of SR 89 South.

- The factor along Airport Road is based upon the average peak hour to ADT factor for Light Industrial, General Aviation, and General Office land uses as presented in the Trip Generation Manual (ITE, 1997).

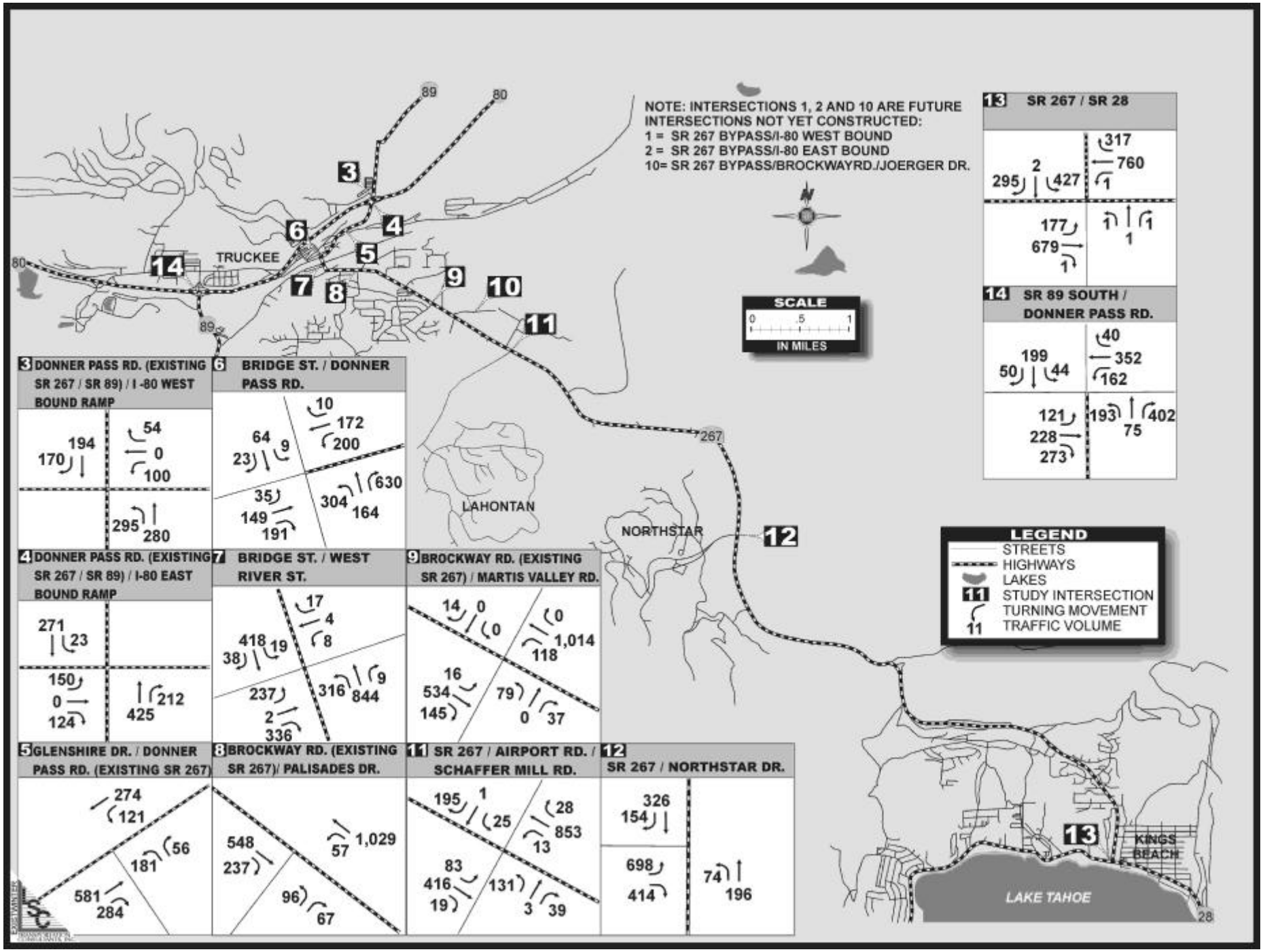


PMC

SOURCE: LSC, 2002

FIGURE 4.4-2

YEAR 2001 SUMMER PEAK WEEKDAY P.M. PEAK HOUR TRAFFIC VOLUMES



PMC
PACIFIC MUNICIPAL CONSULTANTS

SOURCE: LSC, 2002

FIGURE 4.4-3
YEAR 2001 30TH HIGHEST WINTER PEAK HOUR TRAFFIC VOLUMES

Existing Level of Service (LOS)

The existing LOS at all the study intersections is summarized in **Table 4.4-5**. The roadway LOS was determined by applying the appropriate Nevada County (Town of Truckee) or Placer County standard to the peak-hour, peak-directional traffic volumes on each roadway or the ADT on each roadway. The resulting roadway LOS is summarized in **Table 4.4-6**.

TABLE 4.4-5
EXISTING INTERSECTION LOS (YEAR 2001)

Note: LOS shown in bold exceeds standard		Year:	2001	
		Roadway Network:	Existing	
		Land Use:	Existing	
			Summer	Winter
		Design Period:	Weekday	Weekend
Intersection	**Type of Control**		**LOS**	**LOS**
SR 89/SR 267 Bypass/I-80 Westbound	Traffic Signal	Total Intersection	--	--
SR 89/SR 267 Bypass/I-80 Eastbound	Traffic Signal	Total Intersection	--	--
DPR (Existing 267/89)/I-80 Westbound	Stop-Controlled	Worst Movement	**F**	**F**
		Total Intersection	B	A
DPR (Existing 267/89)/I-80 Eastbound	Stop-Controlled	Worst Movement	**F**	D
		Total Intersection	A	A
Glenshire Drive/DPR (Existing SR 267)	Stop-Controlled	Worst Movement	**F**	**F**
		Total Intersection	E	C
Bridge Street/Donner Pass Road	Stop-Controlled (2)	Worst Movement	**F**	**F**
		Total Intersection	**F**	E
Bridge Street/West River Street	Stop-Controlled	Worst Movement	**F**	**F**
		Total Intersection	E	**F**
Brockway Rd (Existing 267)/Palisades Dr		Total Intersection	B	B
Brockway Rd (Existing 267)/Martis Valley Rd	Stop-Controlled	Worst Movement	**F**	**F**
		Total Intersection	**E**	B
267Bypass/267/Brockway Rd (Existing 267)/Joerger Dr		Total Intersection	--	--
SR 267/Airport Road/Schaffer Mill Road	Stop-Controlled	Worst Movement	**F**	**F**
		Total Intersection	**F**	C
SR 267/Northstar Drive	Stop-Controlled (1)	Worst Movement	**F**	C
		Total Intersection	A	C
SR 267/SR 28		Total Intersection	B	C
SR 89 South/Donner Pass Road		Total Intersection	D	D

Note 1: Traffic control is provided at the SR 276/Northstar Drive intersection during the peak skier season.
General Note: The SR 267 Bypass was not in operation at the time of this traffic analysis.
DPR: Donner Pass Road

TABLE 4.4-6
EXISTING ROADWAY LOS FOR SUMMER CONDITIONS (YEAR 2001)

Roadway	Jurisdiction	Applicable LOS Standard	Peak Direction/ Peak-Hour Volume (per lane)	ADT	Roadway LOS
SR 89 North of Bypass	Truckee	D	—	—	—
SR 267 Bypass South of I-80	Truckee	D	—	—	—
Donner Pass Road (Existing SR 89) North of I-80 (East)	Truckee	D	421	6,590	A
Donner Pass Road (Existing SR 267) South of I-80 (East)	Truckee	D	640	13,160	A
Donner Pass Road (Existing SR 267) East of Bridge Street	Truckee	D	734	13,510	A
Donner Pass Road West of Bridge Street	Truckee	D	577	11,730	A
Bridge Street (Existing SR 267) South of Donner Pass Road	Truckee	D	844	14,510	A
Brockway Road (Existing SR 267) South of West River Street	Truckee	D	985	16,760	A
Brockway Road (Existing SR 267) South of Palisades Drive	Truckee	D	885	14,720	A
Brockway Road (Existing SR 267) South of Martis Valley Road	Truckee	D	900	13,920	A
SR 267 South of Brockway Road and SR 267 Bypass	Placer County	E	—	—	—
SR 267 South of Airport Road/Schaffer Mill Road	Placer County	E	688	11,030	D
SR 267 South of Northstar Drive	Placer County	E	654	7,980	D
SR 267 North of SR 28	Placer County	E	471	9,790	D
SR 28 East of SR 267	Placer County	E	925	16,100	E
SR 28 West of SR 267	Placer County	E	821	12,100	D
West River Street West of SR 267	Truckee	D	425	5,220	A
Palisades Drive West of SR 267	Truckee	D	294	4,380	A
Martis Valley Road West of SR 267	Truckee	D	278	3,910	A
Schaffer Mill Road West of SR 267	Placer County	C (1)	192	2,820	A
Airport Road East of SR 267	Placer County	C (1)	251	3,040	B
Northstar Drive West of SR 267	Placer County	C (1)	291	6,520	C
SR 89 S South of Donner Pass Road	Truckee	D	712	11,730	A
Donner Pass Road East of SR 89 South	Truckee	D	682	14,340	A
Donner Pass Road West of SR 89 South	Truckee	D	911	17,490	A

General Note: The SR 267 Bypass was not in operation at the time of this traffic analysis.
(1) The applicable LOS for County roadways is LOS C except within ½ mile of SR 267, for which it is LOS D.

TRANSIT SYSTEM

Truckee Trolley Winter Service

The main public transit service in place to serve the Martis Valley region is the Truckee Trolley, operated by Area Transit Management, Inc. (ATM, Inc.) under contract to the Town of Truckee. This free shuttle service runs during the peak ski season months, with 3 fixed routes: Truckee Depot to Northstar, Northstar to Kings Beach, and Truckee Depot to Sugar Bowl Ski Area. Hourly service is provided along SR 267 between downtown Truckee and Northstar between 7:00 AM and 5:30 PM; vehicles leave the Truckee Depot at the top of the hour and leave Northstar at the bottom of the hour, with major stops at the Truckee Tahoe Airport, the Best Western Motor Inn, and the Regional Park. No service is provided between 1:00 PM and 2:00 PM.

During the 1999-2000 ski season, the Trolley operated from November to April, carrying a total of 39,177 passengers. The majority of riders on the 2 Northstar routes were Northstar employees and

guests, with employees comprising 69.5 percent of passengers, and guests 26.6 percent. Northstar provides employee housing near downtown Truckee, making the route between Northstar and the Truckee Depot a convenient transit option for Northstar employees.

Truckee Trolley Summer Service

ATM, Inc. also provides the Truckee Trolley summer service under contract to the Town of Truckee. During the summer season, the Truckee Trolley provides service between the Truckee Tahoe Airport and the West End Donner Lake beach. The Truckee Trolley operates on an hourly basis between approximately 9:00 AM and 5:00 PM, with 8 round-trips per day, 7 days a week. One-way fare for the Truckee Trolley during the summer is $1.00, with a discounted fare for disabled patrons, seniors, and children between the ages of 5 and 15.

The Trolley provided 7,548 passenger-trips during the 1999 summer season, July through November. Peak months were July and August with 2,507 and 2,173 passengers, respectively. Of total ridership, 82 percent consisted of general public riders.

Lake Tahoe/Northstar Shuttle Service

During the ski season, Northstar Ski Area operates a free shuttle for employees and guests that runs between the ski area and North Shore along Highways 28 and 267. This route is served once per hour from 7:00 AM to 5:30 PM, except between 1:00 PM and 2:00 PM. The vehicle departs Northstar at 0:30 past the hour and departs Tahoe Vista at the top of the hour. During the 1999-2000 ski season, the shuttle transported 3,866 passengers (Paula Rachuay, Resort Planner, Northstar-At-Tahoe Ski Area. May, 2000)

Truckee Dial-A-Ride

The Town of Truckee also funds Dial-a-Ride, a demand-based transit service that provides door-to-door transport between Glenshire, Tahoe Donner and downtown Truckee. Customers call in advance to schedule a ride and pay a flat fare of 3 dollars per ride.

Dial-A-Ride transported 14,579 passengers, between July 1999 and April 2000. Seniors accounted for approximately 60 percent of the ridership, with disabled and wheelchair-bound passengers accounting for almost 26 percent, and general public making up the remaining 14 percent. Monthly ridership ranged from a high of 1,503 passengers in March to a low of 1,065 in April.

Greyhound Bus Lines

The unstaffed Amtrak Station/Truckee Intermodal Transit Center in downtown Truckee acts as the depot for Greyhound passengers. Greyhound operates 10 daily scheduled departures from the Truckee Depot: 4 eastbound to Reno and 6 westbound to Sacramento.

Amtrak Thruway Service

In addition to 1 westbound and 1 eastbound passenger train (the *California* Zephyr) serving the Truckee Depot each day, Amtrak operates 5 buses daily along the Capitol Corridor, from Reno through Truckee to Sacramento. Passengers on this thruway service can connect with The Capitol s rail service in Sacramento, which runs to the Bay Area.

Tahoe Area Regional Transit (TART)

Tahoe Area Regional Transit (TART), operated by Placer County, does not currently provide service along SR 267, but does provide bus service between Truckee and Tahoe City via SR 89 South. This service is partially funded by the Town of Truckee. TART buses operate 7 days a week, 364 days a year (excluding Christmas), and run on roughly 2-hour headways between the Truckee Intermodal Transit Center in downtown Truckee and the Tahoe City "Y" area. One-way fare is 1.25 dollars. The 1-way disabled fare is 1 dollar, while all day passes are 3 dollars for adults and 2 dollars for children, senior citizens, and the disabled.

Shuttle Services to the Reno-Tahoe International Airport

Approximately 17 privately owned shuttle services operate in the Truckee/Martis Valley/Tahoe area, providing transportation between the area and the Reno-Tahoe International Airport in Reno, Nevada. Squaw Creek Transportation is arguably the most established of these services, operating standard shuttle service on the hour between the Resort at Squaw Creek in Squaw Valley, USA and the Reno Airport. Service runs from approximately 5:00 AM to 11:00 PM daily, with basic 1-way fares starting at 38 dollars, with lower group rates. Luxury and door-to-door service is also available.

RAIL SERVICES

The existing rail facilities through historic downtown Truckee extend along the I-80 corridor from the Bay Area to the west and to Reno, Ogden and beyond in the east. These facilities are owned and operated by Union Pacific Railroad. There is an un-staffed Amtrak station/Truckee Intermodal Transit Center in downtown Truckee that is used as a passenger pickup and drop off point for buses and shuttles, as well as for Amtrak trains. Passenger rail service is currently limited to 1 daily departure in each direction of the Amtrak *California Zephyr*, which runs from Oakland, California to Chicago, Illinois. However, Caltrans' *Rail Passenger Program Report* (Caltrans Rail Program, 1999) calls for expansion of *The Capitols* rail service, currently operating between San Jose and Auburn, eastward to Truckee and Reno in 2004-05.

PARK-AND-RIDE FACILITIES

There are currently no officially designated Park-And-Ride facilities in the study area. Unofficial park-and-ride activity is observed to occur on the northern side of the SR 267/I-80 interchange.

Among the Transportation Control Measures listed in the Truckee General Plan (Town of Truckee General Plan, 1995-2014, 1996), the addition of Park-And-Ride lots within the Town of Truckee is included in Circulation Policy 4.1 as another method Truckee would like to implement to promote efficient use of public transit.

BICYCLE AND PEDESTRIAN SYSTEM

At present, there are no designated pedestrian/bicycle routes along the SR 267 corridor through historic downtown Truckee and the Martis Valley. Limited pedestrian activity occurs within the area due to the dispersed pattern of land use. Bicycle activity is also limited within the area, with the exception of summer recreational trips. To access the Martis Valley region from downtown Truckee, cyclists must use the Truckee River crossing located on SR 267. From the North Shore of Lake Tahoe, SR 267 must be used to travel by bicycle to Truckee. This roadway has steep grades the hinder bicycle use.

The Town of Truckee is currently developing a master plan for trails and bikeways that preliminary would add signed bicycle corridors along Donner Pass Road, West River Street and SR 267 to the Placer County boundary near the Truckee Tahoe Airport (Ball, Gavin, April 2000). Placer County has plans to add five miles of off-road multipurpose trails between Northstar and the Truckee town limits, connecting with existing multipurpose trails in the area (Ramirez, John. May 2000). The reader is referred to Section 4.11 (Public Services) regarding existing and planned trail systems in the plan area.

4.4.2 REGULATORY FRAMEWORK

FEDERAL REGULATIONS

No federal documents were identified that addressed regulatory issues relating to the proposed project's impact on the transportation system.

STATE REGULATIONS

Caltrans

Caltrans owns, operates, and maintains much of the study area roadways, including I-80, SR 267, and SR 28. Specific regulatory conditions that relate to this analysis or the implementation of the proposed project are described below.

- *District System Management Plan*, Caltrans - District 3, August 1992: This document sets forth the policy direction for Caltrans - District 3 over the next 20 to 30 years. Nine policies and 15 action statements are presented, all intended to move toward achieving the District's principal goal:

  > *"... assure the economic vitality and quality of life for its population through a cohesive multi-modal, multi-jurisdictional, economical and environmentally sound transportation system to provide for mobility of goods, services, information, and people, in a safe and efficient manner."*

- *Transportation Concept Report - Interstate Route 80*, Caltrans - District 3, 1999: Route Concept Reports (RCRs) and Transportation Concept Reports (TCRs)are planning documents, which are intended to define the state's goal for a specific facility, in terms of LOS and the general magnitude of improvements. The I-80 Route Concept Reports states that the LOS for this interstate highway in rural areas (including the vicinity of the proposed project) should be LOS D (assuming traffic operations are unaffected by adverse weather). In addition, the "concept facility" is defined as a 6-lane facility, though only four lanes exist today. The RCR anticipates reduction in LOS to F by the year 2016, and proposes a series of improvements to mitigate some of these deficiencies. Among the proposals noted in the concept report is the reconstruction of the I-80/SR 89/SR 267 interchange and the addition of a 1.3-mile eastbound auxiliary lane between Truckee and the new interchange. The reconstruction of the I-80/SR 89/SR 267 interchange is currently in progress, and is scheduled for completion in 2002. The Department of Food and Agriculture plans to construct a new Agriculture Inspection Station adjacent to the westbound lanes on I-80 east of Truckee just west of the existing Truck Inspection Stations. When the new station is operational, the existing station will be closed. According to the concept report, the schedule calls for construction of the

Agricultural Station by early June 2000. However, construction has not started yet. The concept LOS based on these improvements is LOS E.

- *Route Concept Report - State Route 267*, Caltrans - District 3, March 2001: This Route Concept Report identifies concept LOS D, E, and E on the portion of SR 267 in Nevada County, between the Nevada County line and Brockway Summit, and south of Brockway Summit, respectively. According to the concept report, the SR 267 Bypass is planned to be in place by 2002, which will improve the roadway LOS. However, the ultimate concept facility is planned to have a 4-lane cross-section along the bypass roadway. For the section from the Nevada County to Brockway Summit, the concept facility is a 2-lane conventional highway with southbound truck climbing lanes to Brockway Summit. However, the ultimate concept facility would have a 4-lane cross-section, as well. The concept facility of the segment located south of Brockway would include 8-foot shoulders, while the ultimate concept facility would contain 8-foot shoulders, as well as northbound truck climbing lanes. (Please note that Caltrans staff recently identified an error in the March 2001 SR 267 Transportation Concept Report. The Concept LOS was improperly identified in Table 1 of the Caltrans report. A revised copy will be available soon.)

- *Route Concept Report - State Route 28*, Caltrans - District 3, May 1997: This Route Concept Report identifies a concept LOS F on the portion of SR 28 near the proposed project. Members of the community requested that the Placer County Planning Department conduct a study of the reduction in the number of lanes on this segment (Kings Beach) from 4 to 3 lanes. This reduction in lanes would provide a continuous left turn lane in the median. Caltrans conducted a traffic analysis in December 1996. This analysis determined the proposed reduction in lanes would result in increased delays, longer queues, additional fuel consumption, and reduced quality in the level of service on the SR 28/SR 267 signalized intersection. The Tahoe Regional Planning Agency (TRPA) is the responsible regional transportation planning agency within the Tahoe Basin for transportation issues and takes the lead role in identifying transportation strategies and projects. As a result, Caltrans cannot guarantee that the overall facility will operate at any level of service better than LOS F.

LOCAL REGULATIONS

Numerous regulations or policies of relevant jurisdictions apply to the transportation system within the study area. The study area encompasses three local jurisdictions, as follows:

- *Placer County:* Unincorporated portion of Placer County outside Tahoe Basin, including the SR 267/Airport Road-Schaffer Mill Road, SR 267/Northstar Drive and Northstar Drive/Big Springs Drive intersections;

- *Tahoe Regional Planning Agency:* Portion of Placer County located within Tahoe Basin, including the SR 267/SR 28 intersection; and

- *Town of Truckee:* Portion of the SR 267 corridor from a point just north of the Airport Road - Schaffer Mill Road alignment, including the I-80 intersections, Bridge Street/Commercial Row, and New SR 267 Bypass/Old SR 267 intersection.

Placer County

Applicable policy documents were reviewed as part of this study to determine the significance of various impacts. Specific regulatory conditions that would relate to this analysis or the implementation of the proposed project are described below:

- According to the *Placer County General Plan Background Report*, the maximum daily traffic volume *per lane* for a rural 2-lane highway with flat terrain operating at LOS E or better is 12,500. Please note that this standard was applied to the section of SR 267 that is located south of Brockway Road and north of Northstar Drive.

- *Countywide Traffic Fee Program* (Placer County Department of Public Works, Transportation Division; July 2000): The Placer County Board of Supervisors adopted the Countywide Traffic Fee Program, requiring new development within the County to pay traffic impact fees. The fees collected through this program, in addition to other funding sources, allows the County to construct transportation facilities needed as a result of new development. The Martis Valley is part of the Tahoe/Resorts Benefit District. Roadway and intersection improvements in the area for the Tahoe/Resorts Benefit District consist of Northstar Drive/Big Springs Drive intersection signalization ($125,000 total cost), northbound passing lane along SR 267 at Brockway Summit ($1,000,000 total cost) and the SR 267 Bypass and miscellaneous improvements ($32,000,000 total cost). The fee each development is required to pay is based upon its Vehicle Miles of Travel (VMT) generated by the project as it compares to the VMT generation of a single-family dwelling unit, or a Dwelling Unit Equivalent (DUE). The fee per DUE in the Martis Valley is 2,355 dollars.

- Placer County DPW staff has indicated that, for purposes of this study, an Average Daily Traffic volume of 2,000 should be used as the standard for the maximum volume compatible with local residential street with front-on lots (e.g. Sierra Meadows/Ponderosa Palisades), as stated in a memo from Richard Moorehead dated 9/5/01.

- *Placer County General Plan Update - Countywide General Plan Policy Document* (Placer County, et al.; August 16, 1994): The Countywide General Plan Policy Document provides long-range direction and policies for the use of land within Placer County. With regard to the transportation and circulation system serving the project, this document establishes an overall roadway system including a roadway functional classification system and designates a series of transit corridors. In addition, six modal goals are presented, each of which is supported by numerous policies and implementation programs. A list of applicable General Plan provisions are provided below:

  Policy 3.A.1 The County shall plan, design, and regulate roadways in accordance with the classification system established in *Placer County General Plan* and reflected in the *Circulation Plan Diagram* contained therein.

  Policy 3.A.2 The County shall require that streets and roads be dedicated, widened, and constructed according to the roadway design and access standards generally defined in the Placer County General Plan and the County's Highway Deficiency 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.

Policy 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 2021), as well as any planned bikeways and required drainage, utilities, landscaping, and suitable separations.

Policy 3.A.4 On arterial roadways and thoroughfares, intersection spacing should be maximized. Driveway encroachments along collector and arterial roadways, and to a lesser degree, collector roadways, shall be minimized. Access control restrictions for each class of roadway in the county are specified in Part I of the Placer County General Plan Document.

Policy 3.A.5 The County shall require that through-traffic be accommodated in a manner that discourages the use of neighborhood roadways, particularly local streets. This through-traffic, including through truck traffic, shall be directed to appropriate routes in order to maintain public safety and local quality of life.

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

Policy 3.A.7 The County shall develop and manage its roadway system to maintain the following minimum levels of service (LOS).

a. LOS "C" on rural roadways, except within ½ mile of state highways where the standard shall be LOS "D".

b. LOS "C" on urban/suburban roadways except within ½ mile of state highways where the standard shall be LOS "D".

The County may allow exceptions to these level of service (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:

- 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 LOS standards for the State highway system shall be no worse than those adopted in the *Placer County Congestion Management Program* (CMP).

Policy 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 Town of Truckee, the unincorporated area, and adjacent Nevada County.

Policy 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.

Policy 3.A.11 The County shall plan and implement a complete road network to serve the needs of local traffic. This road network shall include roadways parallel to regional facilities so that the regional roadway system can function effectively and efficiently. Much of this network will be funded and/or constructed by new development.

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. Such improvements may include a fair share of improvements that provide benefits to others.

Policy 3.A.13 The County shall secure financing in a timely manner for all components of the transportation system to achieve and maintain adopted level of service standards.

Policy 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.

Policy 3.A.15 Placer County shall participate with other jurisdictions and Caltrans in the planning and programming of improvements, as well as maintaining the adopted level of service (LOS), for the State Highway 267 in accordance with state and federal transportation planning and programming procedures, so as to maintain acceptable levels of service for Placer County residents.

Policy 3.B.1 The County shall work with transit providers to plan and implement additional transit services within and to the county that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.

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

Policy 3.B.4 The County shall pursue all available sources of funding for transit services.

Policy 3.B.8 The County shall undertake, as funding permits, and participate in studies of inter-regional recreational transit services, such as rail, to the Sierra.

Policy 3.B.9 The County shall require development of transit services by ski resorts and other recreational providers in the Sierra to meet existing and future recreational demand.

Policy 3.B.10 The County shall consider the transit needs of senior, disabled, minority, low-income, and transit-dependent persons in making decisions regarding transit services and in compliance with the Americans with Disabilities Act.

Policy 3.B.11 The County shall support efforts to provide demand-responsive service ("paratransit") and other transportation services for those unable to use conventional transit.

Policy 6.G.2 The County shall continue and, where appropriate, expand the use of synchronized traffic signals on roadways susceptible to emissions improvement through approach control.

Policy 6.G.3 The County shall encourage the use of alternative modes 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.

Policy 6.G.4 The County shall consider instituting disincentives for single-occupancy vehicle trips, including limitations in parking supply in areas where alternative transportation modes are available and other measures identified by the Placer County Air Pollution Control District and incorporated into regional plans.

Policy 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.

Policy 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.

- *Martis Valley General Plan* (Placer County, 1975): The existing Martis Valley General Plan contains the following relevant goals:

  1) Establish improved access between Highway SR 267 and Interstate 80 in order to eliminate through traffic in downtown Truckee.

2) Encourage methods of innovative mass transit into and within Martis Valley and the Lake Tahoe Basin.

3) Encourage creative methods of dispersal of travelers to specific destination points from mass transit facilities.

Town of Truckee

Truckee General Plan (Town of Truckee, Community Development Department, Planning Division, adopted February 15, 1996): This document guides the overall growth and development of the Town of Truckee, which is located to the north of the proposed project. The plan's Circulation Element calls for the following goals and policies related to applicable Truckee circulation standards of significance:

Policy 1.6 Maintain a LOS D or better at weekday PM peak hour on arterial and collector road segments, and on primary through movements at intersections, in portions of the Town outside the Downtown Study Area.

Policy 1.7 Maintain a LOS E or better at weekday, PM peak hour on local, collector, and arterial road segments and on primary through movements at intersections within the Downtown Study Area. With regards to this traffic analysis, the Downtown Study Area includes locations along Donner Pass Road between Glenshire Drive and Bridge Street (inclusive) and along Bridge Street between West River Street and Donner Pass Road (inclusive); all other study intersections are outside of the Downtown Study Area.

Note that this policy is applied to unsignalized intersections as a *whole*, rather than on individual approaches or turning movements. In addition, LOS is specifically considered for a summer peak weekday only.

The Truckee Town Engineer has indicated that the conclusions of the *Level of Service Criteria Study* (PRISM Engineering, December 2000, for the Nevada County Transportation Commission) should be used as guidance regarding the methodology associated with roadway capacity. According to this document, the maximum peak hour capacity per lane for a 2-lane highway operating at LOS D or better is 1,584, which was based partially upon factors presented in the 1997 Highway Capacity Manual (HCM, Transportation Research Board, 1997). The most recent 2000 HCM (Transportation Research Board, 2000) presents updated values for some of these factors. Per Placer County's request and the Town of Truckee's Public Works director's preliminary approval, the methodologies used in *Level of Service Criteria Study* were updated to reflect the more recent factors presented in the HCM (Moorehead, 2002).

The primary difference between the 2 methodologies is that the 2000 HCM identifies a lower value of Passenger Car Equivalents (PCEs) per truck along rolling terrain than the 1997 HCM. The reduction in this factor reflects the improved acceleration and deceleration characteristics of more modern trucks, which reduce the impacts of an individual truck on overall traffic flow. Applying these revised values, the capacity of the SR 267 Bypass (at the Town's LOS standard of D) is 1,891 vehicles per hour per lane. For comparison, as a part of the *SR 89 South Intersection Improvement Analysis* (LSC, 2000) a peak-hour peak-direction traffic count through the "Mousehole" railroad Undercrossing in Truckee was performed on February 21, 2000. The maximum observed southbound volume was 2,025 vehicles per hour per lane, indicating that 1,891 vehicles per hour per lane could be accommodated along the roadway links of the SR 267

Bypass, which will contain wider lanes and shoulders than are currently provided through the "Mousehole."

Please note that the *Level of Service Criteria Study* provided an analysis of 2-lane (and not four-lane) highways within Nevada County. Therefore, consistent with the methodologies presented in the *2000 Highway Capacity Manual*, the LOS of a four-lane roadway is dependent upon the percent of traffic that uses each lane. It was, therefore, assumed that if SR 267 is a 4-lane roadway, 60 percent of the traffic in each direction will use 1 lane and 40 percent would use the other.

Town of Truckee Development Code, Truckee Municipal Code, Title 18 (Town of Truckee, Effective November 6, 2000): This document provides most of the Town's requirements for the development and use of private and public land, buildings and structures within the Town. Section 18.20.020: Access states the following:

> *For intersections with an acceptable level of service (D or better outside the Downtown Study Area (DSA), E or better inside DSA), the project (existing plus project traffic) decreases the level of service of the total intersection to an unacceptable level (E or F outside DSA, F inside DSA area). The significant impact may be reduced to a less than significant level by incorporating intersection improvements and other mitigation into the project, which improves level of service to an acceptable level.*
>
> *For intersections with an unacceptable level of service, the project increases the total traffic volumes of the intersection 5percent or more above existing traffic volumes. The significant impact may be reduced to a less than significant level by incorporating intersection improvements and other mitigation into the project, which maintains the level of service of the intersection at pre-project levels.*

Town of Truckee AB1600 Traffic Fee Program (Town of Truckee, August, 1999): The Town of Truckee maintains a Traffic Fee Program much like Placer County's, which requires new development within the Town to pay traffic impact fees. The fees collected through this program, in addition to other funding sources, allows the Town to construct transportation facilities needed as a result of new development. The fee each development is required to pay is based upon its Vehicle Miles of Travel (VMT) generated by the project as it compares to the VMT generation of a single-family dwelling unit, or a Dwelling Unit Equivalent (DUE). The current fee per DUE is 1,936 dollars. Relevant roadway and intersection improvements that are fully or partially funded by the fees collected as a part of this program include Tahoe Donner Connector ($6,035,000 total cost), Glenshire/SR 267 capacity improvements ($600,000 total cost), Bridge Street/Union Pacific Railroad improvements ($450,000 total cost), Easterly Railroad Undercrossing ($6,000,000) and the Easterly River Crossing (cost not determined).

Tahoe Regional Planning Agency

Regional Transportation Plan - Air Quality Plan (RTP- AQP) for the Lake Tahoe Region (Tahoe Regional Planning Agency, 1995): The purpose of the Regional Transportation Plan - Air Quality Plan (RTP-AQP) is to attain and maintain the Environmental Threshold Carrying Capacities (thresholds) established by TRPA in 1982, and all applicable federal, state, and local standards established for transportation and air quality. To meet the goals of the Transportation Element, peak-period traffic flow should not exceed:

- LOS C on rural scenic/recreational roads;
- LOS D in rural developed areas;

- LOS D on urban roads; or
- LOS D for signalized intersections.
- LOS E may be acceptable during peak periods not to exceed four hours per day.

This document does not identify a peak traffic period such as summer peak weekday or winter weekend. Currently, TRPA does not have a specific adopted standard for unsignalized intersections.

4.4.3. IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The CEQA Guidelines states that a project will be expected to result in a significant transportation and circulation impact if it causes an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. For the purpose of this EIR, impacts are considered to be significant if the following could result from the implementation of the proposed project:

1) Project implementation would increase traffic and degrade the LOS of roadways or intersections from acceptable to unacceptable conditions or exacerbate conditions that are already at an unsatisfactory level. These standards are presented in Section 4.1.2, above;

2) Project traffic would exacerbate conditions at a facility operating at lower than minimum standards without the project (as defined in the various policies presented in Section 4.1.2, above);

3) Project implementation would increase traffic volumes on local residential streets with front-on lots to over 2,000 average daily trips;

4) Project implementation would conflict with adopted related goals, objectives, and policies of the Town of Truckee General Plan, Placer County General Plan, or the Regional Transportation Plan - Air Quality Plan (RTP- AQP) for the Lake Tahoe Region;

5) Project implementation would result in inadequate parking capacity; or

6) Project implementation would conflict with transit, pedestrian and bicycle uses.

These criteria are consistent with, or more conservative than, the adopted policies or thresholds of Caltrans, Placer County, Tahoe Regional Planning Agency, and the Town of Truckee. Other transportation-related issues (including impact on air traffic patterns and emergency access) are addressed in other sections of this environmental document.

A summary of standards of significance for the various roadway elements in the study area is presented as **Table 4.4-7**.

The reader is referred to Section 4.1 (Land Use) and Section 4.3 (Human Health/Risk of Upset) associated with potential conflicts with the Truckee-Tahoe Airport.

ASSUMPTIONS

This analysis is predicated upon the following assumptions:

- Land uses will develop in accordance with the densities discussed in the "Methodology" Section, below.
- The proportion of residences used as primary homes versus recreational homes will be in accordance with those proportions identified in "Methodology" Section, below.
- The Town of Truckee General Plan land uses will be built out by 2021.
- There will be no substantial shifts in general travel characteristics (such as the proportion of travel accommodated by the various travel modes) over the coming 20 years: factors such as fuel prices or air quality plans will not substantially impact current travel patterns within or external to the study area.

TABLE 4.4-7
LEVEL OF SERVICE STANDARDS

Roadway Element		Level of Service Standard		Source	Notes
		Summer	Winter		
Intersections					
	SR 89/SR 267 Bypass/I-80 Westbound	D	None	Town of Truckee General Plan	Based on total intersection delay
	SR 89/SR 267 Bypass/I-80 Eastbound	D	None	Town of Truckee General Plan	Based on total intersection delay
	Donner Pass Road (Existing SR 267/SR 89) / I-80 Westbound	D	None	Town of Truckee General Plan	Based on total intersection delay
	Donner Pass Road (Existing SR 267/SR 89) / I-80 Eastbound	D	None	Town of Truckee General Plan	Based on total intersection delay
	Glenshire Drive/Donner Pass Road (Existing SR 267)	E	None	Town of Truckee General Plan	Based on total intersection delay
	Bridge Street/Donner Pass Road	E	None	Town of Truckee General Plan	Based on total intersection delay
	Bridge Street/West River Street	E	None	Town of Truckee General Plan	Based on total intersection delay
	Brockway Road (Existing SR 267) / Palisades Drive	E	None	Town of Truckee General Plan	Based on total intersection delay
	Brockway Road (Existing SR 267) / Martis Valley Road	D	None	Town of Truckee General Plan	Based on total intersection delay
	SR 267 Bypass/SR 267/Brockway Road (Existing SR 267)/Joerger Drive	D	None	Town of Truckee General Plan	Based on total intersection delay
	SR 267/Airport Road/Schaffer Mill Road	E	E	Placer County Congestion Management Program	–
	SR 267/Northstar Drive	E	E	Placer County Congestion Management Program	–
	SR 267/SR 28	D	D	TRPA Regional Transportation Plan/Air Quality Plan	Up to 4 hours per day of LOS E may be acceptable
	SR 89 South/Donner Pass Road	D	None	Town of Truckee General Plan	Based on total intersection delay
Roadway Links					
	SR 267 North of Brockway/267 Bypass Intersection	D	None	Town of Truckee General Plan and NCTC Level of Service Criteria Study	Capacity of 1,891 peak-hour traffic volume per lane

Roadway Element		Level of Service Standard		Source	Notes
		Summer	Winter		
	SR 267 South of Brockway/267 Bypass Intersection and North of Northstar Drive	E	E	Placer County Congestion Management Program	Capacity of 12,500 ADT per lane for level terrain
	SR 267 South of Northstar Drive	E	E	Placer County Congestion Management Program	Capacity of 10,500 ADT per lane for rolling terrain
	Arterials within Placer County	C (1)	C (1)	Placer County Congestion Management Program	Capacity of 8,100 ADT per lane for LOS D and 7,200 ADT per lane for LOS C

Note If worst movement LOS at an unsignalized intersection in Placer County is equal to LOS F a signal warrant analysis is used to determine if mitigation is required.

(1) The applicable LOS for County roadways is LOS C except within ½ mile of SR 267, for which it is LOS D.

METHODOLOGY

The discussion below describes the steps that were followed in estimating the transportation conditions that would result from the proposed land use diagram and 2 land use map alternatives under various roadway improvement options. The methodology consists of 3 steps. First, the Town of Truckee Transportation Model was expanded to include the Martis Valley region and the model was calibrated to existing 2001 summer conditions. Next, the land use quantities associated with each land use map alternative were estimated, as well as appropriate trip rates for each land use. Finally, the transportation model was run for each land use map alternative and roadway improvement options to estimate summer peak weekday PM peak-hour traffic volumes. These numbers were then adjusted to best represent typical winter weekend peak-hour conditions (30th highest winter peak hour). ADT volumes were then estimated from the peak hour volumes.

Expansion of the Town of Truckee Transportation Model

The Town of Truckee maintains a town-wide travel demand model using the TMODEL2 software. The purpose of this model is to simulate peak-hour summer traffic flow in Truckee based upon the roadway network and land uses contained in the town. First, the 1995 land use numbers that are contained in the Town of Truckee model were updated to reflect any new development that has occurred along the SR 267 corridor since the last model calibration in 1995, in order to reflect existing 2001 conditions. The model was next expanded to include the Martis Valley region. A total of 36 Traffic Analysis Zones (TAZs) were added to the network, as well as the existing roadways and possible future roadways that would gain access to new development. All existing Martis Valley land uses were inventoried and added to the model. The model was run and compared to known 2001 turning-movement volumes in order to calibrate the model. A more detailed explanation of this process may be found in **Appendix 4.4**.

Estimation of Land Use Quantities

While the Community Plan land use description provides acreage and allowed residential densities, the traffic model requires the quantification of building floor area (for commercial uses) or number of dwelling units (for residential uses). Accordingly, it was necessary as the first step in the traffic analysis to determine the future number of dwelling units and square feet of commercial or office space in each TAZ. Please note that the following golf course characteristics were assumed for each land use alternative:

1) Lahontan 1 (18-hole) -- existing

2) Lahontan 2 (9-hole) -- existing
3) Northstar (18-hole) -- existing
4) Eaglewood (18-hole) -- proposed
5) Hopkins Ranch (18-hole) -- proposed
6) Siller Ranch (18-hole and 9-hole) -- conceptually proposed
7) Waddle Ranch (18-hole) – conceptually proposed

The methodology used in determining the number of single-family and multi-family residential units, as well as the square footage of office and commercial uses, in each TAZ for each land use map alternative is described below. This methodology and associated assumptions were developed based upon direction provided by the Placer County Planning Department. The resulting land use quantities by TAZ for each of the Community Plan Alternatives are presented in **Appendix 4.4**.

Proposed Land Use Diagram (PP)

1. All residential land use quantities for this Alternative were provided by the County Planning Department, as shown in **Table 4.4-8**. All residential development in areas designated Low Density Residential was assumed to be single-family residences. Otherwise, the residences were assumed to be multi-family residential. Several exceptions were made in the case that a current application for the development identifies the amount of single-family or multi-family residential (as identified in Section 3.0 [Project Description]). In addition, East-West Partners has indicated that all future residential development within Northstar is planned to be multi-family. Therefore, the existing single-family dwelling units in Northstar were assumed to remain, but all other Northstar residential development was assumed to consist of multi-family residential.

TABLE 4.4-8
LAND USE QUANTITIES FOR THE PP: PROPOSED LAND USE DIAGRAM

Development Name	Residential Dwelling Units	Single Family Dwelling Units (SFDU)/Multi-Family Dwelling Units (MFDU)
Lahontan I & II	537	SFDU
Ponderosa Palisades/Sierra Meadows	449	SFDU
Northstar	3,700	SFDU/MFDU
Martis Ranch	1,360	SFDU/MFDU
Hopkins Ranch	87	SFDU
Siller Ranch	1,000	SFDU
Eaglewood	506	SFDU/MFDU
Waddle Ranch	894	SFDU/MFDU
Waddle Road/SR 267	105	SFDU
Forest Residential East of Northstar	21	SFDU
Northstar Drive Employee Housing	270	MFDU
East of SR 267 – Northstar	160	SFDU
Forest Residential near County Line	51	SFDU
County Line Medium Density Residential	80	MFDU
Total	**9,220**	

2. For all commercial and office space, 20 percent of the acreage is subtracted for use by roadways and utilities. Of the remaining acreage, a maximum Floor-to-Area Ratio (FAR) of 0.25 percent is assumed. The square footage of tourist commercial in the Siller Brothers Property was adjusted from 383,000 square feet to 75,000 square feet.

A total of 9,220 dwelling units (4,731 single-family and 4,489 multi-family dwelling units) and 1,190,000 square feet of commercial/office land uses were used in the traffic analysis, in addition to the golf courses.

Existing Martis Valley General Plan Land Use Map (AA)

1. Because the Sierra Meadows/Ponderosa Palisades area has already been subdivided into 449 lots and Lahontan I and II has already been approved to develop 537 single-family dwelling units, adjustments were required to account for existing development in these areas. Therefore, because the Lahontan areas consist of 421 acres of land designated Low Density Residential, the 421 acres was subtracted from the total Low Density Residential land use acreage. Similarly, as the Sierra Meadows/Ponderosa Palisades area consists of 40 acres designated Low Density Residential and 350 acres designated Medium Density Residential, the total acreage was adjusted accordingly. The existing residential lots are added back in to the total in step 3.

2. For all residential areas, 20 percent of the acreage was first subtracted from the total acreage to reflect roadway and utility use. The maximum allowable density for each land use designation was then applied to the remaining acreage. For example, if a 40-acre area was designated High Density Residential at a density of 3-6 units per acre, the 40 acres would be multiplied by 0.8 and then by the maximum density (6 units per acre) to estimate a total of 192 units. The residential uses contained within the Forest, Low Density Residential, Open Space, and Valley Residential designations were assumed to consist of single-family residences only. The residential uses contained within the High Density Residential, Medium Density Residential, and Ski-Based Commercial Residential designations were assumed to consist of multi-family residences only. A list of the maximum allowable density of each land use designation contained in the existing Martis Valley General Plan is shown in **Table 4.4-9.**

TABLE 4.4-9
EXISTING MARTIS VALLEY GENERAL PLAN MAXIMUM ALLOWABLE LAND USE DENSITIES

Land Use Designation	Maximum Allowable Density
Forest	1 DU / 10 acre
High Density Residential	6 DU / acre
Medium Density Residential	3 DU / acre
Low Density Residential	1 DU / acre
Open Space	1 DU / acre
Ski-Based Commercial	15 DU / acre
Valley Residential	1 DU / 10 acres

Note 1 DU = Dwelling Unit
Note 2: 6 acres of High Density Residential was assumed to have a maximum allowable density of 15.2 dwelling units per acre to represent the recently-approved Northstar Employee Housing development.

3. Next, the 537 existing single-family residential lots in Lahontan and the 449 existing dwelling residential lots in the Sierra Meadows/Ponderosa Palisades neighborhood were added to the totals as single-family dwelling units. While the majority of the Northstar area is designated Medium Density Residential (indicating multi-family dwelling units), the existing single-family lots contained in Northstar were assumed to remain.

4. For all commercial and office space, 20 percent of the acreage is subtracted for use by roadways and utilities. Of the remaining acreage, a maximum FAR of 25 percent is assumed. In other words, the square feet of floor area of the commercial and office spaces were assumed to be 20 percent of the total land area (80 percent multiplied by 25 percent).

5. The Ski-Based Commercial land use designation was assumed to contain both residential and commercial within the same area. For example, 10 acres of land designated Ski-Based Commercial would contain 87,120 square feet of commercial land use (10 acres X 43,560 square feet/acre X 80 percent X 0.25 FAR), as well as 120 multi-family dwelling units (10 acres X 80 percent X 15 DU/acre). In addition, no residential use was assigned to the smaller 1 to 2 acre parcels located on the ski mountains.

A total of 11,668 dwelling units (4,064 single-family and 7,604 multi-family dwelling units), 1,681,000 square feet of commercial/office land uses, and 130 acres of Recreation land use were identified used for the traffic analysis, in addition to the golf courses.

<u>Alternative 1 Land Use Map Alternative (AB)</u>

1. The same adjustments as those presented above for the Existing Martis Valley General Plan Land Use Map were made for the Lahontan development and the Sierra Meadows/Ponderosa Palisades development for this. The only difference in methodology was that the Lahontan and Sierra Meadows/Ponderosa Palisades areas are wholly designated as Low Density Residential in Alternative 1. A similar adjustment was made for the Northstar area, which consisted of removing 1,174 acres of the Low Density Residential designation contained within Northstar.

2. As with the Existing Community Plan Alternative, 20 percent of the acreage was subtracted from the total acreage for roadway and utility use, and then the maximum allowable density for each land use designation was then applied to the remaining acreage. The residential uses within the Forest, Low Density Residential, Rural Residential, and Forest Residential designation areas were assumed to consist of single-family residences only. The residential contained within the High Density Residential, Medium Density Residential, and Ski-Based Commercial Residential designations were assumed to consist of multi-family residences only. A list of the maximum allowable density of each land use designation under Alternative 1 is shown in **Table 4.4-10.**

TABLE 4.4-10
ALTERNATIVE 1 MAXIMUM ALLOWABLE LAND USE DENSITIES

Land Use Designation	Maximum Allowable Density
Forest	1 DU / 40 acre
High Density Residential	15 DU / acre
Medium Density Residential	10 DU / acre
Low Density Residential	5 DU / acre
Rural Residential	1 DU / acre
Forest Residential	2.5 acres / 1 DU
Tourist Commercial	15 DU / acre

Note: DU = Dwelling Unit

3. Next, the 537 single-family dwelling units in Lahontan and the 449 single-family dwelling units in the Sierra Meadows/Ponderosa Palisades neighborhood were added to the totals as single-family dwelling units. In addition, 3,522 single-family dwelling units were added to the Northstar area, which reflects the application of a 3 dwelling unit per acre density to the 1,174 acres of Low Density Residential designation. The amount of single-family dwelling units that were included in each Northstar TAZ was based upon the proportion of Low Density Residential acreage that exists in each TAZ.

4. For all commercial and office space, 20 percent of the acreage is subtracted for use by roadways and utilities. Of the remaining acreage, a maximum FAR of 25 percent is assumed.

5. As with the Existing Martis Valley General Plan Land Use Map, the Tourist Commercial land use designation (similar to the Ski-Based Commercial land use designation) may have both residential and commercial associated to the acreage. In addition, no residential use was assigned to the smaller one to two acre parcels located on the ski mountains.

Using this methodology, a total of 10,311 dwelling units (8,458 single-family and 1,853 multi-family dwelling units) and 1,220,000 square feet of commercial/office land uses was used for the traffic analysis, in addition to the golf courses.

Alternative 2 Land Use Map Alternative (AC)

This land uses Alternative is the same as the Proposed Land Use Alternative except that it does not contain any development on the Martis Ranch property, located on the east side of SR 267. A total of 7,956 dwelling units (3,467 single-family and 4,489 multi-family dwelling units) and 1,173,000 square feet of commercial/office land uses was used for the traffic analysis, in addition to the golf courses.

Estimation of Trip Rates

Per Placer County Department of Public Works direction, it was assumed that 20 percent of all residences in Martis Valley are full-time residences, and that the remaining 80 percent are second homes, with the exception of the residences that reside in the Ponderosa Palisades neighborhood. The assumption that 20 percent of the residences in Martis Valley will be full-time residences was based upon the review of the existing number of homes that are second homes

in the Martis Valley area. As the proportion of homes used as full-time residences is actually presently lower than 20 percent and as the trip generation of full-time residences is higher than that of second homes, this assumption results in conservative (i.e., "high") estimates of total trip generation.

ITE land use code 260 (Recreational Homes) was used as the appropriate rate for second homes, while ITE land use code 210 (Single Family Dwelling Units) was used for full-time residences. A blended single-family and multi-family trip rate was estimated, as shown in **Table 4.4-11**. As the ITE *Trip Generation Manual* does not include a recreational multi-family dwelling unit rate, the assumption was made that multi-family recreational units have the same trip generation rate as a single-family recreational unit. (While MFDU typically have rates lower than SFDU, recreational MFDU probably have a higher utilization rate, as they are more likely in a rental pool program.)

TABLE 4.4-11
RESIDENTIAL TRIP RATES

	ITE Land Use Code	ADT	PM Peak-Hour Trip of Generator		
			In	Out	Total
Single-Family Dwelling Unit Rate Calculation					
Recreational Home	260	3.16	0.14	0.17	0.31
Single Family Dwelling Unit	210	9.57	0.65	0.37	1.02
Blended Rate Assuming 80 % Recreational		4.44	0.24	0.21	0.45
Multi-Family Dwelling Unit Rate Calculation					
Recreational Home	260	3.16	0.14	0.17	0.31
Condominium	230	5.86	0.35	0.19	0.54
Blended Rate Assuming 80 % Recreational		3.70	0.18	0.17	0.36

Source: ITE Trip Generation Manual, 6th Edition, 1997.

It was assumed that the residences contained within the Ponderosa Palisades neighborhood (TAZ 91), which is located west of SR 267 and accessible via Martis Valley Road and Palisades Drive, consist of 80 percent primary homes and 20 percent secondary homes. This assumption came out of the model calibration to existing conditions, which indicated that the residences in the Ponderosa Palisades neighborhood generate more traffic than residences in the remainder of Martis Valley. The trip rates for the Ponderosa Palisades neighborhood residences located within the TAZs contained within the Town of Truckee were also increased and the same trip rates were applied as to TAZ 91. These rates are shown in **Table 4.4-12**. **Table 4.4-13** provides a summary of all the trip rates that were used in the model.

TABLE 4.4-12
PONDEROSA PALISADES/SIERRA MEADOWS AREA RESIDENTIAL TRIP RATES

	ITE Land Use Code	ADT	PM Peak-Hour Trip of Generator		
			In	Out	Total
Single-Family Dwelling Unit Rate Calculation					
Recreational Home	260	3.16	0.14	0.17	0.31
Single-Family Dwelling Unit	210	9.57	0.65	0.37	1.02
Blended Rate Assuming 20 % Recreational		8.29	0.55	0.33	0.88
Multi-Family Dwelling Unit Rate Calculation					
Recreational Home	260	3.16	0.14	0.17	0.31
Condominium	230	5.86	0.35	0.19	0.54
Blended Rate Assuming 20 % Recreational		5.32	0.31	0.19	0.49

TABLE 4.4-13
PM PEAK-HOUR TRIP RATES

Land Use	Corresponding ITE Land Use Code	Corresponding ITE Land Use	Unit	Rate (PM peak-hour trips per unit)
Single-Family Dwelling Units	--	--	Dwelling Units	0.45
Multi-Family Dwelling Units	--	--	Dwelling Units	0.36
General Commercial	814	Specialty Retail Center	1,000 s.f. floor area	2.59
Public or Professional Office (Office)	710	General Office	1,000 s.f. floor area	1.49
General Commercial	814	Specialty Retail Center	1,000 s.f. floor area	2.59
Golf Course	430	Golf Course	Holes	3.56
Single-Family Dwelling Units In Ponderosa Palisades Neighborhood (1)	--	--	Dwelling Units	0.88
Multi-Family Dwelling Units	--	--	Dwelling Units	0.49
Recreational	412	County Park	Acres	0.06

Note 1: Residences in Ponderosa Palisades neighborhood are assumed to be 80 percent full-time residences and 20 percent second homes.

Source: ITE Trip Generation Manual, 6th Edition, 1997.

The trip generation rates identified above take into account incidental trips associated with each land use, including service trips, employee trips and commute trips by residents and employees.

A summary of the total number of trips generated by each Alternative is summarized in **Appendix 4.4** and in **Table 4.4-14.**

Estimation of 2021 Traffic Volumes

In order to estimate 2021 traffic volumes, the full build-out of the Town of Truckee General Plan land uses was assumed as well as planned development in Nevada County and anticipated increases in traffic volumes that feed into the Martis Valley area. In addition, the land uses proposed by each Martis Valley land use Alternative were also added to the model. Model runs were conducted to estimate future 2021summer volumes. Please note that the 2021 model network contains the Third Tahoe Donner Connection, which would connect SR 89 to Northwoods Boulevard and Bridge Street in Downtown Truckee. The model also contains Sawmill Flat Road and Highlands Drive in the Northstar area, both of which have been approved to be constructed as part of the Northstar Employee Housing development. Because the model is calibrated to provide estimates of summer P.M. peak-hour volumes only, the winter volumes were estimated by applying factors to summer turning-movement volumes and then balancing the volumes along SR 267 and Brockway Road. This was accomplished in the following steps:

1. The amount of traffic generated by skiers at the Northstar-at-Tahoe Ski area was estimated based upon the data provided in the *Northstar-at-Tahoe 2000-2001 Winter Season Traffic Monitoring Program Report* (LSC, August, 2001). The skier traffic generated by skiers at the Northstar-At-Tahoe ski area was subtracted from the peak winter traffic volumes to estimate all non-skier winter traffic.

2. A ratio of summer to non-skier winter turning movement volumes was estimated at each of the study intersections.

3. The summer to winter ratio was applied to all summer 2021 turning-movement volumes to estimate peak winter non-skier traffic volumes. The volumes were balanced along the SR 267 corridor and Brockway Road.

4. The skier traffic was then added back to the winter non-skier volumes to estimate 2021 peak winter traffic volumes. The traffic generated by the Siller Ranch ski area access was also added to the winter volumes for all scenarios. The traffic generated by the Siller Ranch ski area access was estimated based upon the existing traffic levels generated by Northstar-At-Tahoe ski area. The ratio of acreage at the Northstar-At-Tahoe ski area to the proposed acreage of the Siller Ranch ski area access was applied to the traffic generated by the Northstar-At-Tahoe ski area to estimate the Siller Brothers ski area access trip generation. The 30th highest winter hour was estimated by adding the 30th highest hour skier traffic volumes onto the winter non-skier traffic volumes.

ADT volumes were estimated for 2021 forecast conditions. It is only necessary to consider summer ADT values, as the comparison between future 2021 summer and winter ADT levels indicates that summer ADT represents a "worst case" condition for traffic over an entire day. An analysis of future daily traffic volumes along Northstar Drive was conducted to validate this point. The data contained in the Northstar-at-Tahoe 2000-2001 Winter Season Traffic Monitoring Program Report was used to estimate the non-skier ADT on Northstar Drive during the day of the 30th highest winter peak hour traffic volume. Based upon the observed traffic volumes and the

recorded number of skiers that bought tickets at Northstar-At-Tahoe that day, it is estimated that approximately 45 percent of the traffic on Northstar Drive during a winter day is generated by skiers. Next, it was determined based on existing counts that the winter non-skier ADT on Northstar Drive is approximately 70 percent of the summer ADT. Therefore, the winter ADT on Northstar Drive can be assumed to be equal to 70 percent of the summer ADT plus the skier traffic. Applying these results to the future 2021 traffic volumes indicates that the winter ADT remains less than the summer ADT in the future. ADT volumes were estimated based upon the peak-hour forecasts discussed above, multiplied by the factors presented in Section 4.4.1.

A more detailed description of the 2021 traffic volume estimation may be found in **Appendix 4.4.**

TABLE 4.4-14
ESTIMATED TRIP GENERATION FOR EACH LAND USE MAP ALTERNATIVE

	Quantity	Unit	Weekday P.M. Peak-Hour Trip Rate (3)	Daily Trip Rate (3)	Weekday P.M. Peak-Hour Trips	Daily Trips
Existing Martis Valley General Plan Land Use Map (AA)						
Single-Family Dwelling Units	3,503	DU(1)	0.45	4.44	1,576	15,553
Multi-Family Dwelling Units	7,604	DU	0.36	3.7	2,737	28,135
General Commercial	227	KSF(2)	2.59	40.67	588	9,232
Office	723	KSF	1.49	11.01	1,077	7,960
Tourist Commercial	732	KSF	2.59	40.67	1,896	29,770
Golf Course (4)	41	Holes	3.56	35.74	146	1,465
Single-Family Dwelling Units in Palisades Neighborhood	449	DU	0.88	8.29	395	3,722
Recreational	130	Acres	0.06	2.28	8	296
Total	--	--	--	--	*8,474*	*96,631*
Proposed Land Use Diagram						
Single-Family Dwelling Units	4,282	DU	0.45	4.44	1,927	19,012
Multi-Family Dwelling Units	4,489	DU	0.36	3.7	1,616	16,609
General Commercial	270	KSF	2.59	40.67	699	10,981
Office	357	KSF	1.49	11.01	532	3,931
Tourist Commercial	563	KSF	2.59	40.67	1,458	22,897
Golf Course	41	Holes	3.56	35.74	146	1,465
Single-Family Dwelling Units in Palisades Neighborhood	449	DU	0.88	8.29	395	3,722
Recreational	0	Acres	0.06	2.28	0	0
Total	--	--	--	--	*6,773*	*78,617*
Percent of Existing General Plan	--	--	--	--	*79.9%*	*81.8%*
Alternative 1 Land Use Map (AB)						
Single-Family Dwelling Units	8,009	DU	0.45	4.44	3,604	35,560
Multi-Family Dwelling Units	1,853	DU	0.36	3.7	667	6,856
General Commercial	192	KSF	2.59	40.67	497	7,809
Office	314	KSF	1.49	11.01	468	3,457
Tourist Commercial	714	KSF	2.59	40.67	1,849	29,038
Golf Course	41	Holes	3.56	35.74	146	1,465
Single-Family Dwelling Units in Palisades Neighborhood	449	DU	0.88	8.29	395	3,722
Recreational	0	Acres	0.06	2.28	0	0
Total	--	--	--	--	*7,626*	*87,907*
Percent of Existing Community Plan	--	--	--	--	*89.9%*	*90.9%*
Alternative 2 Land Use Map (AC)						
Single-Family Dwelling Units	3,018	DU	0.45	4.44	1,358	13,400
Multi-Family Dwelling Units	4,489	DU	0.36	3.7	1,616	16,609
General Commercial	253	KSF	2.59	40.67	655	10,290
Office	357	KSF	1.49	11.01	532	3,931

Tourist Commercial	563	KSF	2.59	40.67	1,458	22,897
Golf Course	41	Holes	3.56	35.74	146	1,465
Single-Family Dwelling Units in Palisades Neighborhood	449	DU	0.88	8.29	395	3,722
Recreational	0	Acres	0.06	2.28	0	0
Total	--	--	--	--	*6,160*	*72,314*
Percent of Existing Community Plan	--	--	--	--	*72.7%*	*75.2%*

Note 1: DU = dwelling units.
Note 2: KSF=1,000 square feet of floor area.
Note 3: Trip Rates based upon the ITE Trip Generation Manual (TRB, 1997).
Note 4: Adjusted to reflect private versus public golf facilities.

Conceptual Future Development Plans for Northstar Area

While no formal application has been presented to the County, East West Partners has indicated that the current conceptual plan for the area is to relocate Sawmill Flat Road from its current location (near the southern leg of the Northstar Drive/Basque Road intersection) eastward approximately 1,000 feet to a location near the existing gas station, where a roundabout would be built. The north (fourth) leg of the Northstar Drive/Sawmill Flat Road intersection would provide access to approximately 1,800 day skier intercept parking spaces, which would be relocated from its current location north of the Village. The relocation of these parking spaces would substantially reduce winter peak-hour traffic volumes along Northstar Drive west of the skier intercept parking lot. As the project has yet to be officially proposed and to remain conservative in this analysis, the relocation of these spaces was not assumed for the base case 2021 traffic conditions.

It was estimated based upon the historical operation of ski resorts in the Sierra that 40 percent of day skiers exit the ski resort during the PM peak hour. This percentage was applied to the potential 1,240 relocated parking spaces to estimate the total number of vehicles that would exit during the PM peak hour would be relocated. Based upon this analysis, it was estimated that moving 1,240 skier parking spaces could relocate approximately 496 PM peak-hour exiting trips. However, assuming a capacity of 30 people on the shuttle buses used to transport skiers and a 2.46 vehicle occupancy rate, per the *Northstar-At-Tahoe 2000-2001 Winter Season Traffic Monitoring Program Report,* 40 1-way bus trips would also be generated during the PM peak hour. Therefore the relocation of the skier parking would increase westbound traffic PM peak hour traffic on Northstar Drive by 40 trips and decrease the eastbound PM peak hour traffic by 456 trips.

Analysis of Roadway Improvement Options/Scenarios

Intersection LOS was calculated for 2 future roadway scenarios, as depicted in **Figure 4.4-4,** both of which contain the SR 267 Bypass (with 1 travel lane in each direction), a traffic signal at the SR 267/Airport Road/Schaffer Mill Road and Bridge Street/Donner Pass Road intersections, as well as some additional intersection turn lanes that are already programmed for construction. Both roadway networks also assume a full-access roadway connection between Big Springs Drive and Sawmill Flat Road, creating a loop through the Northstar mid-mountain area south of Northstar Drive. The two scenarios analyzed were as follows:

> Proposed Roadway Network (No Schaffer Mill Road Connections) -- This roadway improvement option is currently proposed as part of the Martis Valley Community Plan Update and includes the widening of SR 267 to 2 lanes in each direction, from a point just south of Northstar Drive to Interstate 80 via the SR 267 Bypass.

All Connections Option (All Connections) -- This roadway improvement option contains a 4-lane SR 267, a Northstar Connector, and a Palisades Connector. The Northstar Connector would provide a connection from Schaffer Mill Road southward to the Northstar area. The exact alignment of this roadway has also not been determined, although the link lengths used in the model represent the most reasonable alignment connecting Big Springs Drive to Shaffer Mill Road just west of the Lahontan parcel. This roadway was entered into the Town of Truckee Model with an operating speed of 25 miles per hour. The Palisades Connector would provide between 1 and 3 connection(s) from Schaffer Mill Road to the Ponderosa Palisades/Sierra Meadows neighborhood to the north.

While there are 3 existing roadways that have been "stubbed out" to potentially provide this connection, the exact alignment of this connection (or connections) has not been determined. The amount of traffic that might divert onto this connector would vary slightly based upon the alignment chosen. However, because this is a planning level document and the Town of Truckee Model is a macro model, the most reasonable location of the roadway was chosen and entered into the Town of Truckee Model, with an operating speed of 25 miles per hour, comparable to other roadways contained within the model with similar characteristics.

Please note that traffic volumes were also generated for a roadway Alternative, which contains a 4-lane SR 267 and a Northstar Connector, as well as a two-lane SR 267. While the intersection LOS was not analyzed for these roadway Alternatives, the turning-movement volumes resulting on these roadway Alternatives are shown in the Appendices.

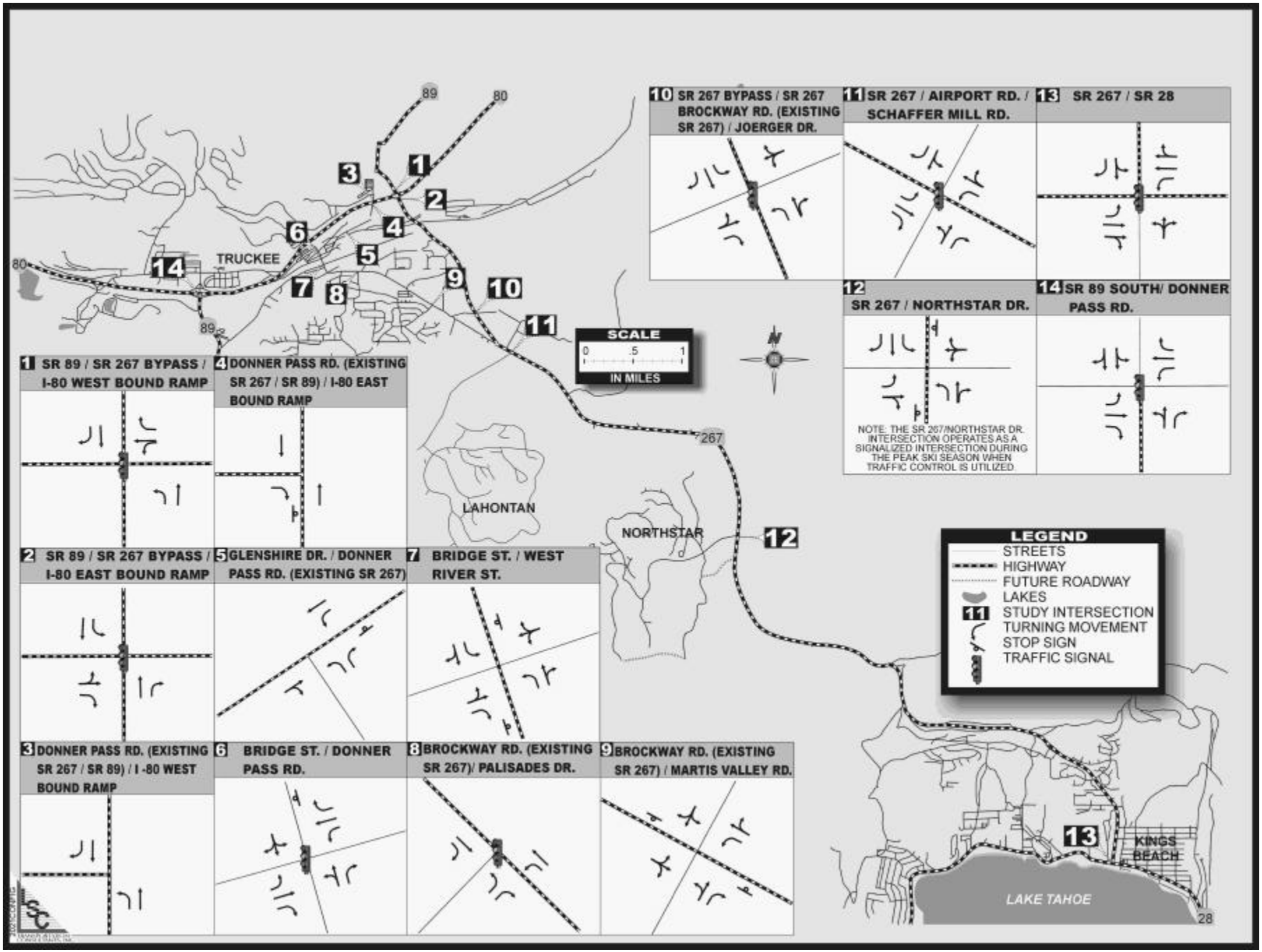
PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.4.1 Potential to Exceed an Established Level of Service Standard

PP Depending upon the roadway network and analysis period, intersection and roadway Level of Service (LOS) standards are forecast to be exceeded under full development of the Proposed Land Use Diagram for up to 8 intersections in the Town of Truckee, and 3 intersections and 2 roadway segments in Placer County. Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a **significant** impact.

AA Depending upon the roadway network and analysis period, intersection and roadway Level of Service (LOS) standards are forecast to be exceeded under full development of this land use Alternative for up to 8 intersections in the Town of Truckee, and 3 intersections and 1 roadway segment in Placer County. Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a **significant** impact.

AB Depending upon the roadway network and analysis period, intersection and roadway Level of Service (LOS) standards are forecast to be exceeded under full development of this land use Alternative for up to 8 intersections in the Town of Truckee, and 3 intersections and 2 roadway segments in Placer County. Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a **significant** impact.



PMC

SOURCE: LSC, 2002

FIGURE 4.4-4
YEAR 2021 INTERSECTION CONFIGURATIONS

AC Depending upon the roadway network and analysis period, intersection and roadway Level of Service (LOS) standards are forecast to be exceeded under full development of this land use Alternative for up to 8 intersections in the Town of Truckee, and 3 intersections and 2 roadway segments in Placer County. Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a **significant** impact.

PP Proposed Land Use Diagram

Each intersection was analyzed using the Traffix Software package (Dowling Associates, 2000). Using the Traffix traffic analysis software package, the improvements required to obtain an adequate LOS at each intersection were determined. Within the Town of Truckee, the LOS standard only applies to the summer peak weekday PM peak hour. However, within Placer County the LOS standards apply to both the summer and winter peak periods analyzed. Two scenarios were analyzed for the Proposed Land Use Diagram. The traffic volumes that would result on the 2 roadway networks ("No Schaffer Mill Road Connections" and "All Connections") were analyzed.

As shown in **Table 4.4-15**, intersection LOS standards are forecast to be exceeded under the Proposed Land Use Diagram for the following intersections in the Town of Truckee under each roadway improvement option:

- SR 89/SR 267 Bypass/I-80 Westbound;
- SR 89/SR 267 Bypass/I-80 Eastbound;
- Glenshire Drive/Donner Pass Road (Existing SR 267);
- Bridge Street/Donner Pass Road;
- Bridge Street/West River Street;
- Brockway Road/Martis Valley Road;
- SR 267 Bypass/SR 267/Brockway Road (Existing SR 267)/Joerger Drive; and
- SR 89 South/Donner Pass Road.

Intersection LOS standards are forecast to be exceeded under the Proposed Land Use Diagram for the following intersections within Placer County are:

- SR 267/Airport Road/Schaffer Mill Road;
- SR 267/Northstar Drive; and
- SR 267/SR 28.

TABLE 4.4-15
2021 INTERSECTION LOS UNDER PP: PROPOSED LAND USE DIAGRAM

Bold text indicates that LOS threshold exceeded.		Roadway Network:	All Connections		No Schaffer Mill Road Connections	
		Land Use:	Proposed		Proposed	
Intersection	Type of Control	Design Period:	Summer Weekday LOS	Winter Weekend LOS	Summer Weekday LOS	Winter Weekend LOS
SR 89/SR 267 Bypass/I-80 Westbound	Traffic Signal	Total Int.	**F**	**E**	**F**	**E**
SR 89/SR 267 Bypass/I-80 Eastbound	Traffic Signal	Total Int.	**F**	B	**F**	C
DPR(Existing 267/89)/I-80 Westbound	Stop-Controlled	Worst Mvmnt.	B	B	B	B
		Total Int.	A	A	A	A
DPR(Existing 267/89)/I-80 Eastbound	Stop-Controlled	Worst Mvmnt.	C	B	C	B
		Total Int.	A	A	A	A
Glenshire Drive/DPR(Existing SR 267)	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
Bridge Street/Donner Pass Road	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
Bridge Street/West River Street	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
Brockway Rd/Palisades Dr	Traffic Signal	Total Int.	C	C	C	B
Brockway Rd/Martis Valley Rd	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
267Bypass/267/Brockway Rd/Joerger Dr	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 267/Airport Road/Schaffer Mill Road	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 267/Northstar Drive	Stop-Controlled (1)	Worst Mvmnt.	**F**	TC	**F**	TC
		Total Int.	**F**	**F**	**F**	**F**
SR 267/SR 28	Traffic Signal	Total Int.	E	**F**	**F**	**F**
SR 89 South/Donner Pass Road	Traffic Signal	Total Int.	**E**	D	**E**	D

1 Traffic control program operates at SR 267/Northstar Drive during peak ski season, indicated by "TC."

In addition, as shown in the tables found in **Appendix 4.4** and **Table 4.4-16**, roadway LOS standards are forecast to be exceeded along the following roadways under "No Schaffer Mill Road Connections" and "All Connections":

- Schaffer Mill Road, from SR 267 to the Hopkins Ranch access, unless the Northstar Drive Connector is built which would extend the section on which the LOS threshold is exceeded to the Eaglewood access.

- Northstar Drive, from SR 267 to Basque Drive, unless the Northstar Drive Connection is built.

Please note that the need to widen SR 267 to four lanes between Northstar Drive and Schaffer Mill Road/Airport Road would be avoided if the Northstar Connector were built (with or without the Palisades Connector). In addition, the portion of SR 267 from I-80 to Brockway Road would not need to be widened to four lanes to maintain an adequate LOS (LOS D or better) under any of the roadway network alternatives.

Also note that the construction of the Palisades Connector in the absence of the Northstar Connector would not reduce traffic volumes on SR 267 between Airport Road/Schaffer Mill Road and Brockway Road sufficient to avoid the need to provide four travel lanes as mitigation to the LOS F along this roadway segment. In addition, while the provision of a Palisades Connector does reduce traffic volumes along Schaffer Mill Road, it does not reduce traffic volumes sufficient to avoid the need to provide four lanes along Schaffer Mill Road as mitigation to the LOS F condition along this roadway segment.

Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a significant impact.

TABLE 4.4-16
UNMITIGATED ROADWAY LOS

Bold text indicates LOS threshold is exceeded	Unmitigated Roadway Level Of Service		
	Existing Roadway Network	**Proposed Roadway Option: 4-Lane SR 267 With No Schaffer Mill Road Connections**	**4-Lane SR 267 plus All Connectors Option**
Proposed Land Use Diagram (PP)			
SR 267 Bypass I-80 to Old Brockway Road	C (2)	A (2)	A (2)
SR 267 Old Brockway Road to Schaffer Mill Road	**F**	E	E
SR 267 Schaffer Mill Road to Northstar Drive	**F**	D	D (2)
Schaffer Mill Road West of SR 267	**E**	**E**	**F**
Northstar Drive West of SR 267	**E**	**E**	C (2)
Existing Martis Valley General Plan Land Use Map (AA)			
SR 267 Bypass I-80 to Old Brockway Road	**F**	B	B
SR 267 Old Brockway Road to Schaffer Mill Road	**F**	E	E
SR 267 Schaffer Mill Road to Northstar Drive	**F**	D	D
Schaffer Mill Road West of SR 267	**F**	**F**	**F**
Northstar Drive West of SR 267	D	D	C (2)
Alternative 1 Land Use Map (AB)			
SR 267 Bypass I-80 to Old Brockway Road	D (2)	A (2)	A (2)
SR 267 Old Brockway Road to Schaffer Mill Road	**F**	E	E
SR 267 Schaffer Mill Road to Northstar Drive	**F**	D	D (2)
Schaffer Mill Road West of SR 267	**F**	**F**	**F**
Northstar Drive West of SR 267	**E**	**E**	C (2)
Alternative 2 Land Use Map (AC)			
SR 267 Bypass I-80 to Old Brockway Road	C (2)	A (2)	A (2)
SR 267 Old Brockway Road to Schaffer Mill Road	**F**	E	E
SR 267 Schaffer Mill Road to Northstar Drive	**F**	D	D (2)
Schaffer Mill Road West of SR 267	**E**	**E**	**F**
Northstar Drive West of SR 267	**E**	**E**	C (2)

Note 1: Roadway LOS standard is D in the Town of Truckee, LOS E along SR 267 in Placer County, and LOS D on all other arterial roadways in Placer County.
Note 2: Four lanes not required to attain LOS standard.
General Note: The 4-lane SR is the Community Plan proposed Circulation Diagram. The roadway network that does not contain the widening of SR 267 to four lanes was analyzed simply to depict whether the widening is required to maintain adequate LOS or not.

AA Existing Martis Valley General Plan Land Use Alternative

As shown in **Table 4.4-17**, the intersection LOS standards forecast to be exceeded under this land use Alternative are the same as those forecasted under the Proposed Land Use Diagram (PP).

TABLE 4.4-17
2021 INTERSECTION LOS UNDER AA: EXISTING MARTIS VALLEY GENERAL PLAN LAND USE MAP

Bold text indicates that LOS threshold exceeded.		Roadway Network:	All Connections		No Schaffer Mill Road Connections	
		Land Use:	Existing Community Plan		Existing Community Plan	
		Design Period:	Summer Weekday LOS	Winter Weekend LOS	Summer Weekday LOS	Winter Weekend LOS
Intersection	**Type of Control**					
SR 89/SR 267 Bypass/I-80 Westbound	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 89/SR 267 Bypass/I-80 Eastbound	Traffic Signal	Total Int.	**F**	C	**F**	C
DPR(Existing 267/89)/I-80 Westbound	Stop-Controlled	Worst Mvmnt.	B	B	B	B
		Total Int.	A	A	A	A
DPR(Existing 267/89)/I-80 Eastbound	Stop-Controlled	Worst Mvmnt.	C	B	C	B
		Total Int.	A	A	A	A
Glenshire Drive/DPR(Existing SR 267)	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
Bridge Street/Donner Pass Road	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
Bridge Street/West River Street	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
Brockway Rd/Palisades Dr	Traffic Signal	Total Int.	C	C	C	C
Brockway Rd/Martis Valley Rd	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
267Bypass/267/Brockway Rd/Joerger Dr	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 267/Airport Road/Schaffer Mill Road	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 267/Northstar Drive	Stop-Controlled (1)	Worst Mvmnt.	**F**	TC	**F**	TC
		Total Int.	**F**	**F**	**F**	**F**
SR 267/SR 28	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 89 South/Donner Pass Road	Traffic Signal	Total Int.	**E**	D	**E**	D

1 Traffic control program operates at SR 267/Northstar Drive during peak ski season, indicated by "TC."

In addition, as shown in the tables found in **Appendix 4.4** and **Table 4.4-16**, roadway LOS standards are forecast to be exceeded along the following roadway:

- Schaffer Mill Road, from SR 267 to the Lahontan Property access for all roadway Alternatives.

The construction of the Palisades Connector in the absence of the Northstar Connector would not reduce traffic volumes on SR 267 between Airport Road/Schaffer Mill Road and Brockway Road sufficient to avoid the need to provide 4 travel lanes as mitigation to the LOS F along this roadway segment. In addition, while the provision of a Palisades Connector does reduce traffic volumes along Schaffer Mill Road, it does not reduce traffic volumes sufficient to avoid the need

to provide four lanes along Schaffer Mill Road as mitigation to the LOS F condition along this roadway segment. In addition, the portion of SR 267 from I-80 to Brockway Road would not need to be widened to four lanes to maintain an adequate LOS (LOS D or better) under any of the roadway network Alternatives, except the Existing Martis Valley General Plan Alternative (AA). Under this Alternative four lanes from I-80 to Brockway Road would be required to maintain an adequate LOS.

Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a significant impact.

AB Alternative 1 Land Use Map

As shown in **Table 4.4-18**, the intersection LOS standards forecast to be exceeded under this land use Alternative are the same as under the Proposed Land Use Diagram (PP).

TABLE 4.4-18
2021 INTERSECTION LOS UNDER AB: ALTERNATIVE 1 LAND USE MAP

Bold text indicates that LOS threshold exceeded.		Roadway Network:	All Connections		No Schaffer Mill Road Connections	
		Land Use:	Alternative 1		Alternative 1	
Intersection	Type of Control	Design Period:	Summer Weekday LOS	Winter Weekend LOS	Summer Weekday LOS	Winter Weekend LOS
SR 89/SR 267 Bypass/I-80 Westbound	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 89/SR 267 Bypass/I-80 Eastbound	Traffic Signal	Total Int.	**F**	C	**F**	C
DPR(Existing 267/89)/I-80 Westbound	Stop-Controlled	Worst Mvmnt.	B	B	B	B
		Total Int.	A	A	A	A
DPR(Existing 267/89)/I-80 Eastbound	Stop-Controlled	Worst Mvmnt.	C	B	C	B
		Total Int.	A	A	A	A
Glenshire Drive/DPR(Existing SR 267)	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
Bridge Street/Donner Pass Road	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
Bridge Street/West River Street	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
Brockway Rd/Palisades Dr	Traffic Signal	Total Int.	C	C	C	C
Brockway Rd/Martis Valley Rd	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
267Bypass/267/Brockway Rd/Joerger Dr	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 267/Airport Road/Schaffer Mill Road	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 267/Northstar Drive	Stop-Controlled (1)	Worst Mvmnt.	**F**	TC	**F**	TC
		Total Int.	**F**	**F**	**F**	**F**
SR 267/SR 28	Traffic Signal	Total Int.	E	**F**	E	**F**
SR 89 South/Donner Pass Road	Traffic Signal	Total Int.	**E**	D	**E**	D

1 Traffic control program operates at SR 267/Northstar Drive during peak ski season, indicated by "TC."

In addition, as shown in the tables found in **Appendix 4.4** and **Table 4.4-16**, roadway LOS standards are forecast to be exceeded along the following roadways:

- Schaffer Mill Road from SR 267 to the Lahontan Property access for all roadway Alternatives; and

- Northstar Drive between SR 267 and Basque Drive unless the Northstar Drive Connector is built.

Please note that the need to widen SR 267 to four lanes between Northstar Drive and Schaffer Mill Road/Airport Road would be avoided if the Northstar Connector were built (with or without the Palisades Connector). In addition, the portion of SR 267 from I-80 to Brockway Road would not need to be widened to four lanes to maintain an adequate LOS (LOS D or better) under any of the roadway network Alternatives.

Also note that the construction of the Palisades Connector in the absence of the Northstar Connector would not reduce traffic volumes on SR 267 between Airport Road/Schaffer Mill Road and Brockway Road sufficient to avoid the need to provide 4 travel lanes as mitigation to the LOS F along this roadway segment. In addition, while the provision of a Palisades Connector does reduce traffic volumes along Schaffer Mill Road, it does not reduce traffic volumes sufficient to avoid the need to provide four lanes along Schaffer Mill Road as mitigation to the LOS F condition along this roadway segment.

Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a significant impact.

AC Alternative 2 Land Use Map

As shown in **Table 4.4-19**, intersection LOS standards could potentially be exceeded under this land use Alternative for the same intersections as with the Proposed Land Use Diagram (PP).

TABLE 4.4-19
2021 INTERSECTION LOS UNDER AC: LAND USE ALTERNATIVE 2

Bold text indicates that LOS threshold exceeded.		Roadway Network:	All Connections		No Schaffer Mill Road Connections	
		Land Use:	Alternative 2		Alternative 2	
Intersection	Type of Control	Design Period:	Summer Weekday LOS	Winter Weekend LOS	Summer Weekday LOS	Winter Weekend LOS
SR 89/SR 267 Bypass/I-80 Westbound	Traffic Signal	Total Int.	**F**	**E**	**F**	**E**
SR 89/SR 267 Bypass/I-80 Eastbound	Traffic Signal	Total Int.	**F**	C	**F**	C
DPR(Existing 267/89)/I-80 Westbound	Stop-Controlled	Worst Mvmnt.	B	B	B	B
		Total Int.	A	A	A	A
DPR(Existing 267/89)/I-80 Eastbound	Stop-Controlled	Worst Mvmnt.	C	B	C	B
		Total Int.	A	A	A	A
Glenshire Drive/DPR(Existing SR 267)	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
Bridge Street/Donner Pass Road	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
Bridge Street/West River Street	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
Brockway Rd/Palisades Dr	Traffic Signal	Total Int.	C	C	C	B
Brockway Rd/Martis Valley Rd	Stop-Controlled	Worst Mvmnt.	**F**	**F**	**F**	**F**
		Total Int.	**F**	**F**	**F**	**F**
267Bypass/267/Brockway Rd/Joerger Dr	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 267/Airport Road/Schaffer Mill Road	Traffic Signal	Total Int.	**F**	**F**	**F**	**F**
SR 267/Northstar Drive	Stop-Controlled (1)	Worst Mvmnt.	**F**	TC	**F**	TC
		Total Int.	**F**	**E**	**F**	**F**
SR 267/SR 28	Traffic Signal	Total Int.	D	**F**	D	**F**
SR 89 South/Donner Pass Road	Traffic Signal	Total Int.	**E**	D	**E**	D

1 Traffic control program operates at SR 267/Northstar Drive during peak ski season, indicated by "TC."

In addition, as shown in the tables found in **Appendix 4.4** and **Table 4.4-16**, roadway LOS standards are forecast to be exceeded along the following roadways:

- Schaffer Mill Road, from SR 267 to the Hopkins Ranch Property access unless the Northstar Connector Roadway is built, in which case it will need to be widened from SR 267 to the Eaglewood access;
- Northstar Drive between SR 267 and Basque Drive, unless the Northstar Drive Connector is built.

Please note that the need to widen SR 267 to four lanes between Northstar Drive and Schaffer Mill Road/Airport Road would be avoided if the Northstar Connector were built (with or without the Palisades Connector). In addition, the portion of SR 267 from I-80 to Brockway Road would not need to be widened to four lanes to maintain an adequate LOS (LOS D or better) under any of the roadway network Alternatives.

The construction of the Palisades Connector in the absence of the Northstar Connector would not reduce traffic volumes on SR 267 between Airport Road/Schaffer Mill Road and Brockway Road sufficient to avoid the need to provide four travel lanes as mitigation to the LOS F along this roadway segment. In addition, while the provision of a Palisades Connector does reduce traffic volumes along Schaffer Mill Road, it does not reduce traffic volumes sufficient to avoid the need to provide four lanes along Schaffer Mill Road as mitigation to the LOS F condition along this roadway segment.

Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a significant impact.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan listed below. Compliance with these plan policies and implementation programs would provide some mitigation to traffic impacts.

Policy 5.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, as well as any planned bikeways and required drainage, utilities, landscaping, and suitable separations.*

Policy 5.A.4 *On highways, intersection spacing should be maximized. Driveway encroachments along collector roadways shall be minimized. Access control restrictions for each class of roadway in the county are specified in Part I of the Placer County General Plan Document.*

Policy 5.A.7 *The County shall develop and manage its roadway system to maintain the following minimum levels of service (LOS).*

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".

The County may allow exceptions to these level of service (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:

- *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 5.A.8 *The County's LOS standard for State Route 267 shall be no worse than E.*

Policy 5.A.9 *The County shall explore with neighboring jurisdictions acceptable and compatible levels of service and joint funding of projects to improve the transportation system.*

Policy 5.A.10 *The County shall strive to meet the level of service standards through a balanced transportation system that provides Alternatives to the automobile.*

Policy 5.A.11 *It shall be at the discretion of the County to determine if an analysis of traffic will be required for 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 the project's fair share of improvements that may also provide benefits to others.*

Policy 5.A.12 *The County shall work to secure financing in a timely manner for all components of the transportation system to achieve and maintain adopted level of service standards.*

Policy 5.A.13 *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., work force housing, needed health facilities) and when Alternative sources of funding can be identified to offset foregone revenues.*

Policy 5.A.14 *Placer County shall participate with other jurisdictions and Caltrans in the planning and programming of improvements, as well as maintaining the adopted level of service (LOS), for State Highway 267 in accordance with state and federal transportation planning and programming procedures, so as to maintain acceptable levels of service for Placer County residents and visitors in Martis Valley.*

Policy 5.A.15 *The County shall coordinate the road network and Alternative transportation systems within the Community Plan area with similar systems in surrounding areas.*

Policy 5.C.1 *The County shall promote the use of transportation systems management (TSM)/transportation demand management (TDM) programs that divert automobile commute trips to transit, walking, and bicycling.*

Policy 5.C.2 *The County shall promote the use, by both the public and private sectors, of TSM/TDM programs that increase the average occupancy of vehicles.*

Policy 5.C.3 *The County shall work with other responsible agencies to develop other measures to reduce vehicular travel demand and meet air quality goals.*

Policy 5.C.4 *During the development review process, the County shall require that proposed projects meet adopted Trip Reduction Ordinance (TRO) requirements.*

Implementation Programs

1. *Review development projects for compliance with the goals, policies and specific discussions contained in the Transportation and Circulation Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments, Board of Supervisors
   Time frame: Ongoing
   Funding: Application fees

2. *Prepare and adopt an ordinance implementing traffic mitigation fees for the Roadway Capital Improvement Program.*

   Responsible Agency/Department: Department of Public Works, Board of Supervisors
   Time frame: On-going
   Funding: Road Fund/Fees

3. *Coordinate transportation planning with the Placer County Transportation Planning Agency, adjacent jurisdictions, and Caltrans.*

   Responsible Agency/Department: Department of Public Works
   Time frame: Ongoing
   Funding: Road Fund

5. *Pursue other sources of funding for transportation improvements.*

   Responsible Agency/Department: County Executive, Department of Public Works
   Time frame: Ongoing
   Funding: General Fund/Road Fund

6. *Continue existing transportation construction and maintenance programs.*

Responsible Agency/Department: Department of Public Works, Caltrans
Time frame: Ongoing
Funding: Varied

Mitigation Measures

The following mitigation measure shall be incorporated into the Implementation Programs portion of the Transportation and Circulation Section of the Martis Valley Community Plan. The following mitigation measure applies to PP, AA, AB and AC.

MM 4.4.1a The County shall establish a capital improvement program for the land use map and roadway improvements ultimately approved by the County for the improvements identified in **Tables 4.4-20** through **4.4-25** (depending on the land use map adopted). This would include funding and coordination for traffic improvements associated with impacts identified in the Town of Truckee as well as to state highway facilities (SR 267 and SR 28).

TABLE 4.4-20
2021 INTERSECTION LOS MITIGATION MEASURES FOR PP: PROPOSED LAND USE DIAGRAM

Roadway Network: Land Use: Intersection	Type of Control	Type of LOS	Season	All Connections		No Schaffer Mill Road Connections	
				Proposed Land Use Diagram		Proposed Land Use Diagram	
				LOS	Mitigation	LOS	Mitigation
SR 89/SR 267 Bypass/ I-80 Westbound	Traffic Signal	Total Int.	Summer	D	Add 2nd NBLTL = 2 Total	D	Add 2nd NBLTL = 2 Total
SR 89/SR 267 Bypass/ I-80 Eastbound	Traffic Signal	Total Int.	Summer	D	Add 2nd NBTL = 2 Total	D	Add 2nd NBTL = 2 Total
Glenshire Drive/DPR (Existing SR 267)	Stop-Controlled	Total Int.	Summer	D	Signalize Add EBRTL	D	Signalize Add EBRTL
Bridge Street/ Donner Pass Road	Signal	Total Int.	Summer	E	Add NBFRTL + Acceleration Lane Add NBLTL (remove L/T shared) Add SBRTL	E	Add NBFRTL + Acceleration Lane Add NBLTL (remove L/T shared) Add SBRTL
Bridge Street/ West River Street	Stop-Controlled	Total Int.	Summer	D	Signalize Add SBTL	D	Add SBTL
Brockway Rd/ Martis Valley Rd	Stop-Controlled	Total Int.	Summer	B	Signalize	B	Signalize
267Bypass/267/ Brockway Rd/ Joerger Dr	Traffic Signal	Total Int.	Summer	D	Add 2nd NBLTL = 2 Total Add NBTL = 1 Total + T/R Shared Add EBFRTL + Acceleration Lane Add SBTL = 2 Total	D	Add 2nd NBLTL = 2 Total Add NBTL = 1 Total + T/R Shared Add EBFRTL + Acceleration Lane Add SBTL = 2 Total
SR 267/Airport Road/ Schaffer Mill Road	Traffic Signal	Total Int.	Summer	D	Add 2 NBTL = 2 Total + T/R Shared Add SBTL = 2 Total Add 2 EBLTL (remove L/T shared) Add EBT/R shared lane Add WBLTL (remove L/T shared) Add WBFRTL + Acceleration Lane	E	Add 2NBTL = 2 Total + T/R Shared Add SBTL = 2 Total Add 2 EBLTL (remove L/T shared) Add EBT/R shared lane Add WBLTL (remove L/T shared) Add WBFRTL + Acceleration Lane

SR 267/Northstar Drive	Stop-Controlled	Total Int.	Winter	D	Signalize Add NBTL Add EBLTL	D	Signalize Add NBTL Add EBLTL
SR 267/SR 28	Traffic Signal	Total Int.	Winter	D	Add WBFRTL + Acceleration Lane	E	Add WBFRTL + Acceleration Lane
SR 89 South/ Donner Pass Road	Traffic Signal	Total Int.	Summer	D	Add NBLTL (remove L/T shared) Add SBRTL (remove T/R shared)	D	Add NBLTL (remove L/T shared) Add SBRTL (remove T/R shared)

KEY

NB= Northbound
SB= Southbound
EB= Eastbound
WB= Westbound
TL= Through Lane
LTL= Left-Turn Lane
RTL= Right-Turn Lane
FRT Free-Right Turn Lane

Notes

1 *Mitigation represents improvements needed to maintain LOS D/E in Truckee during summer weekday peak, LOS E in Placer County outside the Tahoe Basin during both winter weekend and summer peak weekday hours, and no more than 4 hours of LOS E within the Tahoe Basin during summer or winter hours.*

2 *All item listed are necessary in addition to the base case 2021 roadway geometry.*

TABLE 4.4-21
EXTENT OF WIDENING REQUIRED ALONG NORTHSTAR DRIVE AND SCHAFFER MILL ROAD FOR EACH LAND USE ALTERNATIVE AND ROADWAY IMPROVEMENT OPTION

Roadway to Be Widened	Land Use Map Alternative	Roadway Improvement Option	Roadway Segment to be Widened to Four Lanes
Northstar Drive	PP	Proposed: No Schaffer Mill Road Connections	SR 267 to Basque Road
		All Connections	Widening Not Needed
	AA	Proposed: No Schaffer Mill Road Connections	Widening Not Needed
		All Connections	Widening Not Needed
	AB	Proposed: No Schaffer Mill Road Connections	SR 267 to Basque Road
		All Connections	Widening Not Needed
	AC	Proposed: No Schaffer Mill Road Connections	SR 267 to Basque Road
		All Connections	Widening Not Needed
Schaffer Mill Road	PP	Proposed: No Schaffer Mill Road Connections	SR 267 to Hopkins Access
		All Connections	SR 267 to Hopkins Access
	AA	Proposed: No Schaffer Mill Road Connections	SR 267 to Lahontan Access
		All Connections	SR 267 to Lahontan Access
	AB	Proposed: No Schaffer Mill Road Connections	SR 267 to Siller Access
		All Connections	SR 267 to Siller Access
	AC	Proposed: No Schaffer Mill Road Connections	SR 267 to Hopkins Access
		All Connections	SR 267 to Hopkins Access

TABLE 4.4-22
MITIGATED LOS FOR POTENTIALLY CRITICAL ARTERIAL ROADWAYS

	Mitigated Roadway Level Of Service (With Four Lane Roadway)		
	Existing Roadway Alt.	Proposed: 4-Lane SR 267, No Schaffer Mill Road Connections	four lane SR 267 Plus All Connections
Proposed Land Use Diagram			
SR 267 Bypass I-80 to Brockway Road	NA	NA	NA
SR 267 Brockway Road to Schaffer Mill Road	E	NA	NA
SR 267 Schaffer Mill Road to Northstar Drive	D	NA	NA
Schaffer Mill Road West of SR 267	A	A	A
Northstar Drive West of SR 267	A	A	NA
Existing Martis Valley General Plan			
SR 267 Bypass I-80 to Brockway Road	A	NA	NA
SR 267 Brockway Road to Schaffer Mill Road	E	NA	NA
SR 267 Schaffer Mill Road to Northstar Drive	D	NA	NA
Schaffer Mill Road West of SR 267	C	C	B
Northstar Drive West of SR 267	NA	NA	NA
Alternative 1			
SR 267 Bypass I-80 to Brockway Road	NA	NA	NA
SR 267 Brockway Road to Schaffer Mill Road	E	NA	NA
SR 267 Schaffer Mill Road to Northstar Drive	D	NA	NA
Schaffer Mill Road West of SR 267	B	B	B
Northstar Drive West of SR 267	A	A	NA
Alternative 2			
SR 267 Bypass I-80 to Brockway Road	NA	NA	NA
SR 267 Brockway Road to Schaffer Mill Road	E	NA	NA
SR 267 Schaffer Mill Road to Northstar Drive	D	NA	NA
Schaffer Mill Road West of SR 267	A	A	A
Northstar Drive West of SR 267	A	A	NA

Note 1: NA = Not applicable because no mitigation is required.

TABLE 4.4-23
INTERSECTION LOS MITIGATION MEASURES FOR AA: EXISTING MARTIS VALLEY GENERAL PLAN LAND USE MAP

Roadway Network: Land Use:				All Connections Existing Community Plan		No Schaffer Mill Road Connections Existing Community Plan	
Intersection	**Type of Control**	**Type of LOS**	**Season**	**LOS**	**Mitigation**	**LOS**	**Mitigation**
SR 89/SR 267 Bypass/ I-80 Westbound	Traffic Signal	Total Int.	Summer	D	Add WBLTL= 2 Total Add 2nd NBLTL = 2 Total	D	Add WBLTL = 2 Total Add 2nd NBLTL = 2 Total
SR 89/SR 267 Bypass/ I-80 Eastbound	Traffic Signal	Total Int.	Summer	C	Add EBFRTL + Acceleration Lane Add 2nd NBTL = 2 Total	C	Add EBFRTL + Acceleration Lane Add 2nd NBTL = 2 Total
Glenshire Drive/DPR (Existing SR 267)	Stop-Controlled	Total Int.	Summer	D	Signalize Add EBRTL	D	Signalize Add EBRTL
Bridge Street/ Donner Pass Road	Signal	Total Int.	Summer	E	Add NBFRTL + Acceleration Lane Add NBLTL (remove L/T shared) Add SBRTL	E	Add NBFRTL + Acceleration Lane Add NBLTL (remove L/T shared) Add SBRTL
Bridge Street /West River Street	Stop-Controlled	Total Int.	Summer	E	Signalize Add SBTL	E	Signalize Add SBTL
Old Brockway Rd/ Martis Valley Rd	Stop-Controlled	Total Int.	Summer	B	Signalize	C	Signalize
267Bypass/267/ Brockway Rd/Joerger Dr	Traffic Signal	Total Int.	Summer	D	Add 2 NBTL = 2 Total + T/R Shared Add 1SBTL = 2 Total Add 2nd NBLTL = 2 Total Add EBFRTL + Acceleration Lane	D	Add 2 NBTL = 2 Total + T/R Shared Add 2SBTL = 3 Total Add 2nd NBLTL = 2 Total Add EBFRTL + Acceleration Lane
SR 267/Airport Road/ Schaffer Mill Road	Traffic Signal	Total Int.	Summer	D	Add 3 NBTL = 3 Total + T/R Shared Add 2 SBTL = 3 Total Add 2 EBLTL (remove L/T shared) Add EBT/R shared lane Add WBLTL (remove L/T shared) Add WBFRTL + Acceleration Lane	E	Add 3 NBTL = 3 Total + T/R Shared Add 2 SBTL = 3 Total Add 2 EBLTL (remove L/T shared) Add EBT/R shared lane Add WBLTL (remove L/T shared) Add WBFRTL + Acceleration Lane
SR 267/Northstar Drive	Stop-Controlled	Total Int.	Winter	E	Signalize Add NBTL Add EBLTL	E	Signalize Add NBTL Add EBLTL
SR 267/SR 28	Traffic Signal	Total Int.	Winter	E	Add WBFRTL + Acceleration Lane	E	Add WBFRTL + Acceleration Lane
SR 89 South/ Donner Pass Road	Traffic Signal	Total Int.	Summer	D	Add NBLTL (remove L/T shared) Add SBRTL (remove T/R shared)	D	Add NBLTL (remove L/T shared) Add SBRTL (remove T/R shared)

KEY

NB= Northbound
SB= Southbound
EB= Eastbound
WB= Westbound
TL= Through Lane
LTL= Left-Turn Lane
RTL= Right-Turn Lane
FRT Free-Right Turn Lane

1 *Mitigation represents improvements needed to maintain LOS D/E in Truckee during summer peak weekday peak, LOS E in Placer County outside the Tahoe Basin during both winter weekend and summer peak weekday hours, and no more than 4 hours of LOS E within the Tahoe Basin during summer or winter hours.*

2 *All item listed are necessary in addition to the base case 2021 roadway geometry.*

TABLE 4.4-24
INTERSECTION LOS MITIGATION MEASURES FOR AB: ALTERNATIVE 1 LAND USE MAP

Roadway Network: Land Use: Intersection	Type of Control	Type of LOS	Season	All Connections Alternative 1		No Schaffer Mill Road Connections Alternative 1	
				LOS	Mitigation	LOS	Mitigation
SR 89/SR 267 Bypass/ I-80 Westbound	Traffic Signal	Total Int.	Summer	D	Add WBLTL = 2 Total Add 2nd NBLTL = 2 Total	D	Add WBLTL = 2 Total Add 2nd NBLTL = 2 Total
SR 89/SR 267 Bypass/ I-80 Eastbound	Traffic Signal	Total Int.	Summer	D	Add 2nd NBTL = 2 Total	C	Add EBFRTL + Acceleration Lane Add 2nd NBTL = 2 Total
Glenshire Drive/DPR (Existing SR 267)	Stop-Controlled	Total Int.	Summer	D	Signalize Add EBRTL	D	Signalize Add EBRTL
Bridge Street/ Donner Pass Road	Signal	Total Int.	Summer	E	Add NBFRTL + Acceleration Lane Add NBLTL (remove L/T shared) Add SBRTL	E	Add NBFRTL + Acceleration Lane Add NBLTL (remove L/T shared) Add SBRTL
Bridge Street/ West River Street	Stop-Controlled	Total Int.	Summer	E	Signalize Add SBTL	D	Signalize Add SBTL
Brockway Rd/ Martis Valley Rd	Stop-Controlled	Total Int.	Summer	B	Signalize	B	Signalize
267 Bypass/267/ Brockway Rd/Joerger Dr	Traffic Signal	Total Int.	Summer	D	Add 2 NBTL = 2 Total + T/R Shared Add SBTL = 2 Total Add 2nd NBLTL = 2 Total Add EBFRTL + Acceleration Lane	D	Add 2 NBTL = 2 Total + T/R Shared Add SBTL = 2 Total Add 2nd NBLTL = 2 Total Add EBFRTL + Acceleration Lane
SR 267/Airport Road/ Schaffer Mill Road	Traffic Signal	Total Int.	Summer	D	Add 2 NBTL = 2 Total + T/R Shared Add SBTL = 2 Total Add 2 EBLTL (remove L/T shared) Add EBT/R shared lane Add WBLTL (remove L/T shared) Add WBFRTL + Acceleration Lane	E	Add 2 NBTL = 2 Total + T/R Shared Add SBTL = 2 Total Add 2 EBLTL (remove L/T shared) Add EBT/R shared lane Add WBLTL (remove L/T shared) Add WBFRTL + Acceleration Lane
SR 267/Northstar Drive	Stop-Controlled	Total Int.	Winter	D	Signalize Add NBTL Add EBLTL	D	Signalize Add NBTL Add EBLTL
SR 267/SR 28	Traffic Signal	Total Int.	Winter	E	Add WBRTL	E	Add WBRTL
SR 89 South/ Donner Pass Road	Traffic Signal	Total Int.	Summer	D	Add NBLTL (remove L/T shared) Add SBRTL (remove T/R shared)	D	Add NBLTL (remove L/T shared) Add SBRTL (remove T/R shared)

KEY

NB= Northbound
SB= Southbound
EB= Eastbound
WB= Westbound
TL= Through Lane
LTL= Left-Turn Lane
RTL= Right-Turn Lane
FRT Free-Right Turn Lane

1 *Mitigation represents improvements needed to maintain LOS D/E in Truckee during summer weekday peak, LOS E in Placer County outside the Tahoe Basin during both winter weekend and summer peak weekday hours, and no more than 4 hours of LOS E within the Tahoe Basin during summer or winter hours.*

2 *All item listed are necessary in addition to the base case 2021 roadway geometry.*

TABLE 4.4-25
INTERSECTION LOS MITIGATION MEASURES FOR AC: ALTERNATIVE 2 LAND USE MAP

Roadway Network: Land Use: Intersection	Type of Control	Type of LOS	Season	All Connections Alternative 2		No Schaffer Mill Road Connections Alternative 2	
				LOS	Mitigation	LOS	Mitigation
SR 89/SR 267 Bypass/ I-80 Westbound	Traffic Signal	Total Int.	Summer	D	Add 2nd NBLTL = 2 Total	D	Add 2nd NBLTL = 2 Total
SR 89/SR 267 Bypass/ I-80 Eastbound	Traffic Signal	Total Int.	Summer	D	Add 2nd NBTL = 2 Total	D	Add 2nd NBTL = 2 Total
Glenshire Drive/DPR (Existing SR 267)	Stop-Controlled	Total Int.	Summer	D	Signalize Add EBRTL	D	Signalize Add EBRTL
Bridge Street/ Donner Pass Road	Signal	Total Int.	Summer	E	Add NBFRTL + Acceleration Lane Add NBLTL (remove L/T shared) Add SBRTL	E	Add NBFRTL + Acceleration Lane Add NBLTL (remove L/T shared) Add SBRTL
Bridge Street/ West River Street	Stop-Controlled	Total Int.	Summer	D	Signalize Add 2nd SBTL	D	Signalize Add 2nd SBTL
Old Brockway Rd/ Martis Valley Rd	Stop-Controlled	Total Int.	Summer	B	Signalize	B	Signalize
267 Bypass/267/ Brockway Rd/Joerger Dr	Traffic Signal	Total Int.	Summer	D	Add 2nd NBLTL = 2 Total Add NBTL = 1 Total + T/R Shared Add EBFRTL + Acceleration Lane Add SBTL = 2 Total	D	Add 2nd NBLTL = 2 Total Add NBTL = 1 Total + T/R Shared Add EBFRTL + Acceleration Lane Add SBTL = 2 Total
SR 267/Airport Road/ Schaffer Mill Road	Traffic Signal	Total Int.	Summer	E	Add NBTL = 1 Total + T/R Shared Add SBTL = 2 Total Add 2 EBLTL (remove L/T shared) Add EBT/R shared lane Add WBLTL (remove L/T shared) Add WBFRTL + Acceleration Lane	E	Add NBTL = 1 Total + T/R Shared Add SBTL = 2 Total Add 2 EBLTL (remove L/T shared) Add EBT/R shared lane Add WBLTL remove L/T shared) Add WBFRTL + Acceleration Lane
SR 267/Northstar Drive	Stop-Controlled	Total Int.	Winter	E	Signalize Add NBTL	D	Signalize Add NBTL Add EBLTL
SR 267/SR 28	Traffic Signal	Total Int.	Winter	E	Add WBRTL	E	Add WBRTL
SR 89 South/ Donner Pass Road	Traffic Signal	Total Int.	Summer	D	Add NBLTL (remove L/T shared) Add SBRTL (remove T/R shared)	D	Add NBLTL (remove L/T shared) Add SBRTL (remove T/R shared)

KEY
NB=
SB= Southbound
WB= Westbound
TL= Through Lane
RTL= Right-Turn Lane
FRT Free-Right Turn Lane

1 *Mitigation represents improvements needed to maintain LOS D/E in Truckee during summer peak weekday peak, LOS E in Placer County outside the Tahoe Basin during both winter weekend and summer peak weekday hours, and no more than 4 hours of LOS E within the Tahoe Basin during summer or winter hours.*
2 *All item listed are necessary in addition to the base case 2021 roadway geometry.*

Please note that a modern roundabout may be suitable mitigation for intersections that are identified to need a traffic signal. In addition, while the TRPA establishes a LOS D threshold for intersections, it also indicates that LOS E is suitable so long as the LOS E condition is not exceeded for more than 4 hours of the day. Therefore, the mitigation measures identified for the SR 28/SR 267 intersection represent the improvements needed to provide LOS D at the intersection for all but 4 hours per day during which the LOS is E. This conclusion was validated by a review of both summer and winter traffic data along SR 267 and SR 28, which determined that the 5th highest peak hour traffic volumes are between 60 percent and 80 percent of the peak hour. The LOS analysis indicates that the 5th highest peak-hour traffic volumes would result in a LOS D or better for at least 20 hours of the day in the case that the intersection operates at a LOS E during the peak hour.

As shown in **Tables 4.4-16 and 4.4-22**, the Proposed Land Use Diagram, Alternative 1 and 2 could avoid the need to 4-lane SR 267 from Schaffer Mill Road to Northstar Drive if the Northstar Connector is constructed.

Poor LOS conditions requiring intersection improvements at the Bridge Street/West River Street and Bridge Street/Donner Pass Road intersection for all the land use map Alternatives could instead be mitigated by constructing a new roadway (including an additional railroad crossing and Truckee River crossing) to the east of Bridge Street, as identified in the Town of Truckee Downtown Specific Plan (Truckee, 1997). This improvement is part of the Downtown Specific Plan, but was not included in the Town's 2021 roadway network. The Town of Truckee AB 1600 Capital Improvement Program identifies 3 million dollars for an easterly railroad undercrossing, with an additional 3 million dollars coming from other sources, primarily from the developer of the "balloon track" site located south of Glenshire Drive and east of Bridge Street. The Town of Truckee estimates that this facility could divert 41 percent of the traffic off of Bridge Street. However, no preferred alignment has been identified by the Town. Development of this facility could result in impacts to the Truckee River as well as other biological and historic resources in the Truckee Downtown area.

Since the specific design of these roadway improvements has yet to be determined, it is not possible to determine the exact extent of the environmental effects of these improvements. However, these improvements may result in temporary surface water quality, air quality and noise impacts associated with construction; operational noise and air quality impacts; biological resource impacts associated with construction and operation; and cultural resource impacts (especially with conflicts with historic resources in the Truckee Downtown area).

While implementation of the some of the above identified mitigation measures are within the jurisdiction of Placer County to implement, other mitigation measures would require coordination with other jurisdictions (Town of Truckee and Caltrans) to implement and are not under control of the County. In some cases these improvements are identified in capital improvement programs, while other improvements have not been programmed (e.g., widening of SR 267 to four lanes). Given the unknown nature of the timing and funding of these improvements under the 3 jurisdictions (Placer County, Town of Truckee and Caltrans), this impact is considered **significant and unavoidable**.

<u>Optional Mitigation Measure</u>

MM 4.4.1b Reduce Land Use Quantities in Martis Valley Community Plan Area.

Alternately, under any of the Alternatives, the land uses allowed under each land use Alternative could be reduced to eliminate the need to widen roadways, particularly SR 267, Northstar Drive, and Schaffer Mill Road.

Under the Proposed Land Use Diagram, the list of roadways which have volumes that exceed LOS standards are shown in **Table 4.4-26**, as well as the reduction in land uses needed to maintain LOS standards. The reduction in ADT (or PM peak-hour one-way trips in the Town of Truckee) that would be required to avoid the need to widen particular roadways to four lanes is also shown in the table. These tables are meant for programmatic planning purposes only. Please note that the location of any trip reductions have a relatively minor impact on whether the traffic volumes would be reduced to adequate levels. For SR 267, the reduction shown indicates the reduction needed in traffic generation for the overall Martis Valley area. For Northstar Drive, the reduction required refers to the total traffic generation of Northstar developments. Finally, the reduction needed for Schaffer Mill Road refers to the reduction needed in traffic generation associated with land uses that are proposed to gain access on Schaffer Mill Road (Lahontan, Siller Ranch, Eaglewood, and Hopkins Ranch).

For example, in order to avoid the need to 4-lane SR 267 from Schaffer Mill Road to Northstar Drive, the total trip generation for the area would need to be reduced by approximately 10 percent. Similarly, the total trip generation along Schaffer Mill Road would need to be reduced by 5 percent unless the Northstar Connector is built or both the Northstar Connector and Palisades connectors are built, in which case the trip generation would need to be reduced by 20 percent or 15 percent, respectively.

TABLE 4.4-26
REDUCTIONS IN MARTIS VALLEY TRIP GENERATION
NECESSARY TO MAINTAIN ADEQUATE ROADWAY LOS FOR THE PROPOSED LAND USE DIAGRAM (PP)

Roadway	Reduction in Traffic Generation Needed to Avoid Exceeding the Capacity of a 2-Lane Roadway/Reduction in Trips Required		
	2021 Existing Roadway	Proposed: 4-Lane SR 267, No Schaffer Mill Road Connections	All Connections
SR 267 Bypass Between I-80 and Brockway Road	Note 1	Note 1	Note 1
SR 267 Between Brockway Road and Airport Road/Schaffer Mill Road	90%/15,000 ADT	--	--
SR 267 Between Airport Road/Schaffer Mill Road and Northstar Drive (1)	25%/3,000 ADT	--	Note 2
Schaffer Mill Road West of SR 267 (West end of widening varies)	5%/500 ADT	5%/500 ADT	15%/2,000 ADT
Northstar Drive Between SR 267 and Basque Drive (2)	10%/1,500 ADT or Note 3	10%/1,500 ADT or Note 3	---

Note 1: Four lane SR 267 not required between I-80 and Brockway Road for any roadway Alternative under this land use scenario.
Note 2: Four lane SR 267 is not required between Schaffer Mill Road and Northstar Drive if Northstar Connector is built.
Note 3: Four lane Northstar Drive is not required if Northstar Connector is built.

As indicated, a very substantial reduction in land use in the Placer County portion of Martis Valley would be required to avoid exceeding the 2-lane capacity of SR 267 between Brockway Road and Airport Road/Schaffer Mill Road, as future growth in traffic associated with both through traffic and traffic generated by the build-out of the Truckee General Plan is forecast to consume most of the available roadway capacity. This table also reflects the conclusion that providing new connections to Schaffer Mill Road would increase through traffic on this roadway, thereby increasing the reduction in land use required to avoid exceeding the capacity of a 2-lane roadway.

Under the Existing Martis Valley General Plan Land Use Map, the list of roadways which have volumes that exceed LOS standards are shown in **Table 4.4-27**, as well as the reduction in land uses needed to maintain LOS standards.

TABLE 4.4-27
REDUCTIONS IN MARTIS VALLEY TRIP GENERATION NECESSARY TO MAINTAIN ADEQUATE ROADWAY LOS FOR THE EXISTING MARTIS VALLEY GENERAL PLAN LAND USE MAP ALTERNATIVE (AA)

Roadway	Reduction in Traffic Generation Needed to Avoid Exceeding the Capacity of a 2-Lane Roadway/Reduction in Trips Required		
	2021 Existing Roadway	Proposed: 4-Lane SR 267, No Schaffer Mill Road Connections	All Connections
SR 267 Bypass Between I-80 and Brockway Road	5%/50 P.M. Peak-Hour Trips per Direction per Lane	Note 1	Note 1
SR 267 Between Old Brockway Road and Airport Road/Schaffer Mill Road	90%/ 20,000 ADT	--	--
SR 267 Between Airport Road/Schaffer Mill Road and Northstar Drive (1)	35%/4,500 ADT	--	--
Schaffer Mill Road West of SR 267 (West end of widening varies)	45%/10,500 ADT	45%/10,500 ADT	40%/9,000ADT
Northstar Drive Between SR 267 and Basque Drive	Note 2	Note 2	Note 2

Note 1: Four lane SR 267 not required between I-80 and Broadway Road for any roadway Alternative under this land use scenario.
Note 2: Four-lane Northstar Drive is not required.

Under the Alternative 1 Land Use Map, the list of roadways which have volumes that exceed LOS standards are shown in **Table 4.4-28**, as well as the reduction in land uses needed to maintain LOS standards.

TABLE 4.4-28
REDUCTIONS IN MARTIS VALLEY TRIP GENERATION NECESSARY TO MAINTAIN ADEQUATE ROADWAY LOS FOR THE ALTERNATIVE 1 LAND USE MAP (AB)

	Reduction in Traffic Generation Needed to Avoid Exceeding the Capacity of a 2-Lane Roadway/Reduction in Trips Required		
Roadway	**2021 Existing Roadway**	**Proposed: 4-Lane SR 267, No Schaffer Mill Road Connections**	**All Connections**
SR 267 Bypass Between I-80 and Brockway Road	Note 1	Note 1	Note 1
SR 267 Between Old Brockway Road and Airport Road/Schaffer Mill Road	90%/17,000 ADT	--	--
SR 267 Between Airport Road/Schaffer Mill Road and Northstar Drive(1)	20%/2,000 ADT	--	Note 2
Schaffer Mill Road West of SR 267 (West end of widening varies)	45%/10,000 ADT	45%/10,000 ADT	40%/9,000 ADT
Northstar Drive Between SR 267 and Basque Drive(2)	10%/1,500 ADT or Note 3	10%/1,500 ADT or Note 3	---

Note 1 Four lane SR 267 not required between I-80 and Broadway Road for any roadway Alternative under this land use scenario.
Note 2: Four lane SR 267 is not required between Schaffer Mill Road and Northstar Drive if Northstar Connector is built.
Note 3: Four lane Northstar Drive is not required if Northstar Connector is built.

Under the Alternative 2 Land Use Map, the list of roadways which have volumes that exceed LOS standards are shown in **Table 4.4-29**, as well as the reduction in land uses needed to maintain LOS standards.

TABLE 4.4-29
REDUCTIONS IN MARTIS VALLEY TRIP GENERATION NECESSARY TO MAINTAIN ADEQUATE ROADWAY LOS FOR THE ALTERNATIVE 2 LAND USE MAP (AC)

Roadway	Reduction in Traffic Generation Needed to Avoid Exceeding the Capacity of a 2-Lane Roadway/Reduction in Trips Required		
	2021 Existing Roadway	Proposed: 4-Lane SR 267, No Schaffer Mill Road Connections	All Connections
SR 267 Bypass Between I-80 and Brockway Road	Note 1	Note 1	Note 1
SR 267 Between Old Brockway Road and Airport Road/Schaffer Mill Road	85%/13,000 ADT	--	--
SR 267 Between Airport Road/Schaffer Mill Road and Northstar Drive(2)	10%/800 ADT	--	Note 2
Schaffer Mill Road West of SR 267 (West end of widening varies)	5%/500 ADT	5%/500 ADT	15%/2,000 ADT
Northstar Drive Between SR 267 and Basque Drive (3)	10%/1,000 ADT or Note 3	10%/1,000 ADT or Note 3	Note 3

Note 1 Four lane SR 267 not required between I-80 and Brockway Road for any roadway Alternative under this land use scenario.
Note 2: Four lane SR 267 is not required between Schaffer Mill Road and Northstar Drive if Northstar Connector is built.
Note 3: Four lane Northstar Drive is not required if Northstar Connector is built.

Implementation of the traffic volumes for the land use map Alternatives would also result in improved operation of impacted intersections.

Impact 4.4.2 Traffic Impacts to Local Residential Roadways

PP Implementation of the Proposed Land Use Diagram would result in an increase in traffic volumes along local residential roadways in the Sierra Meadows/Ponderosa Palisades area if the Palisades connection is made. This would be a **potentially significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would result in an increase in traffic volumes along local residential roadways in the Sierra Meadows/Ponderosa Palisades area if the Palisades connection is made. This would be a **potentially significant** impact.

AB Implementation of the Alternative 1 Land Use Map would result in an increase in traffic volumes along local residential roadways in the Sierra Meadows/Ponderosa Palisades area if the Palisades connection is made. This would be a **potentially significant** impact.

AC Implementation of the Proposed Land Use Diagram would result in an increase in traffic volumes along local residential roadways in the Sierra Meadows/Ponderosa Palisades area if the Palisades connection is made. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

The majority of the proposed Martis Valley Community Plan transportation-related goals and policies are a duplication of those policies pertaining to the Martis Valley area presented in the Placer County General Plan. While there are several additional policies proposed in the Martis Valley Community Plan, these added policies are not in conflict with the General Plan goals and policies.

There is, however, a potential conflict with established (as well as proposed) policy *if* a general traffic roadway connection is made between the Martis Valley area and the existing local roadways in the Sierra Meadows/Ponderosa Palisades area. Specifically, General Plan Policy 3.A.5 (replicated as proposed Martis Valley CP Policy 5.A.5.) states that "*The County shall require that through-traffic be accommodated in a manner that discourages the use of neighborhood roadways, particularly local streets. This through-traffic, including through truck traffic, shall be directed to appropriate routes in order to maintain public safety and local quality of life*." Furthermore, as discussed above, a maximum volume of 2,000 ADT is established as the standard for a local residential street with front-on lots.

One of the roadway network Alternatives evaluated as part of this study would provide connections between the northeastern portion of the Martis Valley area and existing local residential streets in the Sierra Meadows/Ponderosa Palisades area (portions of which lie in both Placer County and the Town of Truckee). A total of thr3ee existing roadways have been "stubbed out" to allow potential connections to the south. Due to the geography of the area and the presence of existing development, there does not appear to be a feasible alignment by which to accomplish this connection without the use of an existing residential roadway. Conversely, it is possible to design a connection from Big Springs Road and Schaffer Mill Road that would not impact an existing residential roadway with lots fronting on the roadway. However, it should be noted that while Big Springs Drive does have lots that front directly on the roadway, it is considered a collector roadway and not a local street.

While the level of analysis conducted for this environmental analysis cannot identify traffic volumes on the specific roadways (as these volumes would be impacted by specific development plans not currently available, as well as specific roadway alignments that would require detailed engineering studies to identify), the traffic analysis conducted as part of this environmental study did identify the ADT traffic volumes in 2020 for the roadway connections as a whole, as shown in **Table 4.4-30**.

TABLE 4.4-30
ADT RESULTING ON ROADWAY CONNECTIONS UNDER EACH LAND USE ALTERNATIVE

Land Use Alternative	Northstar Connection Only Built	Northstar Connection and Palisades Connection Built	
	ADT Along Northstar Connector (1)	ADT Along Northstar Connector (1)	ADT Along Palisades Connector (2)
Proposed Land Use (PP)	4,980	4,620	1,890
Existing Martis Valley GP (AA)	4,340	3,780	2,650
Alternative 1 (AB)	5,250	4,390	2,960
Alternative 2 (AC)	5,090	4,730	1,850

Note 1: Between Northstar and Siller Brothers and Lahontan.
Note 2: Total of all potential connectors.

Note that the traffic volumes presented for the Palisades Connector would be added to existing traffic on the residential roadways. In light of these levels of through traffic activity that would be added to local streets, it can be concluded that provision of one or more northern connections to residential streets in existing neighborhoods would constitute a significant impact, in that it would conflict with General Plan Policy 3.A.5, as well as with the traffic volume standard for residential local streets identified for this study.

AA Existing Martis Valley General Plan Land Use Map

Implementation of the Martis Valley Community Plan Update under the Existing Martis Valley General Plan Land Use Map would result in more severe traffic impacts to local residential streets associated with Sierra Meadows/Ponderosa Palisades area as compared to the Proposed Land Use Diagram if these connections are made (see **Table 4.4-30**).

AB Alternative 1 Land Use Map

Implementation of the Martis Valley Community Plan Update under the Alternative 1 Land Use Map would result in more severe traffic impacts to local residential streets associated with Sierra Meadows/Ponderosa Palisades area as compared to the Proposed Land Use Diagram if these connections are made (see **Table 4.4-30**).

AC Alternative 2 Land Use Map

Implementation of the Martis Valley Community Plan Update under the Alternative 2 Land Use Map would result in less severe traffic impacts to local residential streets associated with Sierra Meadows/Ponderosa Palisades area as compared to the Proposed Land Use Diagram if these connections are made (see **Table 4.4-30**).

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere to policies and implementation programs of the Martis Valley Community Plan, which are listed below. Compliance with these plan policies and implementation programs would provide some mitigation to traffic impacts.

Policy 5.A.5 *The County shall require that through-traffic be accommodated in a manner that discourages the use of neighborhood roadways, particularly local streets. This through-traffic, including through truck traffic, shall be directed to appropriate routes in order to maintain public safety and local quality of life.*

Mitigation Measures

The following mitigation measures apply to all the land use map Alternatives (PP, AA, AB, and AC).

The Transportation Section of the Martis Valley Community Plan shall be modified by the following mitigation measures.

MM 4.4.2a The Circulation Diagram shall not allow public roadway access to the Sierra Meadows/Ponderosa Palisades area.

MM 4.4.2b The Northstar Connector (if ultimately included as part of the Circulation Diagram as a public roadway) shall be designed to accommodate projected traffic volumes with minimal local residential roadway connections. Residential lots shall be restricted from having direct access onto the Connector.

As described under Impact 4.4.1, construction of the Palisades Connector in the absence of the Northstar Connector would not reduce traffic volumes on SR 267 between Airport Road/Schaffer Mill Road and Brockway Road sufficient to avoid the need to provide 4 travel lanes as mitigation to the LOS F along this roadway segment. In addition, while the provision of a Palisades Connector does reduce traffic volumes along Schaffer Mill Road, it does not reduce traffic volumes sufficient to avoid the need to provide four lanes along Schaffer Mill Road as mitigation to the LOS F condition along this roadway segment.

Implementation of the above mitigation measure would reduce potential conflicts associated with traffic levels on existing residential streets **less than significant** for the Proposed Land Use Diagram and land use map Alternatives AA through AC by prohibiting the Palisades Connector and requiring proper design of the Northstar Connector if ultimately included as part of the Community Plan as a public roadway.

Impact 4.4.3 Potential Hazards Because of Design or Incompatible Uses

PP Implementation of the Proposed Land Use Diagram is not expected to result in significant traffic hazards. This is considered a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map is not expected to result in significant traffic hazards. This is considered a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map is not expected to result in significant traffic hazards. This is considered a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map is not expected to result in significant traffic hazards. This is considered a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Under any of the land use alternatives evaluated as part of this study, traffic volumes on study area roadways will increase substantially over the next 20 years. With increasing traffic activity, traffic accidents can be expected to increase. As discussed in Section 4.4.1, above, overall accident rates for the regional roadway system are not unduly high. In addition, there are no specific design features that result in undue accident patterns. Several proposed policies address the need to minimize hazards that could result from poor roadway design or incompatible land uses, such as proposed Policy 5.A.2 and 5.A.4. In addition to these policies, the County maintains standards that govern new street construction and access to ensure that improvements are implemented in accordance with safe design standards. Therefore, each of the land use alternatives would have a **less than significant impact** relative to this issue.

Mitigation Measures

None required.

Impact 4.4.4 Inadequate Parking Capacity

PP Implementation of the Proposed Land Use Diagram is not expected to result in parking capacity impacts. This is considered a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map is not expected to result in parking capacity impacts. This is considered a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map is not expected to result in parking capacity impacts. This is considered a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map is not expected to result in parking capacity impacts. This is considered a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

The Martis Valley Community Plan Update is not expected to result in a significant impact on parking capacity on an area-wide basis, as parking supply is a requirement addressed at the individual development project approval level. The provision of adequate parking is addressed, however, under Policy 5.A.6. In combination with existing County parking ordinances, the existing General Plan would have a **less than significant impact** relative to this issue.

Mitigation Measures

None required.

Impact 4.4.5 Conflicts with Transit

PP Implementation of the Proposed Land Use Diagram is not expected to result in conflicts with transit. This is considered a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map is not expected to result in conflicts with transit. This is considered a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map is not expected to result in conflicts with transit. This is considered a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map is not expected to result in conflicts with transit. This is considered a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Policies and Implementation Programs

The proposed Martis Valley Community Plan includes several proposed policies associated with the provision of transit services. These include the following:

Policy 5.B.1 *The County shall work with transit providers to plan and implement additional transit services within and to the county that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.*

Policy 5.B.2 *The County shall consider the need for future transit right-of-way in reviewing and approving plans for development. Rights-of-way may either be exclusive or shared with other vehicles.*

Policy 5.B.3 *The County shall pursue sources of funding for transit services.*

Policy 5.B.4. *The County shall undertake, as funding permits, and participate in studies of inter-regional recreational transit services.*

Policy 5.B.5 *The County shall require development of transit services by ski resorts and other recreational providers to meet existing and future recreational demand.*

Policy 5.B.6 *The County shall consider the transit needs of senior, disabled, minority, low-income, and transit-dependent persons in making decisions regarding transit services and in compliance with the Americans with Disabilities Act.*

Policy 5.B.7 *The County shall support efforts to provide demand-responsive service ("paratransit") and other transportation services for those unable to use conventional transit.*

Policy 5.C.1 *The County shall promote the use of transportation systems management (TSM)/transportation demand management (TDM) programs that divert automobile commute trips to transit, walking, and bicycling.*

Policy 5.D.2 *The County shall, where appropriate, require new development to provide sheltered public transit stops, with turnouts.*

Implementation Programs

1. *Review development projects for compliance with the goals, policies and specific discussions contained in the Transportation and Circulation Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments, Board of Supervisors
   Time frame: Ongoing
   Funding: Application fees

3. *Coordinate transportation planning with the Placer County Transportation Planning Agency, adjacent jurisdictions, and Caltrans.*

   Responsible Agency/Department: Department of Public Works
   Time frame: Ongoing
   Funding: Road Fund

7. *The County shall work with the Placer County Transportation Planning Agency periodically reviewing and updating its short-range transit plan at least as often as required by State law.*

   Responsible Agency/Department: Department of Public Works
   Time frame: FY 99-00; every five years thereafter
   Funding: Transportation Development Act funds

8. *The County shall adopt and implement funding mechanisms to support adopted transit plans throughout the County.*

   Responsible Agency/ Department: Department of Public Works
   Time frame: Ongoing
   Funding: Transportation Development Act funds

None of the proposed land use map alternatives are expected to result in conflicts with existing or future transit service. Thus, the proposed Martis Valley Community Plan is expected to have a **less than significant** impact on transit service.

Mitigation Measures

None required.

Impact 4.4.6 Conflicts with Pedestrian and Bicycle Uses

PP Implementation of the Proposed Land Use Diagram is not expected to result in conflicts with pedestrian and bicycle uses. This is considered a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map is not expected to result in conflicts with pedestrian and bicycle uses. This is considered a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map is not expected to result in conflicts with pedestrian and bicycle uses. This is considered a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map is not expected to result in conflicts with pedestrian and bicycle uses. This is considered a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Policies and Implementation Programs

The proposed Martis Valley Community Plan includes several proposed policies associated with the provision of pedestrian and bicycle ues. These include the following:

Policy 5.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, as well as any planned bikeways and required drainage, utilities, landscaping, and suitable separations.*

Policy 5.C.1 *The County shall promote the use of transportation systems management (TSM)/transportation demand management (TDM) programs that divert automobile commute trips to transit, walking, and bicycling.*

Policy 5.C.2 *During the development review process, the County shall require that proposed projects meet adopted Trip Reduction Ordinance (TRO) requirements.*

Policy 5.D.1 *The County shall promote the development of a comprehensive and safe system of recreational and commuter bicycle routes that provides*

connections between the plan areas major employment and housing areas and between it's existing and planned bikeways.

Policy 5.D.2 *The County shall work with neighboring jurisdictions to coordinate planning and development of the plan area bikeways and multi-purpose trails with those of neighboring jurisdictions.*

Policy 5.D.3 *The County shall pursue sources of funding for the acquisition, development, and improvement of public trails for non-motorized transportation (bikeways, pedestrian, and equestrian).*

Policy 5.D.4 *The County shall promote non-motorized travel (bikeways, pedestrian, and equestrian) through appropriate facilities, programs, and information.*

Policy 5.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.*

Implementation Programs

1. *Review development projects for compliance with the goals, policies and specific discussions contained in the Transportation and Circulation Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments, Board of Supervisors
   Time frame: Ongoing
   Funding: Application fees

3. *Coordinate transportation planning with the Placer County Transportation Planning Agency, adjacent jurisdictions, and Caltrans.*

   Responsible Agency/Department: Department of Public Works
   Time frame: Ongoing
   Funding: Road Fund

4. *Develop funding sources for road-adjacent trails.*

   Responsible Agency/Department: Facility Services
   Time frame: Ongoing
   Funding: General Fund/Fees

9. *The County shall require that bikeways recommended in the Bikeways/Trails Master Plan be developed when street frontage improvements are required of new development.*

   Responsible Agency/Department: Department of Public Works
   Time frame: Ongoing
   Funding: Developer fees, Application Fees

None of the proposed land use map alternatives are expected to result in conflicts with existing or future pedestrian or bicycle uses. The reader is referred to Section 4.11 (Public Services and Utilities) and **Figure 3.0-9** regarding proposed trail system improvements associated with the Community Plan. Thus, the proposed Martis Valley Community Plan is expected to have a **less than significant** impact on pedestrian or bicycle uses.

Mitigation Measures

None required.

4.4.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting associated with the traffic analysis consists of planned and proposed development in the Town of Truckee, Placer and Nevada County associated with their general plans in the Martis Valley area as well as regional traffic volume conditions anticipated in the year 2021 associated with Interstate 80, SR 89 and the Tahoe Basin.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.4.7 Cumulative Impacts to Area Intersections and Roadways

PP Depending upon the roadway network and analysis period, intersection and roadway Level of Service (LOS) standards are forecast to be exceeded under full development of the Proposed Land Use Diagram and other regional development under year 2021 conditions for area roadway facilities in the Town of Truckee and Placer County. Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a **cumulative significant** impact.

AA Depending upon the roadway network and analysis period, intersection and roadway Level of Service (LOS) standards are forecast to be exceeded under full development of the Existing Martis Valley General Plan Land Use Map and other regional development under year 2021 conditions for area roadway facilities in the Town of Truckee and Placer County. Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a **cumulative significant** impact.

AB Depending upon the roadway network and analysis period, intersection and roadway Level of Service (LOS) standards are forecast to be exceeded under full development of the Alternative 1 Land Use Map and other regional development under year 2021 conditions for area roadway facilities in the Town of Truckee and Placer County. Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a **cumulative significant** impact.

AC Depending upon the roadway network and analysis period, intersection and roadway Level of Service (LOS) standards are forecast to be exceeded under full development of the Alternative 2 Land Use Map and other regional development under year 2021 conditions for area roadway facilities in the Town of Truckee and Placer County. Exceedence of LOS standards in the Town of Truckee or Placer County would be considered a **cumulative significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

As described in Section 4.4.3 and under Impacts 4.4.1 and 4.4.2, cumulative development and traffic conditions in the year 2021 for summer and winter peak conditions were modeled to determine impacts to area intersections and roadways. As identified under Impacts 4.4.1 and 4.4.2, these impacts were identified as significant.

Policies and Implementation Programs

New development projects in the Plan area would be required to comply with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation for intersection and roadway impacts. The reader is referred to Impacts 4.4.1 and 4.4.2 regarding applicable proposed policies and implementation programs.

Mitigation Measures

Implementation of mitigation measures MM 4.4.1a and/or b and MM 4.4.2a and b would reduce Community Plan impacts to the impacted roadway facilities identified. While impacts to local residential roadways would be mitigated, cumulative impacts to regional intersections and roadways would remain **significant and unavoidable** given the unknown nature of the timing and funding of these improvements under the three jurisdictions (Placer County, Town of Truckee and Caltrans).

Impact 4.4.8 Cumulative Impacts to Regional Highway Facilities

PP Full development of the Proposed Land Use Diagram and other regional development is expected to add to year 2021 traffic volumes along Interstate 80 and State Route 89 (north of Interstate 80). While State Route 89 (north of Interstate 80) is anticipated to operate properly, Interstate 80 is expected to operate deficiently. This would be a **cumulative significant** impact.

AA Full development of the Existing Martis Valley General Plan Land Use Map and other regional development is expected to add to year 2021 traffic volumes along Interstate 80 and State Route 89 (north of Interstate 80). While State Route 89 (north of Interstate 80) is anticipated to operate properly, Interstate 80 is expected to operate deficiently. This would be a **cumulative significant** impact.

AB Full development of the Alternative 1 Land Use Map and other regional development is expected to add to year 2021 traffic volumes along Interstate 80 and State Route 89 (north of Interstate 80). While State Route 89 (north of Interstate 80) is anticipated to operate properly, Interstate 80 is expected to operate deficiently. This would be a **cumulative significant** impact.

AC Full development of the Alternative 2 Land Use Map and other regional development is expected to add to year 2021 traffic volumes along Interstate 80 and State Route 89 (north of Interstate 80). While State Route 89 (north of Interstate 80) is anticipated to operate properly, Interstate 80 is expected to operate deficiently. This would be a **cumulative significant** impact.

PP Proposed Land Use Diagram

Traffic volumes are expected to increase on I-80 and SR 89 to the north of I-80 with the implementation of the Proposed Land Use Diagram land uses. Specifically, the 2021 peak-hour traffic volumes along I-80 both east and west of SR 267 are expected to increase by 15 percent with the implementation of the Proposed Land Use Diagram above the volumes that could be expected with no future development in Martis Valley. According to the Interstate 80 Transportation Concept Report, I-80 is expected to operate at LOS F by 2017 with no improvements. Traffic volumes along SR 89 north of I-80 are expected to increase by 9 percent in 2021 with the implementation of the Proposed Land Use Diagram. However, this portion of SR 89 is expected to operate at LOS A under year 2021 conditions.

AA Existing Martis Valley General Plan Land Use Map

Traffic volumes are expected to increase on I-80 and SR 89 to the north of I-80 with the implementation of the Existing Martis Valley General Plan Land Use Map. Specifically, the 2021 peak-hour traffic volumes along I-80 both east of west of SR 267 are expected to increase by 20 percent with the implementation of the Existing Martis Valley General Plan Land Use Map above the volumes that could be expected with no future development in Martis Valley. According to the Interstate 80 Transportation Concept Report, I-80 is expected to operate at LOS F by 2017 with no improvements. Traffic volumes along SR 89 north of I-80 are expected to increase by 9 percent in 2021 with the implementation of the Existing Martis Valley General Plan Land Use Map. However, this portion of SR 89 is expected to operate at LOS A under year 2021 conditions.

AB Alternative 1 Land Use Map

Traffic volumes are expected to increase on I-80 and SR 89 to the north of I-80 with the implementation of the Alternative 1 Land Use Map. Specifically, the 2021 peak-hour traffic volumes along I-80 east and west of SR 267 are expected to increase by 17 and 18 percent, respectively, with the implementation of the Alternative 1 Land Use Map above the volumes that could be expected with no future development in Martis Valley. According to the Interstate 80 Transportation Concept Report, I-80 is expected to operate at LOS F by 2017 with no improvements. Traffic volumes along SR 89 north of I-80 are expected to increase by 9 percent in 2021 with the implementation of the Alternative 1 Land Use Map. However, this portion of SR 89 is expected to operate at LOS A under year 2021 conditions.

AC Alternative 2 Land Use Map

Traffic volumes are expected to increase on I-80 and SR 89 to the north of I-80 with the implementation of the Alternative 2 Land Use Map. Specifically, the 2021 peak-hour traffic volumes along I-80 both east of west of SR 267 are expected to increase by 15 percent with the implementation of the Alternative 2 Land Use Map above the volumes that could be expected with no future development in Martis Valley. According to the Interstate 80 Transportation Concept Report, I-80 is expected to operate at LOS F by 2017 with no improvements. Traffic volumes along SR 89 north of I-80 are expected to increase by 8 percent in 2021 with the implementation of the Alternative 2 Land Use Map. However, this portion of SR 89 is expected to operate at LOS A under year 2021 conditions.

<u>Policies and Implementation Programs</u>

The Martis Valley Community Plan does not contain any policies or implementation programs pertaining to regional highway facilities.

Mitigation Measures

There are currently no programmed improvements or funding for improvements to the mainline of Interstate 80 and such improvements are not under control of the County. Given the unknown nature of the timing and funding of improvements this impact is considered **significant and unavoidable**.

Impact 4.4.9 Cumulative Roadway Hazards Because of Design or Incompatible Uses

PP Implementation of the Proposed Land Use Diagram is not expected to contribute to significant traffic hazards. This is considered a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map is not expected to contribute to significant traffic hazards. This is considered a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map is not expected to contribute to significant traffic hazards. This is considered a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map is not expected to contribute to significant traffic hazards. This is considered a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

As identified in Section 4.4.3 and Impact 4.4.3, overall accident rates for the regional roadway system are not unduly high. In addition, there are no specific design features that result in undue accident patterns. Several proposed policies address the need to minimize hazards that could result from poor roadway design or incompatible land uses, such as proposed Policies 5.A.2 and 5.A.4. In addition to these policies, the County maintains standards that govern new street construction and access to ensure that improvements are implemented in accordance with safe design standards. The Martis Valley Community Plan Update is not expected to result in a significant impact on parking capacity on an area-wide basis, as parking supply is a requirement addressed at the individual development project approval level. Therefore, impacts are anticipated to be **less than significant** for PP and Alternatives AA through AC.

Policies and Implementation Programs

New development projects in the Plan area would be required to comply with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation for roadway hazard impacts. The reader is referred to Impact 4.4.3 regarding applicable proposed policies and implementation programs.

Mitigation Measure

None required.

Impact 4.4.10 Cumulative Conflicts with Transit, Pedestrian and Bicycle Uses

PP Implementation of the Proposed Land Use Diagram is not expected to contribute to conflicts with transit. This is considered a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map is not expected to contribute to conflicts with transit, pedestrian and bicycle uses. This is considered a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map is not expected to contribute to conflicts with transit, pedestrian and bicycle uses. This is considered a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map is not expected to contribute to conflicts with transit, pedestrian and bicycle uses. This is considered a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

As identified in Section 4.4.3 and in Impacts 4.4.5 and 4.4.6, the proposed Community Plan includes several provisions ensuring that adequate facilities are provided and no conflicts with transit, pedestrian and bicycle uses occur. This cumulative impact is considered **less than significant**.

Policies and Implementation Programs

New development projects in the Plan area would be required to comply with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation for conflicts with transit, pedestrian, and bicycle impacts. The reader is referred to Impacts 4.4.5 and 4.4.6 regarding applicable proposed policies and implementation programs.

Mitigation Measures

None required.

REFERENCES

A Policy on The Geometric Design of Highways and Streets. American Association of State Highway Transportation Officials. 2000.

Ball, Gavin, Assistant Planner. Town of Truckee Planning Division. *Personal Communication.* April 2000.

California Highway Patrol Information Service Unit *SWITRS Accident Records*, 1990-1999.

Caltrans. *District System Management Plan*. Caltrans, District 3. August 1992.

Caltrans. *Rail Passenger Program Report.* Caltrans Rail Program. 1999.

Caltrans. *Route Concept Report - State Route 28*, Caltrans, District 3. May 1997.

Caltrans. *Route Concept Report - State Route 267*, Caltrans, District 3. April 1987.

Caltrans. *Caltrans Project Programmed (RTIP/STIP/SHOPP) Report.* Sacramento, California. 1994.

Caltrans. *Transportation Concept Report - Interstate Route 80.* District 3. 1999.

Caltrans. *Traffic Volumes on California State Highways, 1990-2000*. State of California Business, Transportation and Housing Agency. Department of Transportation. Sacramento, CA.

Coffman Associates, Inc. *Truckee Tahoe Airport Master Plan.* Phoenix, AZ. 1998.

Countywide Traffic Fee Program (Placer County Department of Public Works. 2001.

Federal Highway Administration. *Manual on Uniform Traffic Control Devices*. Washington, D.C. 1988.

Gaither, Susan. Administrative Assistant. Reno/Tahoe International Airport Marketing Department. *Personal Communication.* May 1999.

LSC Transportation Consultants. *Northstar-At-Tahoe 2000/2001 Ski Season Traffic Monitoring Report. August,* 2001.

Highway Capacity Manual 2000. Transportation Research Board, National Research Council. 2000

Moorehead, Richard. Associate Civil Engineer. Placer County, California. *Memorandum dated 9/5/01 regarding ADT standards for residential streets.*

Moorehead, Richard. Associate Civil Engineer. Placer County, California. *Personal Correspondence*. April 2002.

Placer County. *Placer County General Plan Update - Countywide General Plan Policy Document* (Placer County, et al.; August 16. 1994.

Placer County. *The Placer County Countywide General Plan Final EIR*. Placer County Planning Division. Auburn, California. 1994.

Potter, Walt. Director of Security. Northstar-at-Tahoe Ski Area. *Personal Communication*. May, 2000.

Priebe, David. Associate Transit Planner. Caltrans-District 3. *Personal Communication*. May, 2000.

Rachuay, Paula. Resort Planner. Northstar-At-Tahoe Ski Area. *Personal Communication*. May, 2000.

Ramirez, John. Planner. Placer County Parks and Grounds Division. *Personal Communication*. May, 2000.

PRISM Engineering for the Nevada County Transportation Commission. *Level of Service Criteria Study*. December 2000.

Raymond Vail and Associates, Inc. *Truckee Tahoe Airport Master Plan*. Sacramento, California. 1998

Sattler, John. Public Affairs and Community Outreach Officer. California Highway Patrol. *Personal Communication*. April, 2000.

Tahoe Regional Planning Agency. *Regional Transportation-Air Quality Plan for the Lake Tahoe Region*. Lake Tahoe, California. 1992.

Town of Truckee. *Town of Truckee General Plan*. Town of Truckee Planning Division. Truckee, California. 1996.

Town of Truckee. *Town of Truckee Downtown Specific Plan*. Town of Truckee Community Development Department – Planning Division. 1997.

Town of Truckee. *Town of Truckee Development Code*. *Truckee Municipal Code, Title 18*. Effective November 6, 2000.

Trip Generation Manual, Sixth Edition, Institute of Transportation Engineers. Updated November 1997.

Section 4.5
Noise

This section discusses and analyzes the ambient noise characteristics of the Plan area. The information provided in this section is based on the Administrative Draft Background Report of the Martis Valley Community Plan (Placer County, 2000), Truckee Tahoe Airport Master Plan (Truckee Tahoe Airport District, 1998) and technical review by Bollard and Brennan Acoustical Consultants.

4.5.1 EXISTING SETTING

BACKGROUND AND TERMINOLOGY

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and hence are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers is a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness.

EFFECTS OF NOISE ON PEOPLE

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighing network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels in decibels.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}) over a given time period (usually 1 hour). The L_{eq} is the foundation of the Day-Night Average Level noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The Day-night Average Level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. L_{dn}-based noise standards are commonly used to assess noise impacts associated with traffic, railroad and aircraft noise sources.

EXISTING NOISE CONDITIONS IN THE PLAN AREA

The existing noise environment in the Plan Area is defined almost entirely by surface traffic on the local roadway network (e.g., State Route 267) and by aircraft activities associated with the Truckee-Tahoe Airport. Although railroad noise is intermittently audible within portions of the Plan Area during rail passages through Truckee, it does not significantly contribute to the ambient noise environment. While there are no other significant fixed/industrial noise sources identified in the Plan area which significantly contribute to the ambient noise environment, snow-making in isolated locations may have a significant impact. Therefore, the analysis focuses on the effects of traffic, aircraft, and snowmaking noise emissions within the Plan Area.

Ambient Noise Assessment Methodology

A combination of visual and noise level measurement surveys, use of existing acoustical literature, and application of accepted noise prediction methodologies were used to quantify the existing ambient noise environment in the project study area.

Ambient Noise Environment Away from Major Noise Sources

To quantify the existing ambient noise environment in the project vicinity at locations removed from major noise sources, a short-term ambient noise survey was conducted at 4 locations within the Plan Area on May 3 and 4, 2000. The sites were located within the Northstar-at-Tahoe resort area on Northstar Drive, near the entrance to the Lahontan development on Schaffer Mill Road, along Martis Creek Road near the Martis Creek Reservoir, and east of State Route 267 on Martis Peak Road. The measurements were conducted for 15-minute periods during both daytime and nighttime hours at each site.

Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters were used for the noise level measurement survey. The meters were calibrated before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

The noise level meters were programmed to record the maximum and average noise levels at each site during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured at any time during the measurement. The average value, denoted L_{eq}, represents the energy average of all of the noise received by the sound level meter microphone during the measurement period. A summary of the noise level measurement results is provided in **Table 4.5-1**.

TABLE 4.5-1
AMBIENT NOISE MONITORING RESULTS
MARTIS VALLEY COMMUNITY PLAN AREA, MAY 3-4, 2000

		Measured Sound Level, dBA		
Location	**Time**	**Average(L_{eq})**	**Maximum(L_{max})**	**Day/Night(L_{dn})**
Martis Peak Road – 300 feet east of SR 267	Day	52	61	51
	Night	38	45	
Northstar-at-Tahoe	Day	55	66	54
	Night	43	51	
Martis Creek Reservoir	Day	51	67	50
	Night	37	43	
Lahontan 1	Day	54	70	55
	Night	47	61	

Source: Bollard & Brennan, 2000

The survey results revealed that typical daytime ambient noise levels in areas not directly affected by major noise sources were in the low to mid 50's, with much lower nighttime levels. The estimated L_{dn} based on the short-term noise measurements were in the range of 50 to 55 dB.

Roadway Traffic Noise Levels

To describe noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The FHWA model is the analytical method currently favored for highway traffic noise prediction by most state and local agencies, including the California Department of Transportation (Caltrans).

The FHWA model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site.

The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. To predict L_{dn} values, it is necessary to determine the day/night distribution of traffic and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Average daily traffic (ADT) volumes for existing and future conditions were obtained from the traffic analysis prepared for this project. The FHWA Model inputs are contained in **Appendix 4.5**. **Table 4.5-2** shows the predicted traffic noise levels at a reference distance of 100 feet from the roadway centerlines for the Year 2001 conditions, as well as the distances to the L_{dn} contours.

TABLE 4.5-2
YEAR 2001 TRAFFIC NOISE LEVELS
(L_{DN} AT 100 FEET)

		Distance to L_{DN} Contour			
Roadway	**Segment**	**L_{DN}**	**70**	**65**	**60**
Donner Pass Road (Existing SR 89)	North of I-80 (East)	64	39	84	180
Donner Pass Road (Existing SR 267)	South of I-80 (East)	65	45	97	209
Donner Pass Road (Existing SR 267)	East of Bridge Street	65	46	99	213
Donner Pass Road	West of Bridge Street	64	42	90	193
Bridge Street (existing SR 267)	South of Donner Pass Road	65	48	103	223
Brockway Road (existing SR 267)	South of West River Street	66	53	114	245
Brockway Road (existing SR 267)	South of Palisades Drive	65	48	104	225
Brockway Road (existing SR 267)	South of Martis Valley Road	65	47	101	217
SR 267	South of Airport Road/Schaffer Mill Road	66	55	118	254
SR 267	South of Northstar Drive	65	44	95	204
SR 267	North of SR 28	64	37	80	172
SR 28	East of SR 267	66	51	111	239
SR 28	West of SR 267	64	43	92	198
West River Street	West of SR 267	61	24	52	113
Palisades Drive	West of SR 267	60	22	47	100
Martis Valley Road	West of SR 267	60	20	43	93
Schaffer Mill Road	West of SR 267	58	16	35	75
Airport Road	East of SR 267	58	17	37	79
Northstar Drive	West of SR 267	62	28	61	131
SR 89 South	South of Donner Pass Road	66	57	123	264
Donner Pass Road	East of SR 89 South	65	48	103	221
Donner Pass Road	West of SR 89 South	66	54	117	253

Source: Bollard & Brennan, 2000

It should be noted that the noise contours shown in **Table 4.5-2** do not account for the effects of local topography, and should therefore be considered conservative estimates of traffic noise exposure within the Plan Area.

Aircraft Noise Levels

To assess the potential for noise impacts from aircraft operations at the Truckee-Tahoe Airport, the noise exposure contours contained in the Truckee-Tahoe Airport Master Plan were consulted. Noise contours for the Airport for year 1999 and 2020 are shown in **Figures 4.5-1** and **4.5-2**.

It should be noted that the Airport noise contours represent 24-hour averages of aircraft noise. As a result, individual aircraft overflights of the Plan Area will result in higher instantaneous noise levels than reflected by the noise exposure contours.

4.5.2 REGULATORY FRAMEWORK

Local agencies regulate noise within the Martis Valley Plan area. The following discussion contains a summary review of local regulatory policies relative to noise.

LOCAL

Placer County General Plan

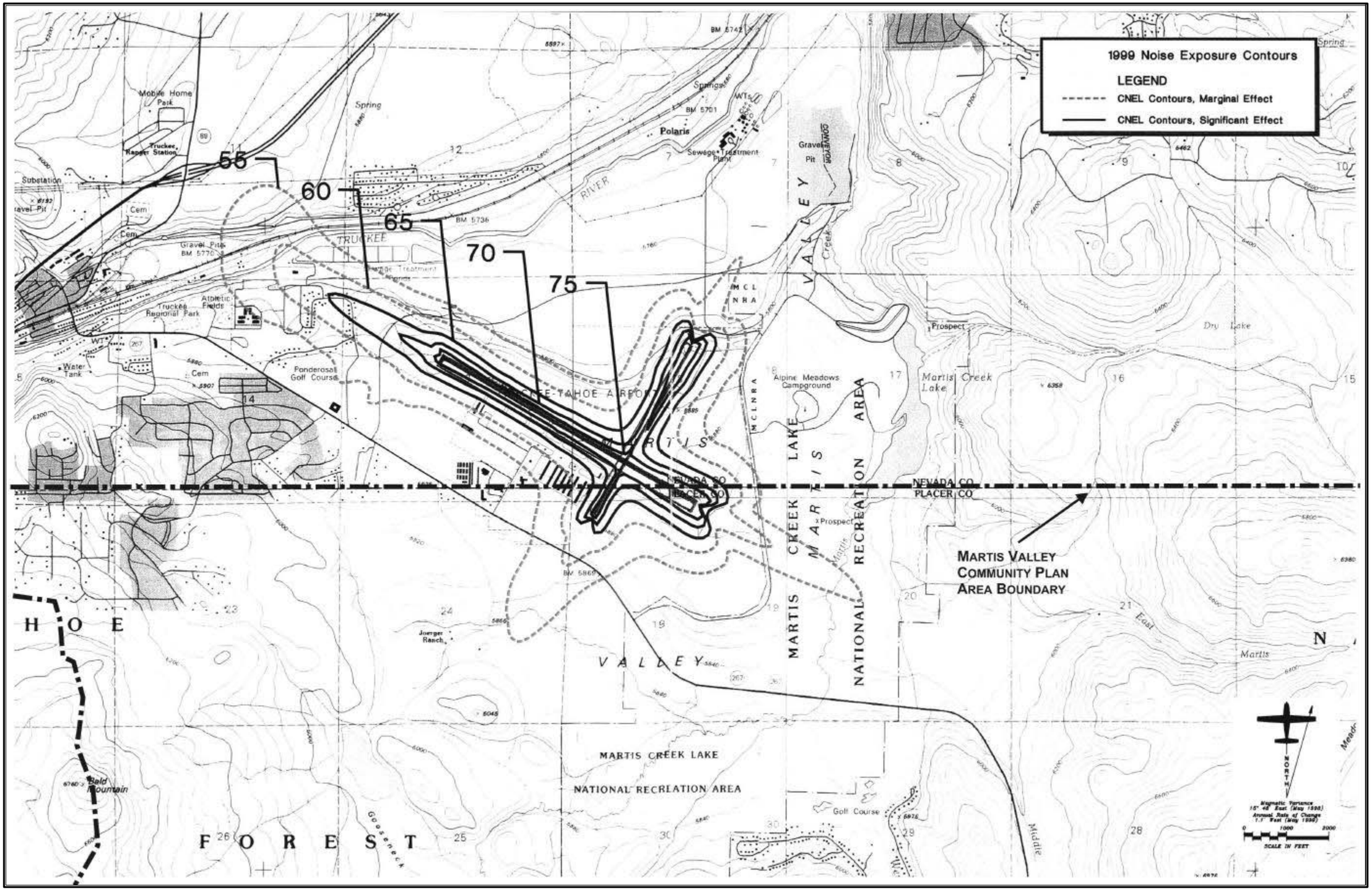
The Placer County General Plan outlines County-wide provisions associated with noise and acceptable levels of noise exposure. The following list identifies General Plan policies that pertain to the Plan area.

Policy 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 9-3 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 9-3.

Policy 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 9-3 as measured immediately within the property line of lands designated for noise- sensitive uses.

Policy 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 9-3 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 9-3.

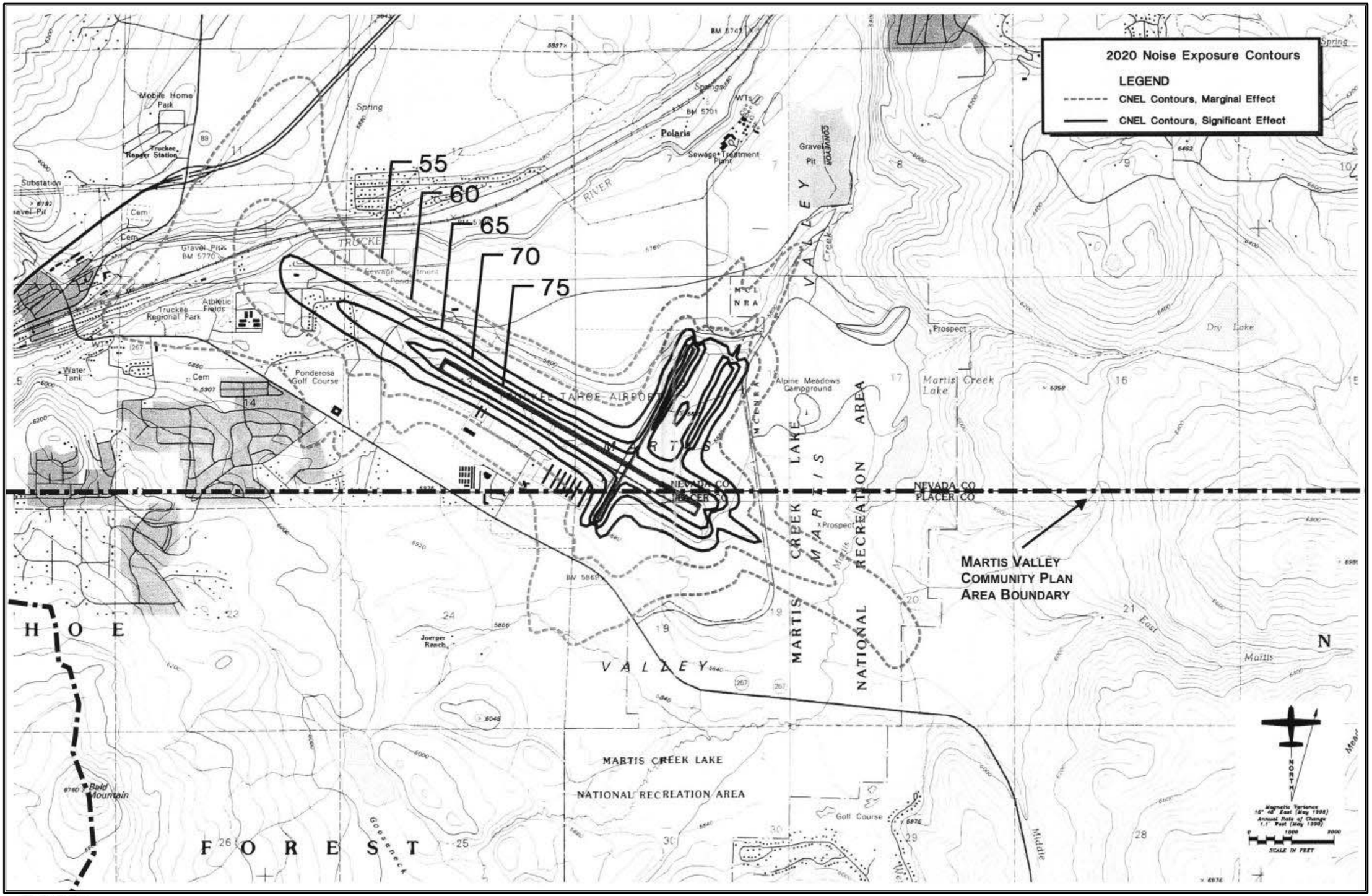
Policy 9.A.2 The County shall require that noise created by new non-transportation noise sources be mitigated so as not to exceed the noise level standards of Table 9-3 as measured immediately within the property line of lands designated for noise- sensitive uses.



PMC
PACIFIC MUNICIPAL CONSULTANTS

SOURCE: TRUCKEE-TAHOE AIRPORT DISTRICT, 1998

FIGURE 4.5-1
TRUCKEE-TAHOE AIRPORT NOISE CONTOURS (1999)



PMC

SOURCE: TRUCKEE-TAHOE AIRPORT DISTRICT, 1998

FIGURE 4.5-2
TRUCKEE-TAHOE AIRPORT NOISE CONTOURS (2020)

Policy 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).

Policy 9.A.4 Impulsive noise produced by blasting should not be subject to the criteria listed in Table 9-3. Single event impulsive noise levels produced by gunshots or blasting shall not exceed a peak linear overpressure of 122 db, or a C-weighted Sound Exposure Level (SEL) of 98 dBC. The cumulative noise level from impulsive sounds such as gunshots and blasting shall not exceed 60 dB Lcdn or CNEL-C on any given day. These standards shall be applied at the property line of a receiving land use.

Policy 9.A.5 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 9-3 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 9-4.

Policy 9.A.6 The feasibility of proposed projects with respect to existing and future transportation noise levels shall be evaluated by comparison to Table 9-3.

Policy 9.A.7 The County shall purchase only new equipment and vehicles which comply with noise level performance standards based upon the best available noise reduction technology.

Policy 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.

Policy 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.

Policy 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 9-5 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:

- 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;

- 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;

- 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 L_{dn} (or CNEL) prior to mitigation. For outdoor sports and recreation areas, the existing or projected future noise exposure may not exceed 75 dB L_{dn} (or CNEL) prior to mitigation;

- The topography in the project area is essentially flat; that is, noise source and receiving land use are at the same grade; and

- Effective noise mitigation, as determined by the County, is incorporated into the project design to reduce noise exposure to the levels specified in Table 9-3 or 9-5. Such measures may include the use of building setbacks, building orientation, noise barriers, and the standard noise mitigation 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.

Policy 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.

- Rerouting traffic onto streets that have available traffic capacity and that do not adjoin noise-sensitive land uses;

- Lowering speed limits, if feasible and practical;

- Programs to pay for noise mitigation such as low cost loans to owners of noise-impacted property or establishment of developer fees;

- Acoustical treatment of buildings; or

- Construction of noise barriers.

Policy 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 incorporated into the project.

Policy 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.

Policy 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 I.N.2.

Policy 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.

Policy 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.

TABLE 9-3
ALLOWABLE L_{DN} NOISE LEVELS WITHIN SPECIFIED ZONE DISTRICTS
APPLICABLE TO NEW PROJECTS AFFECTED BY OR INCLUDING NON-TRANSPORTATION NOISE SOURCES

Zone District of Receptor	Property Line of Receiving Use	Interior Space
Residential Adjacent to Industrial (c)	60	45
Other Residential (d)	50	45
Office/Professional	70	45
Transient Lodging	65	45
Neighborhood Commercial	70	45
General Commercial	70	45
Heavy Commercial	75	45
Limited Industrial	75	45
Highway Service	75	45
Shopping Center	70	45
Industrial	_	45
Industrial Park	75	45
Industrial Reserve	_	_
Airport	_	45
Unclassified	_	_
Farm	_	_
Agricultural Exclusive	_	_
Forestry	_	_
Timberland Preserve	70	_
Recreation and Forestry	_	_
Open Space	_	_
Mineral Reserve	_	_

Notes for Table 9-3:

- *Except where noted otherwise, noise exposures will be those which occur at the property line of the receiving use.*
- *Where existing transportation noise levels exceed the standards of this table, the allowable L_{DN} shall be raised to the same level as that of the ambient level.*
- *If the noise source generated by, or affecting, the uses shown above consists primarily of speech or music, of if the noise source is impulsive in nature. the noise standards shown above shall be decreased by 5 dB.*
- *Where a use permit has established noise level standards for an existing use, those standards shall supersede the levels specified in Table 9-3 and Table 9-5. Similarly, where an existing use which is not subject to a use permit causes noise in excess of the allowable levels in Tables 9-3 and 9-5, said excess noise shall be considered the allowable level. If a new development is proposed which will be affected by noise from such an existing use, it will ordinarily be assumed that the noise levels already existing or those levels allowed by the existing use permit, whichever are*

greater, are those levels actually produced by the existing use.

- *Existing industry located in industrial zones will be given the benefit of the doubt in being allowed to emit increased noise consistent with the state of the art (e) at the time of expansion. In no case will expansion of an existing industrial operation be cause to decrease allowable noise emission limits. Increased emissions above those normally allowable should be limited to a one-time 5 dB increase at the discretion of the decision making body.*
- *The noise level standards applicable to land uses containing incidental residential uses, such as caretaker dwellings at industrial facilities and homes on agriculturally zoned land, shall be the standards applicable to the zone district, not those applicable to residential uses.*
- *Where no noise level standards have been provided for a specific zone district, it is assumed that the interior and/or exterior spaces of these uses are effectively insensitive to noise.*

(a) Overriding policy on interpretation of allowable noise levels: Industrial-zoned properties are confined to unique areas of the County, and are irreplaceable. Industries which provide primary wage-earner jobs in the County, if forced to relocate, will likely be forced to leave the County. For this reason, industries operating upon industrial zoned properties must be afforded reasonable opportunity to exercise the rights/privileges conferred upon them by their zoning. whenever the allowable noise levels herein fall subject to interpretation relative to industrial activities, the benefit of the doubt shall be afforded to the industrial use.

Where an industrial use is subject to infrequent and unplanned upset or breakdown of operations resulting in increased noise emissions, where such upsets and breakdowns are reasonable considering the type of industry, and where the industrial use exercises due diligence in preventing as well as correcting such upsets and breakdowns, noise generated during such upsets and breakdowns shall not be included in calculations to determine conformance with allowable noise levels.

(b Interior spaces are defined as any locations where some degree of noise-sensitivity exists. Examples include all habitable rooms of residences, and areas where communication and speech intelligibility are essential, such as classrooms and offices.

(c) Noise from industrial operations may be difficult to mitigate in a cost-effective manner. In recognition of this fact, the exterior noise standards for residential zone districts immediately adjacent to industrial, limited industrial, industrial park, and industrial reserve zone districts have been increased by 10 dB as compared to residential districts adjacent to other land uses.

For purposes of the Noise Element, residential zone districts are defined to include the following zoning classifications: AR, R-l, R-2, R-3, FR, RP, TR-l, TR-2, TR-3, and TR-4.

(d) Where a residential zone district is located within an -SP combining district, the exterior noise level standards are applied at the outer boundary of the -SP district. If an existing industrial operation within an -SP district is expanded or modified, the noise level standards at the outer boundary of the -SP district may be increased as described above in these standards.

Where a new residential use is proposed in an -SP zone, an Administrative Review Permit is required, which may require mitigation measures at the residence for noise levels existing and/or allowed by use permit as described under 'NOTES," above, in these standards.

(e) State of the art should include the use of modern equipment with lower noise emissions, site design, and plant orientation to mitigate offsite noise impacts, and similar methodology.

(f) Normally, agricultural uses are noise insensitive and will be treated in this way. However, conflicts with agricultural noise emissions can occur where single-family residences exist within agricultural zone districts. Therefore, where effects of agricultural noise upon residences located in these agricultural zones is a concern, an L_{DN} of 70 dB will be considered acceptable outdoor exposure at a residence.

TABLE 9-4
REQUIREMENTS FOR AN ACOUSTICAL ANALYSIS
AN ACOUSTICAL ANALYSIS PREPARED PURSUANT TO POLICY 9.A.5 SHALL:

1. Be the financial responsibility of the applicant.
2. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
3. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
4. Estimate existing and projected cumulative (20 years) noise levels in terms of L_{DN} or CNEL and/or the standards of Table 9-3, and compare those levels to the policies in this section. Noise prediction methodology must be consistent with the *Placer County Acoustical Design Manual.*
5. Recommend appropriate mitigation to achieve compliance with the policies and standards of this section, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses, where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
6. Estimate noise exposure after the prescribed mitigation measures have been implemented.
7. Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.

TABLE 9-5
MAXIMUM ALLOWABLE NOISE EXPOSURE
TRANSPORTATION NOISE SOURCES

	Outdoor Activity Areas (a)	Interior Spaces	
Land Use	**L_{dn}/CNEL**	**L_{dn}/CNEL**	**L_{eq}, dB (b)**
Residential	60(c)	45	_
Transient Lodging	60(c)	45	_
Hospitals, Nursing Homes	60(c)	45	_
Theaters, Auditoriums, Music Halls	_	_	35
Churches, Meeting Halls	60(c)	_	40
Office Buildings	_	_	45
Schools, Libraries, Museums	_	_	45
Playgrounds, Neighborhood Parks	70	_	_

(a) Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.
(b) As determined for a typical worst-case hour during periods of use.
(c) Where it is not possible to reduce noise in outdoor activity areas to 60 L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Martis Valley General Plan

The Martis Valley General Plan contains a brief section on noise that generally identifies the major noise sources in the area. However, no specific goals or policies pertaining to noise were identified within that document.

4.5.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A noise impact of the proposed Martis Valley Community Plan Update would be considered significant if it would result in any of the following actions based on the following criteria:

1) Exposure of persons to or generation of noise levels in excess of standards established in the Placer County General Plan or noise ordinance, the Martis Valley Community Plan, and applicable standards of other affected agencies (e.g., Town of Truckee and Truckee Tahoe Airport District);

2) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;

3) A substantial permanent increase in ambient noise levels in the project vicinity above levels without the project as set forth in **Table 4.5-3**; or

4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels without the project.

TABLE 4.5-3
SIGNIFICANCE OF CHANGES IN NOISE EXPOSURE

Ambient Noise Level Without Project, L_{dn}	Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Bollard & Brennan, 2000

Table 4.5-3 is based upon recommendations made in August 1992 by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these criteria have been applied to other sources of noise similarly described in terms of cumulative noise exposure metrics such as the L_{dn}. This metric is generally applied to transportation noise sources, and defines noise exposure in terms of average noise exposure during a 24-hour period with a penalty added to noise that occurs during the nighttime. According to Table 9-6, an increase in the traffic noise level of 1.5 dB or more would be significant where the ambient noise level exceeds 65 dB L_{dn}.

METHODOLOGY

A combination of use of existing literature, and application of accepted noise prediction and sound propagation algorithms, were used to predict changes in ambient noise levels resulting from development within the Plan Area. Specific noise sources evaluated in this section include traffic, construction, aircraft, and common noise sources associated with the land uses types of land use designations proposed within the project area. Potential noise impacts of each of these major noise sources are described below.

Traffic Noise Impact Assessment Methodology

Traffic noise impacts are assessed by comparing both the predicted future traffic noise levels of the project alternatives and current Community Plan to existing traffic noise levels and to the standards of significance.

Traffic Noise Prediction Model

To describe future noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The FHWA model is the analytical method currently favored for highway traffic noise prediction by most state and local agencies, including the California Department of Transportation (Caltrans).

The FHWA model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site.

The FHWA model was developed to predict hourly Leq values for free-flowing traffic conditions. To predict L_{dn}/CNEL values, it is necessary to determine the day/night distribution of traffic and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

FHWA Traffic Noise Prediction Model Inputs

Average daily traffic volumes were provided by LSC Transportation Consultants for existing conditions as well as the Proposed Land Use Diagram (PP) and project alternatives. The major project alternatives are described below:

PP Proposed Land Use Diagram

AA Existing Martis Valley General Plan Land Use Map

AB Alternative 1 Land Use Map

AC Alternative 2 Land Use Map

Consistent with Section 4.4 (Transportation/Circulation), the traffic projections and corresponding noise modeling was done for two roadway scenarios:

1. Proposed roadway (no Schaffer Mill Road connection); and

2. All connections option (Northstar and Palisades connection).

To determine the relative differences between each of the roadway scenarios for each project alternative, the predicted traffic noise level at a standardized distance of 100 feet from each roadway centerline was computed using the data in **Appendix 4.5**, and the traffic noise levels were compared against traffic noise levels predicted for the existing roadway network.

The predicted traffic noise levels at a representative distance of 100 feet from the roadway centerlines are contained in **Appendix 4.5**. In general, the **Appendix 4.5** data indicate that there is no appreciable difference in noise levels predicted on the Martis Valley Community Plan Area roadway network between the proposed roadway and the all connections option.

More specifically, **Appendix 4.5** shows that the noise levels are marginally lower on the existing Plan Area roadways with the construction of the Palisades and Northstar connectors than without. Because the differences in traffic noise levels between the sub-alternatives is basically negligible, as indicated by **Appendix 4.5**, this analysis focuses on the worst-case condition, which is the projected future traffic noise levels with the existing roadway configuration (proposed roadway).

To assess traffic noise impacts of the project alternatives at the discrete roadway level, the data contained in **Appendix 4.5** can be used, as it illustrates the traffic noise levels at a reference distance of 100 feet for each major Alternative and the two roadway scenarios.

Noise Impact Assessment Methodology for Noise-Producing Uses Within the Plan Area

There are a variety of noise sources associated with future development within the Plan Area which have to potential to create noise levels in excess of the Placer County General Plan noise standards or result in annoyance at existing and future noise-sensitive developments in the project vicinity. Such uses/noise sources include, but are not limited to, commercial loading docks associated with grocery stores and other stores/shops, neighborhood parks, and snowmaking systems at ski resorts.

At the Community Plan level, detailed site and grading plans associated with these types of noise sources have not yet been developed. As a result, it is not feasible to identify specific noise impacts associated with these sources. Rather, the potential for these sources to generate excessive or annoying noise levels is identified.

Aircraft Noise Impact Assessment Methodology

Noise impacts associated with operations at the Truckee-Tahoe Airport could result if noise-sensitive land uses are proposed within the airports noise impact boundaries (noise contours). Development proposals within the 55 dB CNEL contour will be reviewed with respect to noise, just as would development proposals for noise-sensitive land uses within the impact contours for major roadways. The adopted future noise contours for the Truckee-Tahoe Airport are incorporated into this document by reference, and indicate the locations of the noise impact zone.

Construction Noise Impact Assessment Methodology

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in **Table 4.5-4**, ranging from 85 to 90 dB at a distance of 50 feet.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration, and would likely occur primarily during daytime hours.

TABLE 4.5-4
CONSTRUCTION EQUIPMENT NOISE

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

Source: Bollard & Brennan, 2000

Impact 4.5.1 Construction Noise Impacts

PP Noise associated with construction activities for subsequent development under the Proposed Land Use Diagram would result in elevated noise levels that would be in excess of applicable noise standards. This would be a **significant** impact.

AA Noise associated with construction activities for subsequent development under the Existing Martis Valley General Plan Land Use Map would result in elevated noise levels that would be in excess of applicable noise standards. This would be a **significant** impact.

AB Noise associated with construction activities for subsequent development under the Alternative 1 Land Use Map would result in elevated noise levels that would be in excess of applicable noise standards. This would be a **significant** impact.

AC Noise associated with construction activities for subsequent development under the Alternative 2 Land Use Map would result in elevated noise levels that would be in excess of applicable noise standards. This would be a **significant** impact.

PP Proposed Land Use Diagram

Construction associated with subsequent development under the Community Plan would typically generate maximum noise levels ranging from 85 to 95 dB at a distance of 50 feet. Depending on the timing of buildout of the Plan area, existing and future residents within the Plan area may be exposed to these excessive noise levels. Construction activities would be temporary in nature and would occur during normal daytime working hours (8:00 a.m. to 5:00 p.m.).

AA Existing Martis Valley General Plan Land Use Map

The Existing Martis Valley General Plan Land Use Map would be exposed to similar construction noise levels and impact as the Proposed Land Use Diagram (PP).

AB Alternative 1 Land Use Map

The Alternative 1 Land Use Map would be exposed to similar construction noise levels and impact as the Proposed Land Use Diagram (PP).

AC Alternative 2 Land Use Map

The Alternative 2 Land Use Map would be exposed to similar construction noise levels and impact as the Proposed Land Use Diagram (PP).

Policies and Implementation Programs

The Community Plan does not include policies or implementation programs that specifically address construction noise impacts.

Mitigation Measures

The following mitigation measures shall be incorporated into the Martis Valley Community Plan as policies under Goal 10.A of the Noise Section. The following mitigation measures shall apply to the Proposed Land Use Diagram and alternatives AA, AB and AC.

MM 4.5.1a As part of subsequent project approvals, the County shall require that construction activities be prohibited on Sundays and federal holidays and limited to daytime hours (6:00 a.m. to 8:00 p.m. Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturdays).

MM 4.5.1b As part of subsequent project approvals, the County shall require that stationary construction equipment and construction staging areas be setback from existing noise-sensitive land uses. The setback distance will be considered on a case-by-case basis and will be determined by the County as part of subsequent project review.

While implementation of the above mitigation measures would reduce the impact of construction noise, construction noise impacts are expected to be temporary but **significant and unavoidable** for the Proposed Land Use Diagram and Alternatives AA, AB and AC.

Impact 4.5.2 Transportation Noise Impacts

PP Anticipated transportation noise increases associated with subsequent development under the Proposed Land Use Diagram would result in elevated noise levels that would be in excess of applicable noise standards. This would be a **significant** impact.

AA Anticipated transportation noise increases associated with subsequent development under the Existing Martis Valley General Plan Land Use Map would result in elevated noise levels that would be in excess of applicable noise standards. This would be a **significant** impact.

AB Anticipated transportation noise increases associated with subsequent development under the Alternative 1 Land Use Map would result in elevated noise levels that would be in excess of applicable noise standards. This would be a **significant** impact.

AC Anticipated transportation noise increases associated with subsequent development under the Alternative 2 Land Use Map would result in elevated noise levels that would be in excess of applicable noise standards. This would be a **significant** impact.

PP Proposed Land Use Diagram

Anticipated roadway noise levels under the Proposed Land Use Diagram for year 2021 is shown in **C-2** of **Appendix 4.5**. As shown in **Appendix 4.5**, anticipated traffic noise levels on roadways within the Plan area would exceed Placer County General Plan noise standards as well as noise standards set forth in the Community Plan policy document for existing and future residential land uses under the Proposed Circulation Diagram as well as the two roadway scenarios described above in the "Methodology" Section. Residential uses within the Town of Truckee along impacted roadways would also be exposed to noise levels in excess of Town standards. Commercial and office uses within the Plan area would not be exposed to noise levels in excess of County standards.

In addition to the roadways listed in **C-2** of **Appendix 4.5**, existing residential land uses north of Schaffer Mill Road that would have a roadway connection under the Proposed Circulation Diagram (all connections option) would experience increased traffic noise as a result of the proposed Palisades Connector.

AA Existing Martis Valley General Plan Land Use Map

Anticipated roadway noise levels under the Existing Martis Valley General Plan Land Use Map for year 2021 is shown in **C-1** of **Appendix 4.5**. As shown in **Appendix 4.5**, anticipated traffic noise levels on roadways within the Plan area and the Tahoe Basin would exceed Placer County General Plan noise standards as well as noise standards set forth in the Community Plan policy document for existing and future residential land uses under the Proposed Circulation Diagram as well as the two roadway scenarios described above in the "Methodology" Section. Residential uses within the Town of Truckee along impacted roadways would also be exposed to noise levels in excess of Town standards. Commercial and office uses within the Plan area would not be exposed to noise levels in excess of County standards.

In addition to the roadways listed in **C-1** of **Appendix 4.5**, existing residential land uses north of Schaffer Mill Road that would have a roadway connection under the Proposed Circulation Diagram (all connections option) would experience increased traffic noise as a result of the proposed Palisades Connector.

AB Alternative 1 Land Use Map

Anticipated roadway noise levels under the Existing Martis Valley General Plan Land Use Map for year 2021 is shown in **C-3** of **Appendix 4.5**. As shown in **Appendix 4.5**, anticipated traffic noise levels on roadways within the Plan area and the Tahoe Basin would exceed Placer County General Plan noise standards as well as noise standards set forth in the Community Plan policy document for existing and future residential land uses under the Proposed Circulation Diagram as well as the two roadway scenarios described above in the "Methodology" Section. Residential uses within the Town of Truckee along impacted roadways would also be exposed to noise levels in excess of Town standards. Commercial and office uses within the Plan area would not be exposed to noise levels in excess of County standards.

In addition to the roadways listed in **C-3** of **Appendix 4.5**, existing residential land uses north of Schaffer Mill Road that would have a roadway connection under the Proposed Circulation Diagram (all connections option) would experience increased traffic noise as a result of the proposed Palisades Connector.

AC Alternative 2 Land Use Map

Anticipated roadway noise levels under the Existing Martis Valley General Plan Land Use Map for year 2021 is shown in **C-4** of **Appendix 4.5**. As shown in **Appendix 4.5**, anticipated traffic noise levels on roadways within the Plan area and the Tahoe Basin would exceed Placer County General Plan noise standards as well as noise standards set forth in the Community Plan policy document for existing and future residential land uses under the Proposed Circulation Diagram as well as the two roadway scenarios described above in the "Methodology" Section. Residential uses within the Town of Truckee along impacted roadways would also be exposed to noise levels in excess of Town standards. Commercial and office uses within the Plan area would not be exposed to noise levels in excess of County standards.

In addition to the roadways listed in **C-4** of **Appendix 4.5**, existing residential land uses north of Schaffer Mill Road that would have a roadway connection under the Proposed Circulation Diagram (all connections option) would experience increased traffic noise as a result of the proposed Palisades Connector.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan, which are listed below. Compliance with these plan policies and implementation programs would help mitigate this impact.

Policy 10.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).*

Policy 10.A.5 *New development of noise-sensitive land uses will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 10-3, unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in Table 10-3.*

TABLE 10-3
MAXIMUM ALLOWABLE NOISE EXPOSURE
TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity Areas[a] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL,dB	L_{eq}, dB[b]
Residential	60[c]	45	--
Transient Lodging	65[d]	45	--
Hospitals, Nursing Homes	60[c]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60[c]	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45

a. Outdoor Activity Areas are generally considered to be the back yard or patio or the receiving land use. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.
b. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.
c. As determined for a typical worst-case hour during periods of use.
d. Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this Table.
e. In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

Policy 10.A.6 *Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 10-3 at outdoor activity areas or interior spaces of existing noise-sensitive land uses.*

Policy 10.A.7 *It is anticipated that roadway improvement projects will be needed to accommodate build-out of the community plan. Therefore, existing noise-sensitive uses may be exposed to increased noise levels due to roadway improvement projects as a result of increased roadway capacity, increases in travel speeds, etc. may occur. It may not be practical to reduce increased traffic noise levels consistent with those contained Table 10-3. Therefore, as an alternative, the following criteria may be used as a test of significance for roadway improvement projects:*

a. Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and

b. Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and

c. Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a + 1.5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant.

Policy 10.A.8 *Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 10-3 or the performance standards of Table 10-1, 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 in 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, and it can be determined that the project will not exceed the appropriate criteria contained within Tables 10-1 and 10-3. 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 topography in the project area is essentially flat; that is, noise source and receiving land use are at the same grade; and

d. Effective noise mitigation, as determined by the County, is incorporated into the project design to reduce noise exposure to the levels specified in Table 10-1 or Table 10-3. 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.

TABLE 10-1
EXTERIOR NOISE LEVEL PERFORMANCE STANDARDS FOR NEW PROJECTS AFFECTED BY OR INCLUDING NON-TRANSPORTATION NOISE SOURCES

Zone District of Receptor	Exterior Hourly L_{eq}, dB		Interior Hourly L_{eq}, dB	
	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)
Residential Adjacent to Industrial	60	50	--	--
Other Residential 1	55	45	--	--
Office/Professional	--	--	45	45
Transient Lodging 2	60	60	45	45
Hospitals, Nursing Homes	60	50	–	--
Theaters, Music Halls, Auditoriums	–	–	35	35
Churches, Meeting Halls [2]	60	50	45	45
Schools, Libraries, Museums [3]	60	50	45	45

1. *Because snowmaking is an integral part of a modern ski area, multi-family residential structures close to ski trails shall be subject only to interior noise level standards as would transient lodging in such locations.*
2. *Where no outdoor activity area exists, only the interior noise level criteria will be applied.*
3. *The exterior noise level criteria only apply at areas, which require good speech articulation such as areas designated for learning.*

a. *Except where otherwise noted, the noise level criteria are applied at the property line of the receiving land use.*
b. *The noise level criteria are generally applied at the first floor receiver locations.*
c. *If the noise source generated by, or affecting the uses shown above consists primarily of speech or music, or if the noise source is impulsive in nature, the noise standards shown above shall be decreased by 5 dB.*
d. *Existing industry located in industrial zones will be given the benefit of the doubt in being allowed to emit increased noise consistent with the state of the art at the time of expansion. In no case will expansion of an existing industrial operation be cause to decrease allowable noise emission limits. Increased emissions above those normally allowable should be limited to a one-time 5 dB increase at the discretion of the decision making body.*
e. *The standards contained are not applied at incidental residential uses of noise generating uses, such as caretaker dwellings on industrial facilities and homes on agriculturally zoned land.*
f. *Where no noise level standards have been provided for a specific zone district, it is assumed that the interior and/or exterior spaces of these uses are effectively insensitive to noise.*
g. *Where an industrial use is subject to infrequent and unplanned upset or breakdown of operations resulting in increased noise emissions, where such upsets and breakdowns are reasonable considering the type of industry, and where the industrial use exercises due diligence in preventing as well as correcting such upsets and breakdowns, noise generated during such upsets and breakdowns shall not be included in calculations to determine conformance with allowable noise levels.*

New noise-sensitive uses which may be affected by noise sources associated with agricultural operations shall be responsible for mitigating agricultural operations noise levels consistent with this Table. Typical operations associated with agricultural uses shall not be subject to compliance with the criteria contained within this Table at nearby noise-sensitive uses.

Policy 10.A.10 *Where noise mitigation measures are required to achieve the standards of Tables 10-1 and 10-3, 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.*

Implementation Programs

1. *The County shall develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the project review process and, as may be determined necessary, through the building permit process.*

   Responsible Agency/Department: Division of Environmental Health, Planning Department, Building Department
   Time frame: Ongoing
   Funding: Permit fees

2. *The County shall develop and employ procedures to monitor compliance with the standards of the Noise section of the Plan after completion of projects where noise mitigation measures were required.*

   Responsible Agency/Department: Division of Environmental Health
   Time frame: Ongoing
   Funding: Permit fees

Mitigation Measures

Implementation of the above policies and implementation programs would adequately mitigate future traffic noise impacts on future residential and noise-sensitive land uses in the Plan area. However, there are existing residential land uses within the Plan area, Tahoe Basin and the Town of Truckee that would be exposed to excessive noise levels. Possible mitigations include installation of sound barriers. However, sound barriers (in some cases) would need to be placed in front yards and would be ineffective given the need for openings for driveways. In addition, Placer County does not have the jurisdiction to place sound barriers in the Town of Truckee. Given these conditions, the traffic noise impact is considered **significant and unavoidable** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.5.3 Future Stationary Noise Impacts

PP Implementation of the Proposed Land Use Diagram could result in the future development of land uses that generate noise levels in excess of applicable noise standards for non-transportation noise sources. This would be a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map could result in the future development of land uses that generate noise levels in excess of applicable noise standards for non-transportation noise sources. This would be a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map could result in the future development of land uses that generate noise levels in excess of applicable noise standards for non-transportation noise sources. This would be a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map could result in the future development of land uses that generate noise levels in excess of applicable noise standards for non-transportation noise sources. This would be a **less than significant** impact.

PP – AC Proposed Land Use Diagram and Alternatives AA, AB, and AC

Implementation of the proposed Community Plan under any of the four land use map alternatives could result in the future development of land uses that generate noise levels in excess of Placer County General Plan noise standards and the Martis Valley Community Plan noise standards for non-transportation noise sources. Such land uses may include commercial and office uses as well as recreational uses (sports fields and new snow-making facilities). However, specific land uses that would locate in the Plan Area are not known at this point in time.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan, which are listed below. Compliance with these plan policies and implementation programs would fully mitigate this impact.

Policy 10.A.1 *New development of noise-sensitive uses shall not be allowed where* the noise level due to non-*transportation noise sources will exceed the noise level standards of Table 10-1 as measured immediately within the property line or within a designated outdoor activity area (at the discretion of the Planning Director) of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards specified in Table 10-1.*

Policy 10.A.2 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 10-1 as measured immediately within the property line of lands designated for noise-sensitive uses.

Policy 10.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).

Policy 10.A.4 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 10-1 at existing or planned noise-sensitive uses, an acoustical analysis shall be required 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 given by Table 10-2.

TABLE 10-2
REQUIREMENTS FOR AN ACOUSTICAL ANALYSIS

An acoustical analysis prepared pursuant to the Noise Element shall:

1. Be the financial responsibility of the applicant.
2. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
3. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
4. Estimate existing and projected cumulative (20 years) noise levels in terms of L_{dn} or CNEL and/or the standards of Table 10-1, and compare those levels to the adopted policies of the Noise Element.
5. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses.
6. Estimate noise exposure after the prescribed mitigation measures have been implemented.
7. Describe a post-project assessment program, which could be used to evaluate the effectiveness of the proposed mitigation measures.

Note:
Industrial, light industrial, commercial and public service facilities which have the potential for producing objectionable noise levels at nearby noise-sensitive uses are dispersed throughout the County. Fixed noise sources which are typically of concern include, but are not limited to the following:

HVAC Systems	Cooling Towers/Evaporative Condensers
Pump Stations	Lift Stations
Emergency Generators	Boilers
Steam Valves	Steam Turbines
Generators	Fans
Air Compressors	Heavy Equipment
Conveyor Systems	Transformers
Pile Drivers	Grinders
Drill Rigs	Gas or Diesel Motors
Welders	Cutting Equipment
Outdoor Speakers	Blowers
Snow -making equipment	

The types of uses which may typically produce the noise sources described above include but are not limited to: industrial facilities including lumber mills, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, ski areas, race tracks, landfills, sand and gravel operations, and athletic fields.

Policy 10.A.9 *Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 10-3 or the performance standards of Table 10-1, 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;

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 10-1 or 10-3. 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.

Policy 10.A.10 *Where noise mitigation measures are required to achieve the standards of Tables 10-1 and 10-3, 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.*

Implementation Programs

1. The County shall develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the project review process and, as may be determined necessary, through the building permit process.

Responsible Agency/Department: Division of Environmental Health, Planning Department, Building Department
Time frame: Ongoing
Funding: Permit fees

2. The County shall develop and employ procedures to monitor compliance with the standards of the Noise section of the Plan after completion of projects where noise mitigation measures were required.

Responsible Agency/Department: Division of Environmental Health
Time frame: Ongoing
Funding: Permit fees

Implementation of the above policies and implementation programs would reduce potential future land use stationary noise impacts to **less than significant**.

Mitigation Measures

None required.

Impact 4.5.4 Truckee-Tahoe Airport Noise Impacts

PP Subsequent development under the Proposed Land Use Diagram would be exposed to noise associated with the operation of the Truckee-Tahoe Airport. This would be a **significant** impact.

AA Subsequent development under the Existing Martis Valley General Plan Land Use Map would be exposed to noise associated with the operation of the Truckee-Tahoe Airport. This would be a **significant** impact.

AB Subsequent development under the Alternative 1 Land Use Map would be exposed to noise associated with the operation of the Truckee-Tahoe Airport. This would be a **significant** impact.

AC Subsequent development under the Alternative 2 Land Use Map would be exposed to noise associated with the operation of the Truckee-Tahoe Airport. This would be a **significant** impact.

PP Proposed Land Use Diagram

As shown in **Figures 4.5-1** and **4.5-2**, future land uses that would be within the designated CNEL noise exposure contour lines for 1999 and 2020 would be limited to Public or Quasi Public, General Commercial, Open Space, Water and Forest Residential. However, due to the number of aircraft arrivals and departures from the Truckee-Tahoe Airport anticipated under the Truckee-Tahoe Airport Master Plan (Truckee-Tahoe Airport District, 1998), the potential for annoyance at future residential land uses will likely occur.

AA Existing Martis Valley General Plan Land Use Map

As shown in **Figures 4.5-1** and **4.5-2**, future land uses that would be within the designated CNEL noise exposure contour lines for 1999 and 2020 would be limited to Public, General Commercial, Open Space, and Water. However, due to the number of aircraft arrivals and departures from the Truckee-Tahoe Airport anticipated under the Truckee-Tahoe Airport Master Plan (Truckee-Tahoe Airport District, 1998), the potential for annoyance at future residential land uses will likely occur.

AB Alternative 1 Land Use Map

As shown in **Figures 4.5-1** and **4.5-2**, future land uses that would be within the designated CNEL noise exposure contour lines for 1999 and 2020 would be limited to Public or Quasi Public, General Commercial, Open Space, Water and Forest Residential. However, due to the number of aircraft arrivals and departures from the Truckee-Tahoe Airport anticipated under the Truckee-Tahoe Airport Master Plan (Truckee Tahoe-Airport District, 1998), the potential for annoyance at future residential land uses will likely occur.

AC Alternative 2 Land Use Map

As shown in **Figures 4.5-1** and **4.5-2**, future land uses that would be within the designated CNEL noise exposure contour lines for 1999 and 2020 would be limited to Public or Quasi Public, General Commercial, Open Space, Water and Forest Residential. However, due to the number

of aircraft arrivals and departures from the Truckee-Tahoe Airport anticipated under the Truckee-Tahoe Airport Master Plan (Truckee-Tahoe Airport District, 1998), the potential for annoyance at future residential land uses will likely occur.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan, which are listed below. Compliance with these plan policies and implementation programs would help mitigate this impact.

Policy 10.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).*

Policy 10.A.5 *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 10-3, unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table 10-3.*

Policy 10.A.6 *Noise created by new transportation noise sources shall be mitigated so as not to exceed the levels specified in Table 10-3 at outdoor activity areas or interior spaces of existing noise-sensitive land uses.*

Policy 10.A.9 *Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 10-3 or the performance standards of Table 10-1, 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 in 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 topography in the project area is essentially flat; that is, noise source and receiving land use are at the same grade; and

d. Effective noise mitigation, as determined by the County, is incorporated into the project design to reduce noise exposure to the levels specified in Table 10-1 or 10-3. 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.

Policy 10.A.10 *Where noise mitigation measures are required to achieve the standards of Tables 10-1 and 10-3, 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.*

Implementation Programs

1. *The County shall develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the project review process and, as may be determined necessary, through the building permit process.*

   Responsible Agency/Department: Division of Environmental Health, Planning Department, Building Department
   Time frame: Ongoing
   Funding: Permit fees

2. *The County shall develop and employ procedures to monitor compliance with the standards of the Noise section of the Plan after completion of projects where noise mitigation measures were required.*

   Responsible Agency/Department: Division of Environmental Health
   Time frame: Ongoing
   Funding: Permit fees

Mitigation Measures

The following mitigation measures shall be incorporated into the Martis Valley Community Plan as policies under Goal 10.A of the Noise Section. The following mitigation measures shall apply to the Proposed Land Use Diagram and alternatives AA, AB and AC.

MM 4.5.4a As part of subsequent residential project approvals, the County shall require that navigation easements be granted to the Truckee-Tahoe Airport District as appropriate. The purpose of the easement is to disclose to future residents that they may be exposed to occasional noise from aircraft utilizing the airport.

MM 4.5.4b As part of subsequent residential project submittals for land areas within the designated 55 CNEL contour of the Truckee Tahoe Airport, the County shall require that the applicant incorporate mitigation that is sufficient to bring interior noise levels to 45 CNEL.

Implementation of the above mitigation measures and policies and implementation programs of the Community would reduce this impact to **less than significant** for PP and alternatives AA, AB and AC.

4.5.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative noise analysis is focused on the Plan Area as well as roadways outside of the Plan Area that were evaluated in **Tables C-1** through **C-4** of **Appendix 4.5**.

Table 3.0-1 and **Figures 3.0-4, 4.0-1** and **4.0-2** illustrates proposed and conceptual development projects in the Martis Valley area that would contribute to cumulative noise impacts.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.5.5 Cumulative Traffic Noise Impacts

PP Anticipated transportation noise increases associated with subsequent development under the Proposed Land Use Diagram in year 2021 would contribute to elevated noise levels that would be in excess of applicable noise standards. This would be a **cumulative significant** impact.

AA Anticipated transportation noise increases associated with subsequent development under the Existing Martis Valley General Plan Land Use Map in year 2021 would contribute to elevated noise levels that would be in excess of applicable noise standards. This would be a **cumulative significant** impact.

AB Anticipated transportation noise increases associated with subsequent development under the Alternative 1 Land Use Map in year 2021 would contribute to elevated noise levels that would be in excess of applicable noise standards. This would be a **cumulative significant** impact.

AC Anticipated transportation noise increases associated with subsequent development under the Alternative 2 Land Use Map in year 2021 would contribute to elevated noise levels that would be in excess of applicable noise standards. This would be a **cumulative significant** impact.

PP Proposed Land Use Diagram

As described in Impact 4.5.2, anticipated roadway noise levels under the Proposed Land Use Diagram in combination with anticipated development in the Martis Valley area for year 2021 (shown in **C-2** of **Appendix 4.5**) would exceed Placer County General Plan noise standards as well as noise standards set forth in the Community Plan policy document for existing and future residential land uses under the Proposed Circulation Diagram as well as roadway scenarios described above in the "Methodology" Section. Residential uses within the Town of Truckee along impacted roadways would also be exposed to noise levels in excess of Town standards. Commercial and office uses within the Plan area would not be exposed to noise levels in excess of County standards.

AA Existing Martis Valley General Plan Land Use Map

As described in Impact 4.5.2, anticipated roadway noise levels under the Existing Martis Valley General Plan Land Use Map in combination with anticipated development in the Martis Valley area for year 2021 (shown in **C-1** of **Appendix 4.5**) would exceed Placer County General Plan noise standards as well as noise standards set forth in the Community Plan policy document for existing and future residential land uses under the Proposed Circulation Diagram as well as roadway scenarios described above in the "Methodology" Section. Residential uses within the

Town of Truckee along impacted roadways would also be exposed to noise levels in excess of Town standards. Commercial and office uses within the Plan area would not be exposed to noise levels in excess of County standards.

AB Alternative 1 Land Use Map

As described in Impact 4.5.2, anticipated roadway noise levels under the Existing Martis Valley General Plan Land Use Map in combination with anticipated development in the Martis Valley area for year 2021 (shown in **C-3** of **Appendix 4.5**) would exceed Placer County General Plan noise standards as well as noise standards set forth in the Community Plan policy document for existing and future residential land uses under the Proposed Circulation Diagram as well as roadway scenarios described above in the "Methodology" Section. Residential uses within the Town of Truckee along impacted roadways would also be exposed to noise levels in excess of Town standards. Commercial and office uses within the Plan area would not be exposed to noise levels in excess of County standards.

AC Alternative 2 Land Use Map

As described in Impact 4.5.2, anticipated roadway noise levels under the Existing Martis Valley General Plan Land Use Map in combination with anticipated development in the Martis Valley area for year 2021 (shown in **C-4** of **Appendix 4.5**) would exceed Placer County General Plan noise standards as well as noise standards set forth in the Community Plan policy document for existing and future residential land uses under the Proposed Circulation Diagram as well as roadway scenarios described above in the "Methodology" Section. Residential uses within the Town of Truckee along impacted roadways would also be exposed to noise levels in excess of Town standards. Commercial and office uses within the Plan area would not be exposed to noise levels in excess of County standards.

Mitigation Measures

Implementation of the policies, implementation programs in the Community Plan would adequately mitigate future traffic noise impacts on future residential and noise-sensitive land uses in the Plan area. However, there are existing residential land uses within the Plan area, Tahoe Basin and the Town of Truckee that would be exposed to excessive noise levels. Possible mitigations include installation of sound barriers. However, sound barriers (in some cases) would need to be placed in front yards and would be ineffective given the need for openings for driveways. In addition, Placer County does not have the jurisdiction to place sound barriers in the Town of Truckee to mitigate its contribution to traffic noise impacts. Given these conditions, the cumulative traffic noise impact is considered **significant and unavoidable** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

REFERENCES

Placer County Planning Dept., 1990, *Martis Valley General Plan*.

Placer County Planning Dept., 1994, *Placer County General Plan Update*.

Section 4.6
Air Quality

This Section describes the impacts of the project on local and regional air quality. The chapter was prepared using methodologies and significance thresholds consistent with the recommendations of the Placer County Air Pollution Control District. In keeping with these recommendations, the section describes existing air quality, construction-related impacts, direct and indirect emissions associated with the project and the impacts of these emissions on both the local and regional scale, and mitigation measures warranted to reduce or eliminate any identified significant impacts.

4.6.1 EXISTING SETTING

CLIMATE AND METEOROLOGY

Martis Valley has a Mediterranean climate type, with pronounced summer and winter seasonal variation in temperature and precipitation. Most precipitation occurs from late October through early May with winter precipitation falling as snow. Temperatures variation is relatively high seasonal as well as daily.

The planning area lies within a small air basin defined by mountainous terrain. As with most mountain valleys, Martis Valley is subject to frequent temperature inversions. A temperature inversion is created when a stable mass of warmer air lies above a mass of colder air. Temperature inversions severely limit the vertical mixing of pollutants. When combined with mountainous terrain that restricts horizontal movement or dilution of pollutants, inversion conditions can result in poor ventilation and high concentrations of pollutants.

Temperature inversions in the Martis Valley area are created in 2 ways: radiational cooling and subsidence. Radiation inversions occur on calm, clear nights when the ground cools more rapidly than the air above it. The cooling of the air near the ground creates a ground-based and relatively shallow inversion.

Subsidence inversions result from the compressional heating of layers of the atmosphere by downward motion (subsidence) related to large-scale high-pressure areas. This type of inversion tends to be elevated above ground. The strongest inversions conditions in the local air basin are a result of the combined effects of both types of inversions.

AMBIENT AIR QUALITY STANDARDS

Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are concentrations of air pollutants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants.

The federal and California state ambient air quality standards are summarized in **Table 4.6-1**. The federal and state ambient standards were developed to protect public health and welfare. However, the standards were developed independently, using different methods. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and PM_{10}.

TABLE 4.6-1
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	0.12 ppm	0.09 ppm
	8-Hour	0.08 ppm	--
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.05 ppm	--
	1-Hour	--	0.25 ppm
Sulfur Dioxide	Annual	0.03 ppm	--
	24-Hour	0.14 ppm	0.05 ppm
	1-Hour	--	0.5 ppm
PM_{10}	Annual	50 ug/m^3	30ug/m^3
	24-Hour	150 ug/m^3	50 ug/m^3
$PM_{2.5}$	Annual	15 ug/m^3	--
	24-Hour	65 ug/m^3	--
Lead	30-Day Avg.	--	1.5 ug/m^3
	Month Avg.	1.5 ug/m^3	--

ppm = parts per million
ug/m^3 = Micrograms per Cubic Meter

The U.S. Environmental Protection Agency in 1997 adopted new national air quality standards for ground-level ozone and for fine Particulate Matter. The existing 1-hour ozone standard of 0.12 PPM will be phased out and replaced by an 8-hour standard of 0.08 PPM. New national standards for fine Particulate Matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods. The current PM_{10} standards were retained.

Implementation of the new ozone and Particulate Matter standards was delayed by a lawsuit. On February 27, 2001 the Supreme Court unanimously ruled in favor of the Environmental Protection Agency, clearing the way for implementation of the new standards. While the new standards are in effect, the implementation method and schedule have not yet been finalized.

AMBIENT AIR QUALITY

The planning area is within the Placer County Air Pollution Control District. The District operates an air quality monitoring site in Colfax, but not in Martis Valley. The adjacent Northern Sierra Air Quality Management District (NSAQMD) maintains ambient air quality monitoring stations in the Truckee area. Ozone, PM_{10} and $PM_{2.5}$ are measured at the Truckee-Fire Station site. In the 4-year period 1997-2000 no exceedances of the national or state standards for ozone were recorded. (NSAQMD, 2001)

PM_{10} concentrations in Truckee have occasionally exceeded the federal ambient air quality standards and frequently exceed the more stringent state standard. Sampling of $PM_{2.5}$ began in the first quarter of 1999. No exceedances of the federal standards for this pollutant were recorded in the years 1999-2000. Annual maximum PM2.5 concentrations measures in Truckee during 1999 and 2000 were 50.0 and 23.0 micrograms per cubic meter. The annual average concentrations were 9.0 and 8.8 micrograms per cubic meter, also below the ambient standard of 15 micrograms per cubic meter (NSAQMD, 2001).

EXISTING EMISSION SOURCES

Major emission sources in the Martis Valley are motor vehicles, railroads, open burning and residential wood burning. Existing permitted industrial sources in the Truckee area include 2 quarry/mining operations and a concrete batch plant. The major sources of ozone precursors are vehicles. The major sources of Particulate Matter are residential wood burning, open burning (in the summer) and road dust. Construction activities are a seasonal source of Particulate Matter emissions and ozone precursors as well. The dominant source of fine Particulate Matter ($PM_{2.5}$) is combustion.

4.6.2 REGULATORY FRAMEWORK

REGIONAL AIR QUALITY PLANNING

Both the federal and state governments have enacted laws mandating the identification of areas not meeting the ambient air quality standards and development of regional air quality plans to eventually attain the standards. Under the federal Clean Air Act, Placer County is considered "Unclassified" or "Attainment" for all pollutants except ozone. For the State standards, the Placer County is "Non-attainment" for PM_{10} and ozone and either "Attainment" or "Unclassified" for other pollutants.

The Town of Truckee and Northern Sierra AQMD have developed a particulate matter air quality management plan for Truckee (Town of Truckee, 1999). The Town of Truckee Town Council initiated this planning effort to analyze particulate matter pollution and take steps to control particulate matter emissions. The urgency of this issue was related to exceedances of the state and federal standards and the possibility of being designated as a federal non-attainment area.

Classification as a non-attainment area sets into motion requirements for development of a plan to reach attainment, which must be developed by the local air districts and submitted to the California Air Resources Board and U.S.E.P.A. for approval. These attainment plans provide for new rules and regulations and other programs designed to reduce emissions. Failure to meet the attainment deadlines could result in increased offset requirements for new industrial sources and potential sanctions, including withholding of federal grants for capacity-expanding transportation projects.

LOCAL AIR DISTRICT

The geographical Martis Valley is a sub-air basin of the Mountain Counties Air Basin. The county line between Nevada County on the north and Placer County on the south bisects this local air basin. Martis Valley is subdivided as to local air pollution agency jurisdiction. The Nevada County portion of the valley is under the jurisdiction of the Northern Sierra Air Quality Management District. The Placer County portion of the valley, the study area, is under the jurisdiction of the Placer County Air Pollution Control District.

The Placer County Air Pollution Control District is the local agency involved in the permitting and regulating of air pollution sources in the study area. District activities with respect to planning are primarily in the form of review of CEQA documents. As a commenting agency, the District has a policy of recommending new residential developments to limit wood-burning and to provide funding for mitigation programs that offset increases in Particulate Matter. (Vintze, 2001)

PLACER COUNTY GENERAL PLAN

The following are Placer County General Plan policies regarding general air quality:

Policy 6.F.1 The County shall cooperate with other agencies to develop a consistent and effective approach to air quality planning and management.

Policy 6.F.2 The County shall develop mitigation measures to minimize stationary source and area source emissions.

Policy 6.F.3 The County shall support the Placer County Air Pollution Control District (PCAPCD) in its development of improved ambient air quality monitoring capabilities and the establishment of standards, thresholds, and rules to more adequately address the air quality impacts of new development.

Policy 6.F.4 The County shall solicit and consider comments from local and regional agencies on proposed project that may affect regional air quality.

Policy 6.F.5 The County shall encourage project proponents to consult early in the planning process with the County regarding the applicability of countywide indirect and areawide source programs and transportation control measures (TCM) programs. Project review shall also address energy-efficient building and site designs and proper storage, use, and disposal of hazardous materials.

Policy 6F.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.

Policy 6.F.7 The County shall encourage development to be located and designed to minimize direct and indirect air pollutants.

Policy 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.

Policy 6.F.9 In reviewing project applications, the County shall consider alternatives or amendments that reduce emissions of air pollutants.

Policy 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).

Policy 6.F.11 The County shall apply the buffer standards described on page 20 in Part I of this Policy Document and meteorological analyses to provide separation between possible emission/nuisance sources (such as industrial and commercial uses) and residential areas.

The following are Placer County General Plan policies regarding air quality related to transportation and circulation:

Policy 6.G.1 The County shall require new development to be planned to result in smooth flowing traffic conditions for major roadways. This includes traffic signals and traffic signal coordination, parallel roadways, and intra- and inter-neighborhood connections where significant reductions in overall emissions can be achieved.

Policy 6.G.2 The County shall continue and, where appropriate, expand the use of synchronized traffic signals on roadways susceptible to emissions improvement through approach control.

Policy 6.G.3 The County shall encourage the use of alternative modes 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.

Policy 6.G.4 The County shall consider instituting disincentives for single-occupancy vehicle trips, including limitations in parking supply in areas where alternative transportation modes are available and other measures identified by the Placer County Air Pollution Control District and incorporated into regional plans.

Policy 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.

Policy 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.

Policy 6.G.7 The County shall require stationary-source projects that generate significant amounts of air pollutants to incorporate air quality mitigation in their design.

MARTIS VALLEY GENERAL PLAN

The 1975 Martis Valley General Plan contains a single policy regarding air quality:

> "*Air quality should receive careful consideration with each development proposal in order to keep air quality at or above extant levels*"

TOWN OF TRUCKEE PARTICULATE MATTER AIR QUALITY MANAGEMENT PLAN

The Particulate Matter Air Quality Management Plan adopted by the Town of Truckee is intended to achieve the air quality goals of the Truckee General Plan:

Achieve and maintain ambient air quality standards established by the U. S. Environmental Protection Agency and the California Air Resources Board; and minimize public exposure to toxic, hazardous or odoriferous air pollutants.

Encourage project design that protects air quality and minimizes direct and indirect emissions of air contaminants.

Within the Air Quality Management Plan the goal of the Plan is as follows:

The Town shall achieve and maintain compliance with National Ambient Air Quality Standards for PM10 and PM2.5 as established by the United State Environmental Protection Agency. The Town shall strive to achieve compliance with State Ambient air quality standards for PM10 as established by State law and shall make reasonable progress toward achieving State particulate matter standards.

The Air Quality Management Plan lists 9 objectives. The following 7 related to control strategies:

Objective 1: New development will mitigate to the maximum extent feasible its particulate matter emissions from solid fuel burning devices and re-entrained road dust.

Objective 2: Particulate matter emissions from solid fuel burning devices and re-entrained road dust represent the Town's greatest opportunity to reduce emission levels since emissions savings (i.e., a reduction of emissions below current levels) can only occur with a reduction of emissions from existing sources. Emissions from these sources will be reduced to the extent necessary to meet the attainment goal of this plan. Control strategies in the near-term should focus on these sources, and all feasible control strategies should be used.

Objective 3: The Town will request and encourage Caltrans to optimize their equipment and operational measures for winter road sanding that will reduce re-entrained road dust emissions below current emissions levels. The Town will optimize its equipment and operational measures for winter road sanding to reduce re-entrained road dust emissions to the maximum extent feasible.

Objective 4: Financial incentives, public education, and other non-regulatory strategies will be encouraged when feasible. Control strategies that are cost effective and reduce financial burden as much as possible will be encouraged. Cost-effective strategies provide higher emission saving at lower financial expenditures to the public sector and private individuals.

Objective 5: Innovative technologies for heating and building energy conservation practices will be encouraged to reduce reliance on solid fuel burning devices and other heating devices which generate particulate matter emissions.

Objective 6: The Town Council will coordinate with and encourage the Nevada County and Placer County Board of Supervisors to implement PM control strategies in the Truckee air basin.

Objective 7: Control strategies for regulated PM will be coordinated with strategies addressing other air pollutants and air quality issues.

4.6.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

An air quality impact of the proposed Martis Valley Community Plan Update would be considered significant if it would result in any of the following actions based on the following criteria:

1) Violate any air quality standard or contribute to an existing or projected air quality violation;

2) Result in new emissions exceeding the Placer County Air Pollution Control District's recommended thresholds of significance for either construction or operation. These thresholds are 82 pounds per day for Reactive Organic Compounds (ROC), Nitrogen Oxides (NO_x,), Sulfur Oxides (SO_X), or PM_{10} and 550 pounds per day for Carbon Monoxide (CO) (Vintze, 2001);

3) Expose sensitive receptors to substantial pollutant concentrations and/or toxic air contaminants;

4) Have the potential to cause localized carbon monoxide levels at nearby intersections to exceed the ambient air quality standards; or

5) Create objectionable odors.

METHODOLOGY

Construction

The URBEMIS7G program was applied to project land uses to estimate the total of construction emissions from site grading, equipment exhaust, construction worker vehicle trips and other construction activities. The total construction emission was converted to estimated daily emissions assuming build-out would occur over a 20-year period and construction would be limited to between May 1 to October 15 each year. Default values were assumed for all URBEMIS7G inputs. The URBEMIS7G model output is included in **Appendix 4.6**.

The resulting emissions for each community plan land use alternative, in pounds per day, are shown in **Table 4.6-2**. These emissions are assumed to be seasonal, occurring largely in the summer months and not during the winter.

TABLE 4.6-2
CONSTRUCTION EMISSIONS, POUND PER DAY

Alternative	ROG	NO_x	PM_{10}
Proposed Land Use Diagram (PP) (with Mitigation)	10.4 (10.1)	80.2 (76.5)	157.5 (30.9)
Existing Martis Valley Community Plan Land Use Map (AA) (with Mitigation)	12.6 (12.3)	83.3 (79.5)	158.1 (31.5)
Alternative 1 (AB) (with Mitigation)	12.5 (12.2)	83.2 (79.4)	158.1 (31.5)
Alternative 2 (AC) (with Mitigation)	11.2 (10.9)	81.3 (77.6)	157.8 (31.1)
PCAPCD Significance Threshold	82.0	82.0	82.0

Source: Ballanti, 2002

Local-Scale Analysis

Auto traffic generated by land use development and cumulative development would affect local air quality along the local and regional street system. On the local scale the pollutant of greatest interest is carbon monoxide. Concentrations of this pollutant are related to the levels of traffic and congestion along streets and at intersections.

A screening form of the CALINE-4 computer simulation model was applied to 3 surface intersections affected by traffic from anticipated development within the project study areas. These intersections were selected for analysis because they were signalized intersections that would perform at Level of Service D or worse in the future and therefore represent worst-case locations. This included consideration of the Proposed Circulation Diagram and roadway improvement options. A description of the screening procedure and assumptions made in its use are included in **Appendix 4.6**. The results of the carbon monoxide analysis is shown in **Table 4.6-3**, which compares predicted concentrations very near the intersection (within 25 feet) to the state and federal ambient air quality standards.

TABLE 4.6-3
PREDICTED WORST-CASE CO CONCENTRATIONS AT SELECTED INTERSECTIONS, IN PARTS PER MILLION

Intersection	Proposed Land Use Diagram (2021)		Existing MV Community Plan (2021)		Alternative 1 (2021)		Alternative 2 (2021)	
	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr
Northstar Dr./ S.R. 267	7.2	4.7	8.0	5.3	7.9	5.3	8.1	5.4
S.R. 267/Airport Road/Schaffer Mill	9.7	6.5	10.8	7.3	10.6	7.1	10.1	6.8
S.R. 267/S.R. 267Bypass/ Joeger/ Brockway	10.2	6.8	11.4	7.7	10.9	7.3	10.5	7.1
Most Stringent Standard	20.0	9.0	20.0	9.0	20.0	9.0	20.0	9.0

Source: Ballanti, 2002

Regional Analysis

The project would result in several new sources of air pollutants affecting differing areas. Automobile traffic associated with project land uses would release new emissions along the local and regional roadway system as vehicle exhaust and as re-entrained road dust. Wood burning, combustion of natural gas, other area sources would release pollutants within development sites within the plan area itself.

Each of these sources would vary seasonally. Exhaust emissions from auto traffic would peak in the summer months along with residential occupancy of the plan area. Road dust emissions from traffic, however, would peak during the winter months after application of sand to the highway system. Wood smoke emissions would also peak in the winter months when the demand for space heating is greatest.

Emissions from these sources have been estimated both for summer months and winter months. However, since ozone is a summertime pollutant, emissions of ozone precursors are most significant in the summer months. Similarly, since PM_{10} problems occur primarily in the winter, wintertime emission of this pollutant is of primary importance.

Nitrogen Oxides, one of the precursors of ozone, is a source of nitrogen-containing particulate matter suspected of contributing to atmospheric deposition of nitrogen and eutrophication of Lake Tahoe. The major sources of atmospheric deposition of nitrogen to the lake are emissions from within the Tahoe Basin itself (vehicles, wood burning, etc.) and transport into the Basin from the San Joaquin and Sacramento valleys (Reuter et. al., 2001). While there may be minor sources of atmospheric deposition of nitrogen from emissions in Mountain Counties into the Tahoe Basin, it is difficult to quantify such emissions given the infrequency of necessary wind conditions. Thus, the emissions resulting from subsequent development within the Plan area project is not likely a significant contributor to such condition.

For each project alternative, regional emissions have been calculated using the URBEMIS7G computer program. A description of the URBEMIS7G program and the assumptions made in its use are described in **Appendix 4.6** along with printouts of the results. The URBEMIS7G program provided estimates of emissions from vehicle exhausts, road dust, landscaping equipment, natural gas combustion and commercial products. Emissions from wood burning were calculated separately as described in **Appendix 4.6**.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.6.1 Construction Air Quality Impacts

PP The potential exists for construction emissions to exceed the PCAPCD's significance thresholds for air pollutants for subsequent development under the Proposed Land Use Diagram. This would be a **significant** impact.

AA The potential exists for construction emissions to exceed the PCAPCD's significance thresholds for air pollutants for subsequent development under the Existing Martis Valley General Plan. This would be a **significant** impact.

AB The potential exists for construction emissions to exceed the PCAPCD's significance thresholds for air pollutants for subsequent development under the Alternative 1 Land Use Map. This would be a **significant** impact.

AC The potential exists for construction emissions to exceed the PCAPCD's significance thresholds for air pollutants for subsequent development under the Alternative 2 Land Use Map. This would be a **significant** impact.

PP–AC Proposed Land Use Diagram and Alternatives AA through AC

As shown in **Table 4.6-2**, summertime averaged daily construction emissions for the Proposed Land Use Diagram and land use alternatives would exceed the PCAPCD's significance threshold for PM_{10} without emission controls and mitigation measures. While NO_x and ROG emissions are not expected to be exceeded based on the assumptions for construction activities in the Plan area, the potential exists for these emissions to be exceeded as well, depending on the extent of construction activities for each subsequent project.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan, which are listed below. Compliance with these plan policies and implementation programs would assist in mitigating this impact.

Policy 9.H.7 *The County shall work with the Placer County Air Pollution Control District (PCAPCD) to reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible. The County should include PM_{10} control measures as conditions of approval of subdivision maps, site plans, and grading permits. The County should inform developers of the requirements of the District's PM_{10} mitigation requirements when they apply for a grading permit.*

Implementation of the above policy during the environmental approval process for individual developments would reduce construction emissions. For the purposes of this analysis, the following construction control measures were assumed to be imposed on all development proposals as a result of the implementation of Policy 9.H.7:

- Alternatives to open burning of vegetative material on the project site shall be used. Suitable alternatives are chipping, mulching, or conversion to biomass fuel.
- Contractors shall be responsible for ensuring that adequate dust control measures are implemented during all phases of project development and construction.
- All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or violation of an ambient air standard. Watering should occur at least twice daily, with complete site coverage.
- All areas (including unpaved roads) with vehicle traffic shall be watered or have a dust palliative applied as necessary for stabilization of dust emissions.
- All on-site vehicle traffic shall be limited to a speed of 15 mph on unpaved roads.
- All land clearing, grading, earth moving or excavation activities shall be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 mph.
- All inactive portions of the construction site shall be covered, seeded, or watered until a suitable cover is established or, alternatively, apply dust palliative.
- Paved streets adjacent construction sites shall be swept or washed at the end of each day, or as required to remove excess accumulations of silt and/or mud which may have resulted from activities at the construction site.
- All material transported off-site shall be either sufficiently watered or securely covered to prevent visible dust emissions.
- Properly maintain all mobile and stationary equipment.
- Use District Rule 218 compliant low-VOC coatings (paints and solvents).

In addition to Policy 9.H.7, the following policies would also assist in mitigating construction air quality impacts.

Policy 9.H.1 *The County shall develop mitigation measures to minimize stationary source, area source, and indirect source emissions.*

Policy 9.H.2 *The County shall support the Placer County Air Pollution Control District (PCAPCD) in its development of improved ambient air quality monitoring capabilities and the establishment of standards, thresholds, and mitigation strategies to more adequately address the air quality impacts of new development.*

Policy 9.H.5 *The County shall encourage innovative measures, which include offsite mitigation strategies, to reduce air quality impacts. Innovative measures can be identified during a pre-application consultation process and during County staff/applicant negotiation over CEQA mitigation.*

Policy 9.H.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.*

Policy 9.H.8 *The County may require new development projects to submit an air quality analysis. Based on this analysis, the County shall require appropriate mitigation measures consistent with the PCAPCD's current list of Best Available Mitigation Measures and/or the most recent version of the Air Quality Attainment Plan.*

Mitigation Measures

The following mitigation measure shall be added as an implementation program in Section IX of the Natural Resources Section of the Community Plan:

MM 4.6.1 The County shall require subsequent projects to fully mitigate their construction air pollutant emissions that are in excess of Placer County Air Pollution Control District's thresholds of significance for emissions. This may include the use of low emission construction equipment, particulate matter control measures, and/or participation in Placer County's Air Pollution Control District's offsite mitigation program.

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: Application Fees

The URBEMIS7G program was used to recalculate construction emissions using the above program of mitigation associated with Policy 9.H.7. The average daily emissions from construction would be reduced to below PCAPCD significance thresholds for all pollutants for all alternatives. Implementation of Mitigation Measure MM 4.6.1 would reduce temporary

construction impacts by requiring full mitigation of the emissions. However, given the unknown timing and extent of construction activities in the Plan area and Martis Valley, it may not be feasible to fully mitigate all construction emissions. Thus, this impact is considered **significant and unavoidable** for the Proposed Land se Diagram and Alternatives AA, AB, and AC.

Impact 4.6.2 Local Carbon Monoxide Concentration Impacts

PP Carbon monoxide concentrations (hot spots) at project intersections at build-out under the Proposed Land Use Diagram would not exceed state or federal air quality standards. This would be a **less than significant** impact.

AA Carbon monoxide concentrations (hot spots) at project intersections at build-out under the Existing Martis Valley General Plan would not exceed state or federal air quality standards. This would be a **less than significant** impact.

AB Carbon monoxide concentrations (hot spots) at project intersections at build-out under the Alternative 1 Land Use Map would not exceed state or federal air quality standards. This would be a **less than significant** impact.

AC Carbon monoxide concentrations (hot spots) at project intersections at build-out under the Alternative 2 Land Use Map would not exceed state or federal air quality standards. This would be a **less than significant** impact.

PP–AC Proposed Land Use Diagram and Alternatives AA through AC

The screening form of the CALINE-4 dispersion model predicted that concentrations of CO near major intersections within or near the planning area currently meet the ambient air quality standards. Similar predictions for the year 2021 with build-out of each project alternative together with cumulative increases in traffic volumes do not indicate violations of any ambient air quality standard (See **Table 4.6-3**). Since this conservative, worst-case, worst-location analysis does not predict that concentrations would exceed the state or federal standards (35 PPM/20 PPM for the 1-hour averaging time and 9 PPM for the 8-hour averaging time) project impacts on local carbon monoxide concentrations are predicted to be **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Mitigation Measures

None required.

Impact 4.6.3 Regional Ozone Precursor Emissions

PP Summertime emissions of ozone precursors as a result of subsequent development under the Proposed Land Use Diagram would exceed the Placer County APCD's thresholds of significance. This would be a **significant** impact.

AA Summertime emissions of ozone precursors as a result of subsequent development under this alternative would exceed the Placer County APCD's thresholds of significance. This would be a **significant** impact.

AB Summertime emissions of ozone precursors as a result of subsequent development under this alternative would exceed the Placer County APCD's thresholds of significance. This would be a **significant** impact.

AC Summertime emissions of ozone precursors as a result of subsequent development under this alternative would exceed the Placer County APCD's thresholds of significance. This would be a **significant** impact.

PP Proposed Land Use Diagram

Total emissions associated with this alternative are shown in **Table 4.6-4** for the two ozone precursors (Reactive Organic Gases and Nitrogen Oxides). Ozone is a summertime pollutant, so that project impacts on ozone air quality will be a result of summertime emissions. Summertime project emissions of both ROG and NOx exceed the Placer County APCD's significance threshold of 82 pounds per day.

NOx emissions from this alternative represent a possible source of additional nitrogen deposition into Lake Tahoe. Transport of pollutants from the Martis Valley into the Tahoe Basin is an unusual event, but would still contribute to air quality issues in the Basin. Specifically, wind data from Donner Summit show winds from a westerly quadrant (southwest through northwest) occur 63 percent of the time, while winds from a northerly quadrant (northwest through northeast) occur only 3.8 percent of the time (California Department of Water Resources, 2002).

TABLE 4.6-4
PROJECT DIRECT/INDIRECT EMISSIONS IN POUND PER DAY

Alternative	Source	ROG		NOx		PM_{10}	
		Summer	Winter	Summer	Winter	Summer	Winter
Proposed Land Use Diagram (PP)	Vehicle Exhaust/ Road Dust	425.7	447.9	1329.5	1451.3	727.2	2562.0
	Landscaping	8.3	---	0.7	---	0.2	---
	Wood Burning	---	2633.8	---	390.2	---	3004.5
	Natural Gas Combustion	10.6	10.6	138.0	138.0	0.3	0.3
	Consumer Products	386.7	386.7	---	---	---	---
	Total	**831.3**	**3479.0**	**1468.2**	**1979.5**	**727.7**	**5566.8**
Existing MV Community Plan (AA)	Vehicle Exhaust/ Road Dust	582.1	611.4	1790.2	1953.2	980.7	3455.1
	Landscaping	9.7	---	0.8	---	0.2	---
	Wood Burning	---	3850.3	---	570.4	---	4392.1
	Natural Gas Combustion	16.8	16.8	219.6	219.6	0.4	0.4
	Consumer Products	565.4	565.4	---	---	---	---
	Total	**1174.0**	**5043.9**	**2010.6**	**2743.2**	**981.3**	**7847.6**
Alternative 1 (AB)	Vehicle Exhaust/ Road Dust	531.3	553.6	1656.0	1784.3	906.5	3153.1
	Landscaping	19.1	---	1.5	---	0.4	---

Alternative	Source	ROG		NOx		PM_{10}	
		Summer	Winter	Summer	Winter	Summer	Winter
	Wood Burning	---	3525.4	---	522.3	---	4021.6
	Natural Gas Combustion	15.9	15.9	205.9	205.9	0.4	0.4
	Consumer Products	495.7	495.7	---	---	---	---
	Total	**1062.0**	**4570.6**	**1863.4**	**2512.5**	**907.3**	**7175.1**
Alternative 2 (AC)	Vehicle Exhaust/ Road Dust	472.7	497.6	1463.3	1597.2	800.7	2821.0
	Landscaping	11.3	---	0.9	---	0.2	---
	Wood Burning	---	3071.6	---	455.1	---	3503.9
	Natural Gas Combustion	12.7	12.7	165.6	165.6	0.3	0.3
	Consumer Products	451.0	451.0	---	---	---	---
	Total	**947.7**	**4032.9**	**1629.8**	**2217.9**	**801.2**	**6325.2**

AA Existing Martis Valley General Plan Land Use Map

Total emissions associated with this alternative are shown in **Table 4.6-4** for the two ozone precursors (Reactive Organic Gases and Nitrogen Oxides). Ozone is a summertime pollutant, so that project impacts on ozone air quality will be a result of summertime emissions. Summertime project emissions of both ROG and NOx exceed the Placer County APCD's significance threshold of 82 pounds per day. The existing plan generates higher levels of emissions for ozone precursors than all other land use plan alternatives (PP, AB, and AC). Specifically, the existing Martis Valley Community Plan Land Use Map would generate between 10 and 37 percent more reactive organic gases and between 9 and 35 percent more nitrogen oxides than all 3 land use plan alternatives (PP, AB, and AC) during both summer and winter conditions.

NOx emissions from this alternative represent a possible source of additional nitrogen deposition into Lake Tahoe. However, only a small fraction of the travel generated by Community Plan land uses would be directed towards and into the Lake Tahoe Basin. Specifically, wind data from Donner Summit show winds from a westerly quadrant (southwest through northwest) occur 63 percent of the time, while winds from a northerly quadrant (northwest through northeast) occur only 3.8 percent of the time (California Department of Water Resources, 2002).

AB Alternative 1 Land Use Map

Total emissions associated with this alternative are shown in **Table 4.6-4** for the two ozone precursors (Reactive Organic Gases and Nitrogen Oxides). Ozone is a summertime pollutant, so that project impacts on ozone air quality will be a result of summertime emissions. Summertime project emissions of both ROG and NOx exceed the Placer County APCD's significance threshold of 82 pounds per day.

NOx emissions from this alternative represent a possible source of additional nitrogen deposition into Lake Tahoe. However, only a small fraction of the travel generated by Community Plan

land uses would be directed towards and into the Lake Tahoe Basin. Specifically, wind data from Donner Summit show winds from a westerly quadrant (southwest through northwest) occur 63 percent of the time, while winds from a northerly quadrant (northwest through northeast) occur only 3.8 percent of the time (California Department of Water Resources, 2002).

AC Alternative 2 Land Use Map

Total emissions associated with this alternative are shown in **Table 4.6-4** for the two ozone precursors (Reactive Organic Gases and Nitrogen Oxides). Ozone is a summertime pollutant, so that project impacts on ozone air quality will be a result of summertime emissions. Summertime project emissions of both ROG and NOx exceed the Placer County APCD's significance threshold of 82 pounds per day.

NOx emissions from this alternative represent a possible source of additional nitrogen deposition into Lake Tahoe. However, only a small fraction of the travel generated by Community Plan land uses would be directed towards and into the Lake Tahoe Basin. Specifically, wind data from Donner Summit show winds from a westerly quadrant (southwest through northwest) occur 63 percent of the time, while winds from a northerly quadrant (northwest through northeast) occur only 3.8 percent of the time (California Department of Water Resources, 2002).

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan, which are listed below. Compliance with these plan policies would help mitigate this impact.

Policy 9.H.1 *The County shall develop mitigation measures to minimize stationary source, area source, and indirect source emissions.*

Policy 9.H.4 *The County shall encourage project proponents to consult early in the planning process with the County regarding the applicability of countywide indirect and area wide source programs and transportation control measures (TCM) programs. Project review shall also address energy-efficient building and site designs and proper storage, use, and disposal of hazardous materials.*

Policy 9.H.5 *The County shall encourage innovative measures, which include offsite mitigation strategies, to reduce air quality impacts. Innovative measures can be identified during a pre-application consultation process and during County staff/applicant negotiation over CEQA mitigation.*

Policy 9.H.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.*

Policy 9.H.8 *The County may require new development projects to submit an air quality analysis. Based on this analysis, the County shall require*

appropriate mitigation measures consistent with the PCAPCD's current list of Best Available Mitigation Measures and/or the most recent version of the Air Quality Attainment Plan.

Policy 9.H.9 *The County shall require new development to be planned to result in smooth flowing traffic conditions for major roadways for the vast majority of time. This includes traffic signals and traffic signal coordination, parallel roadways, and intra-and inter-neighborhood connections where reductions in overall emissions can be achieved.*

Policy 9.H.10 *The County shall continue and, where appropriate, expand the use of synchronized traffic signals on roadways susceptible to emissions improvement through approach control.*

Policy 9.H.11 *The County shall encourage the use of alternative modes 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.*

Policy 9.H.12 *The County shall consider instituting disincentives for single-occupancy vehicle trips, including limitations in parking supply in areas where alternative transportation modes are available and other measures identified by the Placer County Air Pollution Control District and incorporated into regional plans.*

Policy 9.H.13 *The County shall endeavor to secure adequate funding for transit services so that transit is a viable transportation alternative. New development shall either operate their own or pay its fair share of the cost of transit equipment and facilities required to serve new projects.*

Policy 9.H.14 *The County shall require new developments to dedicate land for and construct appropriate improvements for park-and-ride lots, if suitably located.*

Implementation of the above policies during the environmental approval process for individual developments would reduce ozone precursor emissions. The implementation of land use/design measures and transportation programs have the potential to reduce impact by 15-30 percent. The implementation of off-site mitigation and/or imposition of mitigation offset fees (9.H.6) would result in further emission reductions, but the actual amount of emission reductions would depend on the off-site program developed for the Martis Valley.

Mitigation Measures

The following would apply to the Proposed Land Use Diagram and Alternatives AA, AB and AC.

MM 4.6.3 The following language shall be added to policy 9.H.6:

"County staff will develop, with the advice of the Placer County APCD, a mitigation fee program for indirect sources similar to that in use in western Placer County. Mitigation targets will be identified, appropriate off-site mitigation programs developed, and equitable fees established."

This mitigation measure, together with the other air quality policies would reduce ozone precursor impacts, but it is unlikely that impacts could be reduced by such a degree that the PCAPCD threshold of significance would not be exceeded. After mitigation, impacts of the project on ozone precursor emissions would be **significant and unavoidable** for the Proposed Land Use Diagram and Alternatives AA, AB and AC.

Impact 4.6.4 Regional PM_{10} Emissions

PP Project-related summertime emissions of PM_{10} for the Proposed Land Use Diagram would exceed the Placer County APCD's thresholds of significance. This would be a **significant** impact.

AA Project-related summertime emissions of PM10 for the Existing Martis Valley General Plan Land Use Map would exceed the Placer County APCD's thresholds of significance. This impact would be a **significant** impact.

AB Project-related summertime emissions of PM10 for the Alternative 1 Land Use Map would exceed the Placer County APCD's thresholds of significance. This would be a **significant** impact.

AC Project-related summertime emissions of PM10 for the Alternative 2 Land Use Map would exceed the Placer County APCD's thresholds of significance. This would be a **significant** impact.

PP Proposed Land Use Diagram

Total emissions associated with this alternative are shown in **Table 4.6-4** for the PM_{10}. PM_{10} is primarily a wintertime problem in the Martis Valley. The bulk of the emissions are from wood burning and road dust. Road dust impacts would occur a few days following a major snowstorm (after the snowmelt and before the roads are swept), and would occur primarily off-site along the major roads that are sanded. This impact would contribute to ambient PM concentrations through the Plan area. Wood burning emissions also occur primarily in the winter months. Wintertime project emissions of PM_{10} exceed the Placer County APCD's significance threshold of 82 pounds per day. According to the Urbemis Analysis, summertime PM emissions would be above thresholds under project build-out.

AA Existing Martis Valley General Plan Land Use Map

Total emissions associated with this alternative are shown in **Table 4.6-4** for the PM_{10}. PM_{10} is primarily a wintertime problem in the Martis Valley. The bulk of the emissions are from wood burning and road dust. Road dust impacts would occur a few days following a major snowstorm (after the snowmelt and before the roads are swept), and would occur primarily off-site along the major roads that are sanded. This impact would contribute to ambient PM concentrations through the Plan area. Wood burning emissions also occur primarily in the winter months. Wintertime project emissions of PM_{10} exceed the Placer County APCD's significance threshold of

82 pounds per day. According to the Urbemis Analysis, summertime PM emissions would be above thresholds under project build-out.

AB Alternative 1 Land Use Map

Total emissions associated with this alternative are shown in **Table 4.6-4** for the PM_{10}. PM_{10} is primarily a wintertime problem in the Martis Valley. The bulk of the emissions are from wood burning and road dust. Road dust impacts would occur a few days following a major snowstorm (after the snowmelt and before the roads are swept), and would occur primarily off-site along the major roads that are sanded. This impact would contribute to ambient PM concentrations through the Plan area. Wood burning emissions also occur primarily in the winter months. Wintertime project emissions of PM_{10} exceed the Placer County APCD's significance threshold of 82 pounds per day. According to the Urbemis Analysis, summertime PM emissions would be above thresholds under project build-out.

AC Alternative 2 Land Use Map

Total emissions associated with this alternative are shown in **Table 4.6-4** for the PM_{10}. PM_{10} is primarily a wintertime problem in the Martis Valley. The bulk of the emissions are from wood burning and road dust. Road dust impacts would occur a few days following a major snowstorm (after the snowmelt and before the roads are swept), and would occur primarily off-site along the major roads that are sanded. This impact would contribute to ambient PM concentrations through the Plan area. Wood burning emissions also occur primarily in the winter months. Wintertime project emissions of PM_{10} exceed the Placer County APCD's significance threshold of 82 pounds per day. According to the Urbemis Analysis, summertime PM emissions would be above thresholds under project build-out.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan, which are listed below. Compliance with these plan policies and implementation programs would help mitigate this impact.

Policy 9.H.1 *The County shall develop mitigation measures to minimize stationary source, area source, and indirect source emissions.*

Policy 9.H.4 *The County shall encourage project proponents to consult early in the planning process with the County regarding the applicability of countywide indirect and area wide source programs and transportation control measures (TCM) programs. Project review shall also address energy-efficient building and site designs and proper storage, use, and disposal of hazardous materials.*

Policy 9.H.5 *The County shall encourage innovative measures, which include offsite mitigation strategies, to reduce air quality impacts. Innovative measures can be identified during a pre-application consultation process and during County staff/applicant negotiation over CEQA mitigation.*

Policy 9.H.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.

Policy 9.H.8 *The County may require new development projects to submit an air quality analysis. Based on this analysis, the County shall require appropriate mitigation measures consistent with the PCAPCD's current list of Best Available Mitigation Measures and/or the most recent version of the Air Quality Attainment Plan.*

Mitigation Measures

Implementation of the above policies and Mitigation Measure MM 4.6.3 during the environmental approval process for individual developments would reduce PM_{10} emissions. The requirement that particulate matter emissions from new development should be offset through on-site or off-site mitigation strategies could reduce the net impact of the project to a level that is less-than-significant. However, since there are no details regarding how this would be implemented the impact is considered **significant and unavoidable** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

4.6.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

SETTING

The cumulative air quality analysis take into account the immediate air quality conditions associated with the Martis Valley area as well as the Mountain Counties Air Basin and the Tahoe Basin.

Table 3.0-1 and **Figures 3.0-4, 4.0-1,** and **4.0-2** illustrates proposed and conceptual development projects in the Martis Valley area that would contribute to cumulative air quality impacts.

IMPACTS AND MITIGATION MEASURES

Impact 4.6.5 Cumulative Air Quality Impacts

PP Anticipated development and operational effects associated with subsequent development under the Proposed Land Use Diagram in would contribute local and regional air pollution emissions. This would be a **cumulative significant** impact.

AA Anticipated development and operational effects associated with subsequent development under the Existing Martis Valley General Plan Land Use Map would contribute local and regional air pollution emissions. This would be a **cumulative significant** impact.

AB Anticipated development and operational effects associated with subsequent development under the Alternative 1 Land Use Map in would contribute local and regional air pollution emissions. This would be a **cumulative significant** impact.

AC Anticipated development and operational effects associated with subsequent development under the Alternative 2 Land Use Map in would contribute local and regional air pollution emissions. This would be a **cumulative significant** impact.

PP Proposed Land Use Diagram

As described in Impacts 4.6.1, 4.6.3 and 4.6.4, subsequent development under the Proposed Land Use Diagram in combination with anticipated development in the Martis Valley area and the region would contribute to excessive air pollution levels that could impact the ability for Placer County, Nevada County, Town of Truckee and the Tahoe Basin to meet mandated local, state and federal air quality standards.

AA Existing Martis Valley General Plan Land Use Map

As described in Impacts 4.6.1, 4.6.3 and 4.6.4, subsequent development under the Existing Martis Valley General Plan Land Use Map in combination with anticipated development in the Martis Valley area and the region would contribute to excessive air pollution levels that could impact the ability for Placer County, Nevada County, Town of Truckee and the Tahoe Basin to meet mandated local, state and federal air quality standards.

AB Alternative 1 Land Use Map

As described in Impacts 4.6.1, 4.6.3 and 4.6.4, subsequent development under the Alternative 1 Land Use Map in combination with anticipated development in the Martis Valley area and the region would contribute to excessive air pollution levels that could impact the ability for Placer County, Nevada County, Town of Truckee and the Tahoe Basin to meet mandated local, state and federal air quality standards.

AC Alternative 2 Land Use Map

As described in Impacts 4.6.1, 4.6.3 and 4.6.4, subsequent development under the Alternative 2 Land Use Map in combination with anticipated development in the Martis Valley area and the region would contribute to excessive air pollution levels that could impact the ability for Placer County, Nevada County, Town of Truckee and the Tahoe Basin to meet mandated local, state and federal air quality standards.

Policies and Implementation Programs

Policies and Implementation Programs that would provide some mitigation are described under Impacts 4.6.1, 4.6.3 and 4.6.4.

Mitigation Measures

Implementation of the policies, implementation programs in the Community Plan and identified mitigation measures would assist in mitigating the Community Plan's contribution to cumulative air quality impacts. However, Community Plan air pollutant air emissions are expected to exceed Placer County Air Pollution Control District standards even with implementation of these measures. Given these conditions, the cumulative air quality impact is considered **significant and unavoidable** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

REFERENCES

Placer County Planning Dept., 1990, *Martis Valley Community Plan*.

Placer County Planning Dept., 1994, *Placer County Community Plan Update*.

Northern Sierra Air Quality Management District. 2001. *Northern Sierra Air Quality Management District Annual Air Monitoring Report 2000*. Grass Valley, California.

John E. Reuter, Alan D. Jassby, Charles R. Goldman and Alan C. Heyvaert, *Contribution of Basin Watershed and Atmospheric Deposition to Eutrophication at Lake Tahoe*, Tahoe Research Group , University of California, Davis, 2001.

Town of Truckee. 1999. *Particulate Matter Air Quality Management Plan.* Truckee, California.

Vintze, David. Associate Air Quality Planner, Placer County Air Pollution Control District. *Personal Communication* 10-3-2001.

California Department of Water Resources, *Wind in California*, Bulletin No. 185, January 1978.

SECTION 4.7
HYDROLOGY AND WATER QUALITY

This section discusses and analyzes the surface hydrology, groundwater, and water quality characteristics of the Plan area. The information provided in this section is based on the Martis Valley Ground Water Management Plan by the Placer County Water Agency (1998), Ground Water Availability in the Martis Valley Ground Water Basin (Nimbus, 2001), Water Quality Assessment & Modeling Report by the Desert Research Institute (2001), and technical review by Geosolutions.

4.7.1 EXISTING SETTING

SURFACE WATER

The study area (Plan area) includes approximately 35 square miles of land generally bounded by Placer/Nevada County line to the north, Highway 89 to the west, northwesterly boundary to the Lake Tahoe Basin to the south and the California/Nevada state line to the east. Long narrow valleys typify the Martis Valley area with gentle, and moderate to steep sloping hillsides that bound them on either side. The topography of the Plan area is part of the Truckee Basin that ranges from nearly flat valley floors in the central portion of the region to gentle to steep sloping terrain along eastern and southern boundaries of the Plan area. **Figure 4.7-1** illustrates the existing topography and surface hydrology of the Martis Valley Community Plan area.

Surface water resources in the Plan area are part of the greater Truckee River watershed and includes a network of streams, a seasonal lake, and reservoir. Runoff from precipitation is the primary source of surface water supply, although there are numerous springs within the area. Surface water is not the main source of domestic water supply in the Plan area, but Truckee River watershed surface waters are the main source of domestic water for the downstream communities of Reno and Sparks, Nevada.

Martis Creek, Juniper Creek, Gooseneck Lake, and Martis Creek Lake are the main surface hydrological features in the Plan area (see **Figure 4.7-2**). Martis Creek and its tributaries including West Martis, Middle Martis, and East Martis Creeks, and the first and second order streams of Juniper Creek exhibit dendritic drainage patterns throughout the Plan area. The dendritic pattern is a stream pattern characterized by irregular branching in many directions. This pattern is common in terrain underlain by massive rocks or flat-lying strata. In such situations the differences in rock resistance are so slight that their control of the directions in which valleys grow headward is negligible. Such is the case throughout most of the Plan area that is underlain by relatively young andesite rocks. Also, most of the erosional debris including boulders, cobbles, gravel, sand, silt and clays are composed of andesitic materials.

The Martis Creek drainage system includes approximately 46 miles of channels that drain an area approximately 39.6 square miles in size. The portion of Juniper Creek that is located within the planning area has slightly less than six miles of channel and drains an area approximately 3.3 square miles in size. Gooseneck Lake receives only intermittent surface water flows that makes the Martis Creek Lake the principal surface water storage facility in the Martis Valley.

In a memorandum prepared by the Placer County Water Agency (PCWA) titled "Technical Memorandum Regarding Surface Water Availability in Martis Valley," dated June 11, 2001, the total amount of surface water that may become available to the Truckee River basin once the Truckee River Operating Agreement (TROA) is implemented would be 10,000 acre-feet (AF) per year. But this allocation cannot be fulfilled until Public Law 101-618 (PL 101-618) is fully implemented. Therefore the chances of acquiring a State Water Board permit for diversion of surface water from the Truckee River would be unlikely at this time. PL 101-618 has special provisions relevant to water resource allocation to the Truckee River basin.

An amount of surface and groundwater equal to 32,000 AF per year has been allocated for the Truckee River basin and of this amount the maximum annual diversion of surface water from the Truckee River would be limited to not more than 10,000 AF per year.

In the past, those who wished to divert surface waters in California could do so by using one of the following mechanisms: 1) riparian water right; 2) pre – 1914 appropriative water right; or 3) permit issued by the State Water Board for post –1914 appropriative rights. The State Water Board estimates that there are over 100 water rights of record in the Truckee River Basin that allow use of nearly 10,000 AF of water per year in California. Of these, 13 of the largest diverters hold rights to over 95 percent of the total volume of water. The State Water Board also estimated that some of the diversions may not be accurate and may no longer exist because current diversions of surface water from the Truckee River Basin are more likely in the range between 2,500 to 4,000 AF annually. Since the federal act has allocated only 10,000 AF annually an estimated additional 6,000 to 7,500 AF annually may become available for use in the basin. With this information, the State Water Board estimate of 6,000 AF of surface water will be available once TROA is approved.

Precipitation and Climate

Precipitation in the Martis Valley area is dependent mainly on both climate and topography. Regional climate in the winter months is dominated by westerly on-shore flows of moist marine air from the Pacific Ocean. In the summer months, relatively stable high-pressure cells are found over the area. Because of the area's high elevation the local climate is characterized by cold, wet winters and short mild summers. Mean temperatures at the Truckee Ranger Station range from an average minimum of 14.7 degrees Fahrenheit in January to an average of 81.8 degrees Fahrenheit in August.

About 75 percent of the annual precipitation is received in the winter months. Much of the precipitation falls as snow or mixed rain and snow as a result of orographic storms during the winter and early spring months from November to April. Summer time precipitation is primarily associated with convection cell thunderstorms. West of Truckee the higher elevations along the crest of the Sierra Nevada mountains generate a distinct rain shadow to the east of its main ridge and over the Plan area. This reaction causes a variation in precipitation from approximately 40 inches a year in the western portion of the Martis Valley region at the Donner Memorial State Park to approximately 23 inches each year in the eastern part of the region at Boca.

Both water in the Truckee River and groundwater recharge depend heavily on the melting of the snowpack on the mountains when temperatures rise in late spring and early summer or because of melting as a direct response to large warm rainfalls on large winter snowpacks. Within the upper Truckee River basin the runoff for the spring snowmelt period from April through June typically ranges from 50 to 65 percent of the total annual runoff. This period also accounts for the majority of groundwater recharge in the Martis Valley basin.

Flooding

A vast majority of the Plan area, per the Federal Emergency Management Agency (FEMA) via their National Flood Insurance Program, is in a Zone X designation – "Areas determined to be outside 500 year floodplain". While most of the Plan area is dominated by terrain not prone to flooding, there are low lying areas along Martis Creek that are subject to 100-year floods (see **Figure 4.7-3** for approximate 100-year floodplain boundaries). Because of this condition FEMA has classified several hundred acres of land along Martis Creek into a Zone A floodplain category – "Special Flood Hazard area (100-year flood)". The size of this acreage is

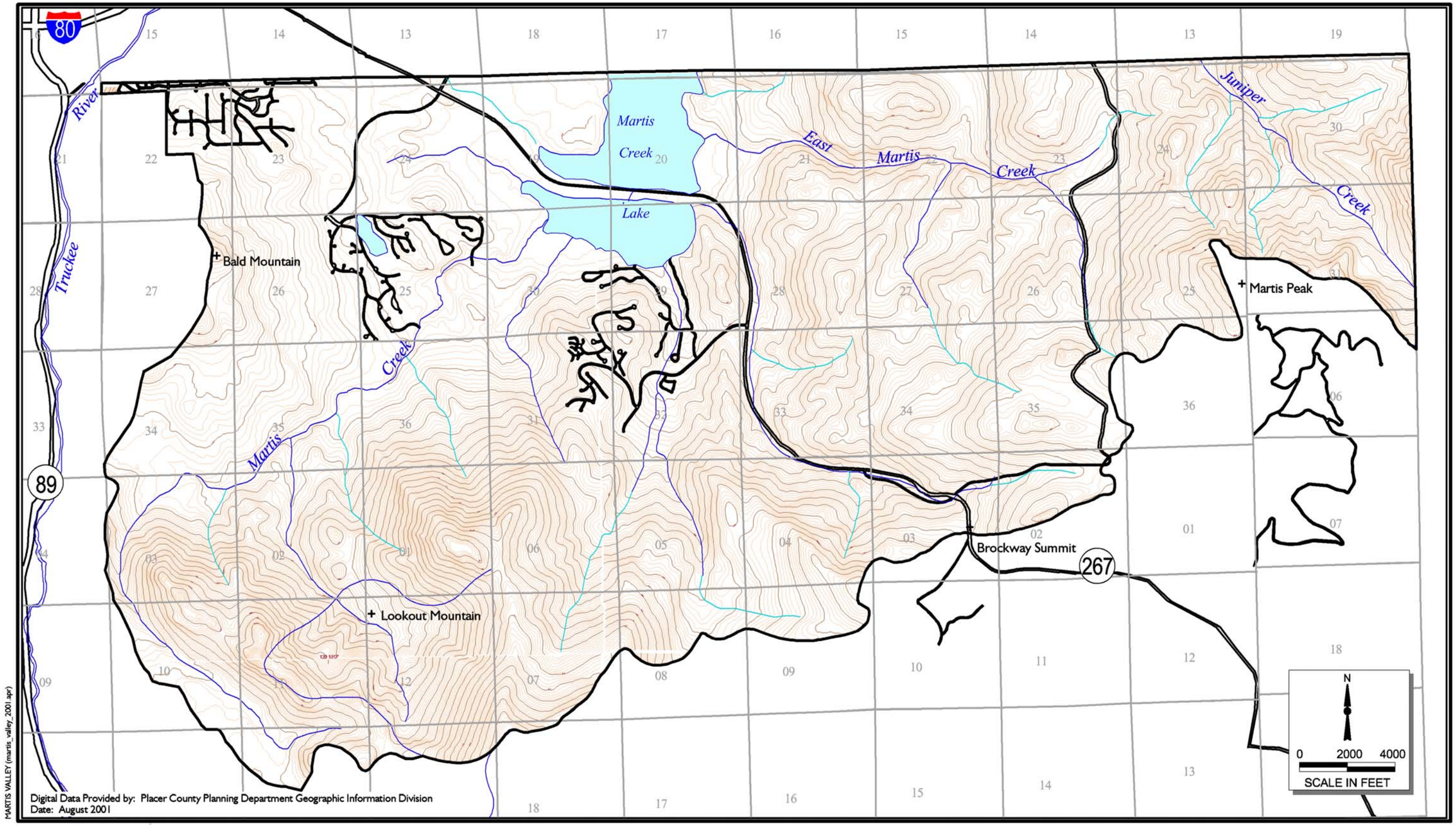


FIGURE 4.7-1
TOPOGRAPHICAL & HYDROLOGICAL FEATURES

PMC

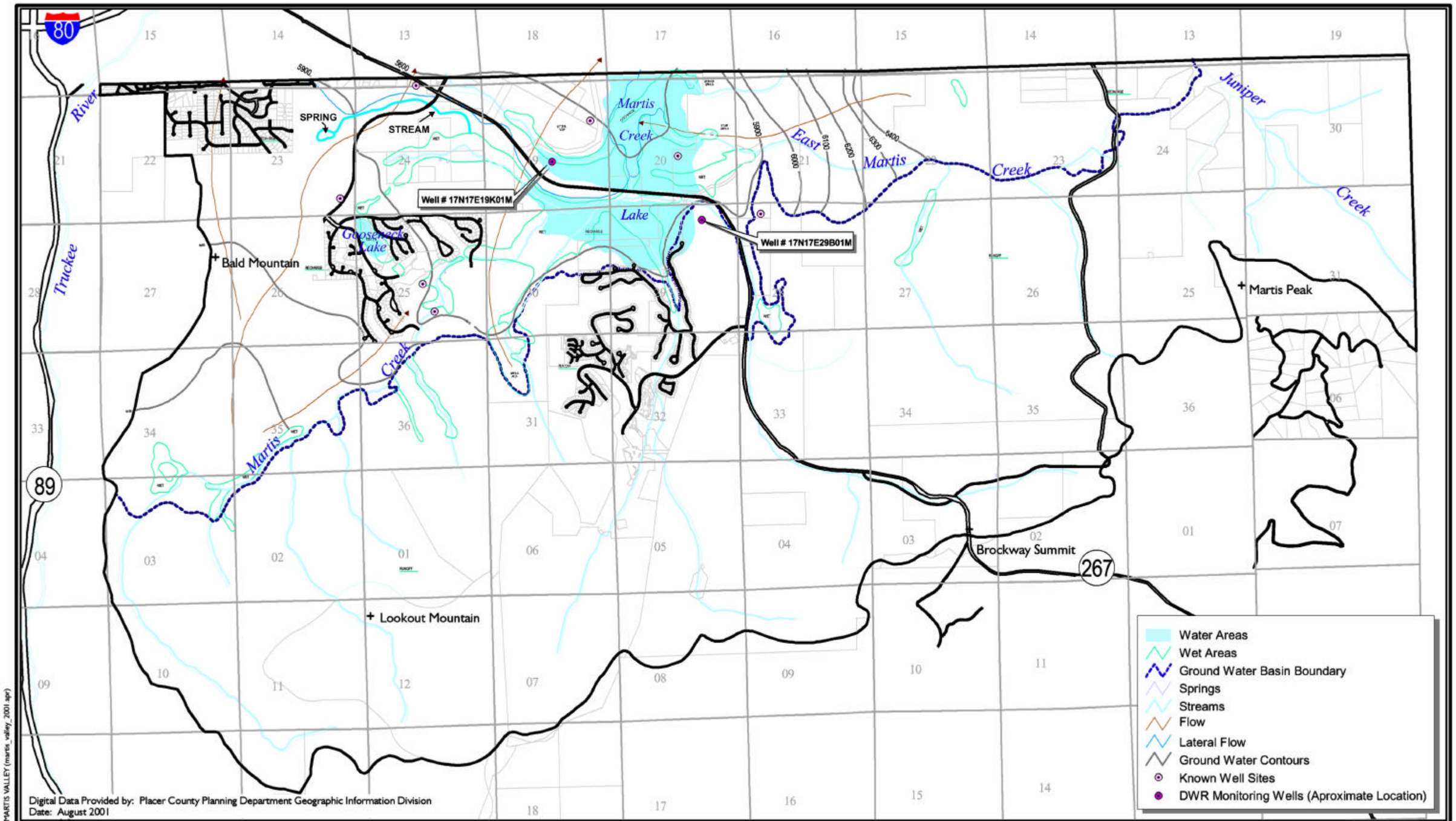


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FIGURE 4.7-2
HYDROLOGICAL FEATURES

approximately 1,300 acres and it is located mostly in Sections 19, 20, 29, & 30, in T 17 N, R 17 E. It is located up stream from Martis Creek Lake and in an area where drainage channels of the Martis, West Martis, Middle Martis and East Martis Creeks converge. A smaller strip of land along both sides of Martis Creek in low lying terrain is also classified as Zone A.

The agency with jurisdiction over aspects of stormwater management in Placer County is the Placer County Flood Control And Water Conservation District. The District was formulated to ensures the effects of flooding are minimized through, among others, the implementation of a program that ensures appropriate design of new proposed projects within the County. Major components of the program include:

- Maintain major drainage facilities including primarily stream channels, and construction of detention and retention basins;
- Provide technical support to local governments;
- Perform regional drainage studies including master drainage plans, and implement the regional projects and programs delineated therein;
- Provide advisory to local governments;
- Gather information and data on flooding events; and,
- Coordinate flood reduction activities with adjacent jurisdictions.

Goals of the District, as reflected by their Stormwater Management Manual, are centered around a level of protection that utilize criterion based on the 100-year flood to minimize property damage, injury and loss of life. These goals are to:

- Provide protection from periodic inundation which could result in loss of life and property;
- Protect and enhance natural resources belonging to the stream environment;
- Prevent significant erosion and adverse effects on water quality;
- Provide a regional approach to stormwater management which is both internally consistent and consistent with other community goals and plans;
- Achieve maximum use of resources through multiple compatible uses; and,
- Assure orderly growth and development and minimize its adverse effects.

The regional master plan is regarded as one of the most cost effective means of achieving stormwater management goals. Floodplain management is an important component in the overall stormwater management strategy. To achieve its objective, the District has advised the County to ensure the use of pre- and post- project HEC-1 and HEC-2 studies by applicants of proposed projects for 10-year and 100year storm events. These studies will help ensure that post project stormwater discharge rates do not exceed natural flow rates prior to development. Because most projects will increase impervious surface areas and channel contained runoff through enclosed drainage system(s) to points of discharge, the discharge rate of stormwater will certainty increase without the use of appropriately sized and designed detention/retention basins. Therefore, a major component to the District's stormwater management strategy is the

use of detention and/or retention basins to temporarily store large volumes of runoff while releasing this runoff to the surrounding environment at a much lower than normal discharge rate. With the utilization of detention and/or retention basins on future development and the presence and proposed use of Martis Creek Reservoir, the possible threat by flooding within Martis Creek drainage and Truckee River system due to proposed developments in the Plan Area appear to be low.

WATER QUALITY

Quality of surface waters is generally excellent in the upper reaches of the Plan area's stream network with few contaminants and nutrients. The Lahontan II Environmental Impact Report states that "grazing, which is presumably the source of elevated coliform levels in Martis Creek, is the only notable existing land use in the watershed that has perceivably affected runoff quality". However, the Tahoe-Truckee Sanitation Agency, which samples Martis Creek water twice monthly at 2 separate locations downstream of Martis Creek Lake, reports that fecal-coliform levels do not support the presumption that grazing has affected runoff quality. In fact, fecal coliform levels during a monitoring period that lasted for 11 months from May 4, 1999 to April 3, 2000, did not exceed a value equal to 20 percent of the water quality objective for this constituent, as established by the Lahontan Regional Water Quality Control Board. As part of the water quality study commissioned by the Lahontan Region Water Quality Control (RWQCB) associated with establishing the Total Maximum Daily Load (TMDL) for sediment for the Truckee River Watershed, suspended sediment loads for Martis Creek were estimated at 635 tons in 1997 (Desert Research Institute, 2001). Per the DRI, their proposed future target for TMDL from Martis Creek drainage is 446 tons. Therefore, existing sediment loads must be decreased by 189 tons in order to achieve the desired objective.

Currently, the Truckee River is a listed waterway on California's Clean Water Act Section 303(d) list due to sediment. The Lahontan Regional Water Quality Control Board is currently working on establishing the TMDL for the Truckee River in order to identify reductions of sediment delivery into the river and to bring the waterway into attainment with applicable water quality standards. The Division of Hydrologic Sciences, Desert Research Institute was retained by the RWQCB to prepare the Water Quality Assessment and Modeling of the California Portion of the Truckee River Basin (July 2001) in order to provide technical data for the development of the TMDL. The Water Quality Assessment and Modeling of the California Portion of the Truckee River Basin identifies that the Little Truckee, Prosser and Donner creeks are the major waterway contributors of suspended sediment to the Truckee River.

The study also identifies that the northern and central land areas of the Plan area along Martis Creek have varying sediment load potential (from 0.001 to 0.12 tons per square mile x 10^ -3), and that areas closer to the Truckee River affect in-stream sediment concentrations the greatest and land areas of higher elevations (typically with steep slopes) produce higher sediment loads per unit area.

On June 17, 2001, the Martis Fire started and ultimately burned approximately 14,500 acres of land locate north and northeast of the Plan area. Reports indicate the fire was fast moving and therefore did not cause much "high intensity burning" of the forest. In areas where the fire burned hot and destruction was complete the soils should be artificially protected. This effort can be accomplished by covering the ground with pine needles and erosion can be slowed through the felling of dead trees horizontally across slopes, spreading of straw wattles, reseeding, and placement of loose rock dams in creeks that drain up gradient watershed areas burnt in the fire.

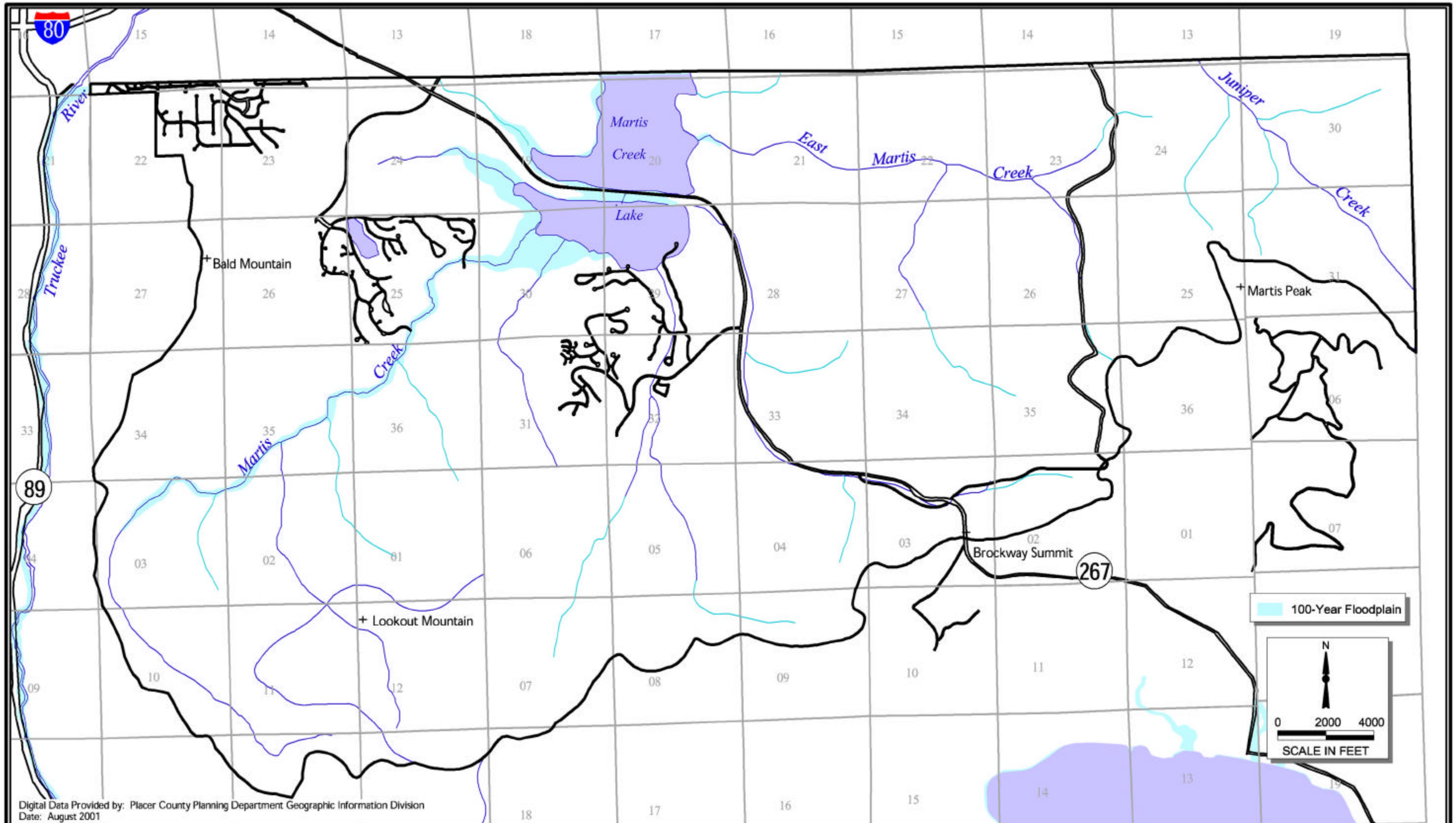

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FIGURE 4.7-3
100-YEAR FLOODPLAIN

The fire remained mostly within the Bronco and Gray Creek watersheds that are located mostly between Floriston, CA to the northwest and Mount Rose, Nevada, to the southeast. Both drainage systems are located northeast of the Juniper Creek drainage that is located in the easterly portion of the Plan area. Therefore, damage sustained in the 2 watershed areas should have little to no effect on surface water quality in the Juniper Creek drainage or to the quality of water in other drainage systems in the Plan area and the Lake Tahoe basin. Precipitation that falls into the Plan area does not flow south, but northward into Martis and Juniper Creek drainage systems, then further northward to the Truckee River. However, the effects of the Martis Fire will add to current sediment issues with the Truckee River downstream of the Plan area.

According to a representative of the Tahoe National Forest, Nevada City Ranger District work to restore the burnt areas in Bronco and Gray Creek watersheds was initiated during 2001. Restoration efforts varied between the 2 watershed areas because of differences in terrain. In the Bronco Creek watershed terrain was less severe and more able to hold intermediate soils located on subtle hillsides. Therefore, restoration included reseeding of grasses by helicopter, orienting fallen trees horizontally to help prevent down slope flows of surface waters, and placement of hay waffles on the ground for protection of exposed soils from splash erosion by rain drops. Also, the falling of brown pine needles from trees in areas where the fire traveled fast across the ground has helped cover large areas of the ground surface. In Gray Creek the terrain is much steeper with hillsides between 30 to 50 percent. Overlying soils are thin and acidic thus not as amenable for the growth of vegetation. Even movement of forestry crews across this terrain would cause severe disturbance of soils and initiate their transport down slope. Therefore, restoration efforts in this watershed has mostly involved the placement of loose rock dams in creek channels, natural germination of existing seeds in soils, natural covering of the ground by pine needles falling from burned trees, and protection of soils by natural accumulation of snow cover. According to the agency's implementation leader, the proposed restoration program was completed by September of 2001 in both drainage systems.

GROUNDWATER

Groundwater Resources in Martis Valley

The Ground Water Availability in the Martis Valley Ground Water Basin report (Nimbus, 2001) provides the most recent data regarding groundwater resources in the Martis Valley Ground Water Basin (Basin) (see **Figure 4.7-4**).

This report was the result of assessing an accumulation of geologic and hydrogeologic data that had been collected during other previous studies dating back as far as the early 1970s. The purpose of this report was to evaluate the Basin with a water balance approach to estimate the amount of groundwater available in the Basin without changing the amount of groundwater in storage over the long term.

In this report, the Basin was defined as a low lying area about 57 square miles in size and completely contained within a larger watershed area of approximately 167 square miles. Faults controlled the development of the Basin. Downward movement along these faults has progressed within an outline surrounding high angle normal faults. These structures roughly define the sides to the Basin. The extension of the earth's crust within this part of the Basin and Range Province has served as the driving mechanism that has developed the area's horst and graben terrain.

Downward movement of the Basin's floor, comprised of Cretaceous-Jurassic plutonic and metamorphic rocks and Miocene volcanics, has resulted in the deposition of sediments and intermediate to mafic lavas, tuffs and volcaniclastic materials of late Miocene to Quaternary age within the evolving depression. Drilling logs indicate these deposits are over 1,000 feet thick and are now host to unconfined and confined aquifers of the Basin.

Sediments that fill the Basin were deposited in fluctuating lacustrine and river environments that had persisted throughout much of Basin's +/- 7 million years of development. As a result, spatial continuity in their inherent engineering and hydrogeologic characteristics must be limited thus ensuring these materials to be both anisotropic and heterogeneous. In addition to the variable conditions in which these sediments were deposited the basin also received periodic intervals when various types of igneous materials were laid down. Volcanic processes were responsible for deposition of these volcanic materials on ancient terrain that must have controlled the direction and extent the lava flowed from their vents. Geochemistry also made a contribution to the extent these flows could migrate overland. Lava with intermediate compositions would be more localized versus the ultramafic flows that are known to travel great distances.

Nimbus studied the Basin's detailed hydrogeology to enable the generalization of its subsurface characteristics. The hydrogeologic characteristics were approximated and enable their performance of relevant evaluations that could then be based upon assumptions the aquifer is isotropic and homogeneous. With this approach, trends could be approximated and placed into categories with averaged values that could closely represent actual in-situ conditions or measured responses. From their report, Nimbus provided the following overview of hydrogeologic estimates for the Basin:

1) Volume of sedimentary and volcanic materials filling in the Basin's 1,000 foot deep depression is estimated to be approximately 9,680,000 acre-feet (AF);

2) Volume of groundwater in storage beneath the surface of the Basin is 484,000 AF;

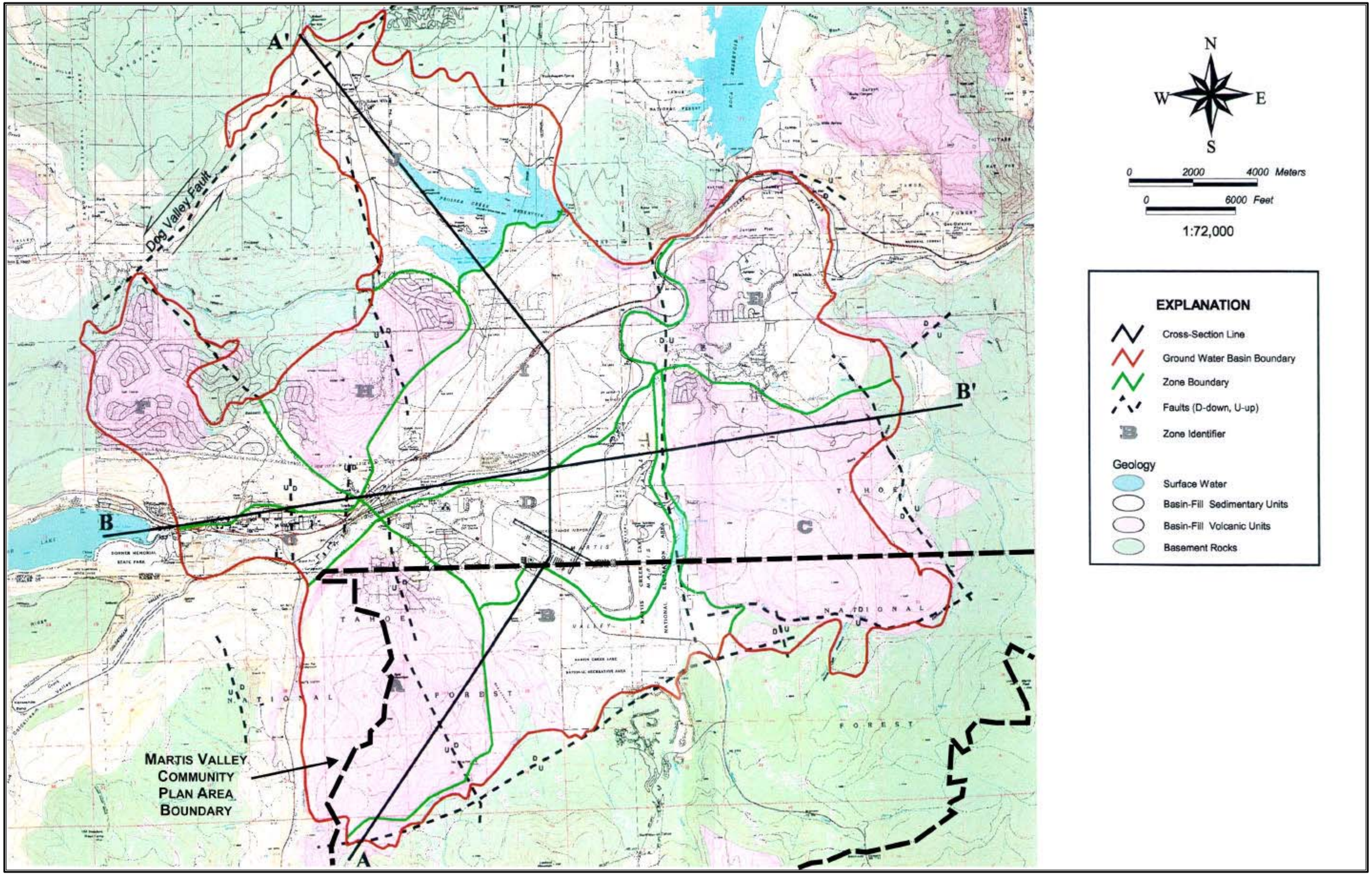
3) Storage coefficient or storativity (S) for the Basin is based on unconfined aquifer conditions and given a value of 0.05 or 5 percent (values can range between 1 percent to 30 percent). Specific storage typically used for confined aquifers was not mentioned, but these values typically range between 0.001 percent to 0.1 percent and may be relevant to the deeper confined aquifer.

4) Basin wide averaged (assumed weighted to area) recharge efficiency was estimated at 25.3 percent with an annual recharge rate of 23,744 AF from precipitation. This recharge efficiency is up from 19.6 percent utilized during previous studies by others.

5) In a normal rainfall year approximately 24,700 AF of groundwater in Basin is available without changing the amount in storage over the long term.

6) Total average annual groundwater flux through the Basin is 34,598 AF.

Total annual groundwater extraction from the Basin is currently 7,252 AF. This extraction is from artificial methods originating from numerous municipal production wells, various industries, and many residential wells. Therefore, approximately an additional 17,448 AF of groundwater is currently available for extraction each year from the underlying aquifer beneath the basin without changing the amount of water in storage.



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Source: Nimbus, 2001

Figure 4.7-4
Martis Valley Ground Water Basin

The Ground Water Availability in the Martis Valley Ground Water Basin Report identifies two general aquifers in the Basin consisting of an upper aquifer and the middle/lower aquifer. However, geologic conditions in the subsurface vary throughout the Basin that results in varying sized water-bearing formations, which occur at varying depths. Boring data from the installation of wells in the general vicinity of Schaffer Mill Road and the Truckee-Tahoe Airport have all identified water bearing formations (sediments associated with the Lousetown Formation and Truckee Formation) and non-bearing formations (lava associated with the Lousetown Formation Volcanics) associated with the upper and middle/lower aquifers at varying depths and thickness (GeoTrans, 2000). In addition, the Ground Water Availability in the Martis Valley Ground Water Basin Report identifies that there is a continuous clay member at the base of the upper aquifer that limits the transfer of groundwater based on well data from the Tahoe-Truckee Sanitation Agency (Nimbus, 2001). However, some interaction between these aquifers is assumed to occur.

The upper aquifer system is fed by year-round infiltration from flowing creeks and precipitation, and in turn, this aquifer feeds waterways (Truckee River) and local springs and wetland areas from groundwater discharge. The middle/lower aquifer begins at depths ranging from approximately 200 to 800 feet below ground surface level and is the primary aquifer utilized for domestic water use (Nimbus, 2001). The Ground Water Availability in the Martis Valley Ground Water Basin Report identifies that hydrogeologic and water level data indicates that the middle/lower aquifer responds as a confined aquifer.

Groundwater Quality

Table 4.7-1 identifies groundwater for wells currently operating in Martis Valley based on the results of the Report on Groundwater Resource Potential Eaglewood Subdivision (GeoTrans, 2000). Test results showed that these elements or compounds were detected in the ground water samples, but at concentrations below maximum contaminant levels (MCLs) established by California Drinking Water Standards. The GeoTrans report points out that arsenic and radon concentration in the local ground water are a water quality concern in Martis Valley. The existing EPA MCL for arsenic is 0.05 milligrams per liter (mg/L), whereas MCL values have not been set for radon at this time. The EPA is considering lowering the arsenic MCL to 0.005 mg/L. A value of 0.02 mg/L has also been recommended. The EPA is proposing a radon MCL of 300 pico-curies per liter (pCi/L). However, each State has the ability to implement an alternative MCL of 4,000 pCi/L as long as the State incorporates a public education program.

Elevated arsenic concentrations in ground water were identified in the Southside Hydrogeologic Test Hole, the Martis Valley Test Hole, and the Brockway well. Ground water from the Southside Hydrogeologic Test Hole exceeds California Drinking Water Standards for arsenic (0.05 mg/L) and manganese (0.05 mg/L) at concentrations of up to 0.063 mg/L and 0.090 mg/L, respectively. Ground water from the Brockway well does not exceed current drinking water standards for arsenic, but exceeds the EPA proposed drinking water standard (0.005 mg/L) with a concentration of 0.046 mg/L. Higher arsenic concentrations are inherent in ground water produced from volcanic rocks, as evidenced in the Southside Hydrogeologic Test Hole, and could also be attributed to long ground water residence times within these rocks as suggested in the Brockway well.

4.7.2 REGULATORY FRAMEWORK

FEDERAL

Clean Water Act (CWA)

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water-quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges, subparagraph (e);
- Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites", subparagraph (a);
- Specify the disposal sites for such permits, subparagraph (b);
- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas", subparagraph (c);
- Specify type of and conditions for non-prohibited discharges, subparagraph (f);
- Provide for individual State or interstate compact administration of general permit programs, subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs, subparagraph (i);
- Ensure public availability of permits and permit applications, subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section, subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations, subparagraph (s).

The California State Water Resources Control Board and RWQCB's enforce the federal Clean Water Act, including administration of NPDES permits for various discharges into waterways.

TABLE 4.7-1
WATER QUALITY DATA FOR MARTIS VALLEY WELLS

Selected water quality (mg/l)

well	date	TDS	Ca	Mg	Na	K	SO4	Cl	HCO3	Fe	Mn	As	Radon	NO3-N
	MCL	1000	none	125	none	none	500	500	none	0.3	0.05	0.05(1)	none(2)	10
Lahontan 1	09/22/1996	120	17	12	6	3	nd	nd	130	0.06	nd	0.003	0.1	0.2
Lahontan 2	09/22/1996	120	17	12	5	3	nd	nd	120	0.22	nd	nd	0.22	0.9
Lahontan Irrig	02/07/2000	84		9.2			0.3	0.5		<0.05	<0.002	<0.002	3.4	0.2
Airport #2	06/29/1979	97	13	4.4	3.9	1	0.3	3.1	60	0.03	0.03	0.005		0.34
	1981											0.005		0.34
Brockway (3)	spring 2000									<0.05-55	**0.012-1.2**	0.01-0.046		
Southside #1	10/13/1994		13	9.2	3.8	1.2	<0.5	2.3	88	**0.3**	**0.5**	<0.004	<1.0	0.3
	1981	106	11.8	9.3	3.5	1	0.1	2.4	89	0.02	0.01	0.005		0.04
Southside #2	10/13/1994		13.6	10.3	3.9	1.4	0.6	3.8	93	**4.3**	**0.2**	0.01		0.5
	1981	112	13.2	9.7	3.1	1	0.1	2.3	95	**4.1**	0.03	0.005		0.52
Martis Valley														

(1) current standards
(2) current standards
(3) interval sampling
nd=non detect
radon units are pCi/l. Some values are reported as total alpha
bold results are at or exceed drinking water standards

Source: GeoTrans, Inc., 2000.

The new NPDES Stormwater Phase II is a far-reaching federally mandated program requiring installation of Best Management Practices (BMPs) to improve non-point source pollution of stormwater runoff. Among other requirements, after March 10, 2003 the law will require installation of BMPs for water quality control for long term (post-construction) improvement in water quality runoff from development projects. The six elements of the Phase II permit would consist of the following:

1) Public Education and Outreach on Storm Water Impacts

2) Public Involvement/Participation

3) Illicit Discharge Detection and Elimination

4) Construction Site Storm Water Runoff Control

5) Post-Construction Storm Water Management in New Development and Redevelopment

6) Pollution Prevention / Good Housekeeping for Municipal Operations

RWQCB's are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters including Martis Creek. In the Martis Valley, the RWQCB is responsible for protecting surface and groundwaters from both point and non-point sources of pollution. Water quality objectives for Martis Creek were established by the RWQCB and are listed in its Basin Plan (discussed below).

Federal Emergency Management Agency (FEMA)

Placer County is a participant in the National Flood Insurance Program (NFIP), a Federal program administered by the Federal Emergency Management Agency (FEMA). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years although such a flood may occur in any given year. The County is occasionally audited by the DWR to insure the proper implementation of FEMA floodplain management regulations.

Public Law 101-618 (Truckee-Carson-Pyramid Lake Water Settlement Act)

In addition to the limits of water availability resulting from the physical characteristics of the Martis Valley Basin, there are legal limitations that may affect the amount of water that can be used within the Plan area. Primary among these legal limitations is the Truckee-Carson-Pyramid Lake Settlement Act (P.L. 101-618, or "Settlement Act"), passed by Congress in 1990.

The Settlement Act was aimed at resolving long-standing disputes over the sharing of the water resources of the Tahoe and Truckee River Basins. The disputes involved conflicting claims of entitlement by the Pyramid Lake Paiute Tribe of Indians, whose reservation is in Nevada; by the State of Nevada and its water users; by Sierra Pacific Power Company, the water supplier to the growing cities of Reno and Sparks; by the United States, which delivers Truckee River water for irrigation of the Truckee-Carson Irrigation District and for fishery purposes; and by the State of California and its water users. These disputes have rendered the States of Nevada and California

unable to manage and administer their water right laws to permit appropriation of water within the Truckee River watershed for almost 30 years.

In the 1990 Settlement Act, Congress established an allocation of water between the 2 states, but provided that the allocation would not become effective until an operating agreement, the "Truckee River Operating Agreement" or "TROA" was signed by the 5 disputing parties. At this time, the basic principles of the TROA have been negotiated, although it cannot be finalized or executed until an Environmental Impact Statement (federal) and an Environmental Impact Report (California) are completed and certified. Nevertheless, in its Martis Valley Groundwater Management Plan, dated October 6, 1998, PCWA has assumed the future execution and implementation of TROA and the applicability of the Settlement Act's allocation and restrictions. This Martis Valley Community Plan will likewise assume that the Settlement Act and TROA is a limiting factor in future water supply development.

The Settlement Act's allocation of water for use in California in the Truckee River watershed outside of the Lake Tahoe basin is 32,000 acre feet per year of gross diversion, of which no more than 10,000 acre feet can be taken from surface streams. In the TROA negotiation, the parties have agreed that consumptive uses would consume 55 percent of the allowable gross diversion of 32,000 acre feet; and therefore that a cap should be set on consumptive uses at 17,600 acre feet per year (Draft TROA, Section 6.E.2.).

In addition to the gross allocation of 32,000 acre feet (net depletion of 17,600 acre feet per year) of water to the Truckee River Basin, the Settlement Act imposes conditions on the manner in which water may be taken for use, and establishes a mechanism for resolving further interstate disputes concerning groundwater availability in the Martis Valley, should one arise. New wells are required to be located so as to minimize any short-term reductions in surface flows.

In the TROA negotiations, the parties have agreed that the Settlement Act's well siting limitation should be implemented by establishing minimum setbacks from surface streams, outside of which wells would be deemed to comply with the Settlement Act's requirements. Well setbacks from the Truckee River and lakes that are 500 feet from the centerline or high water mark; from perennial streams, lakes thereon and springs, 200 feet; and from intermittent streams and springs, 50 feet, would satisfy the Settlement Act's restrictions.

Finally, while the Settlement Act allows Nevada users to take water in California for use in the State of Nevada so long as it is not needed in California, the Act prohibits Nevada users from taking California groundwater if the extraction would cause the groundwater basin's safe yield to be exceeded. The United States Geological Survey was named by the Settlement Act to perform as arbiter in the limited circumstance of an interstate dispute over safe yield. Because this provision of the Settlement Act arises only with respect to interstate use of groundwater, it has no application to groundwater availability for use within California under the Martis Valley Community Plan.

Water Availability for Future Development

In the past, those who wished to divert surface waters in California could do so by 1 of the following mechanisms: (1) riparian right; (2) pre-1914 appropriative water right; or (3) obtaining a permit from the State Water Resources Control Board ("SWRCB") for a post-1914 appropriative right. The SWRCB has estimated that there are over 100 water rights of record in the Truckee River Basin that allow use of nearly 10,000 acre feet of water per year in California. Of these, 13 of the largest diverters hold rights to over 95 percent of the total face value of these water rights.

The SWRCB has also estimated that some of the diversion records may not be accurate, and that some of the rights may no longer be valid.

Current gross diversions reported in the Truckee River Basin are more likely in the range of 2,500 to 4,000 acre feet annually, of which approximately 2,200 acre feet is by public water purveyors. Based upon the SWRCB's records, therefore, it estimates that an additional 6,000 to 7,000 acre feet annually may become available once TROA is implemented. PCWA has adopted a conservative estimate of 6,000 acre feet of surface water potentially available for future use.

The availability of groundwater has been investigated by Nimbus Engineers. Based upon 30 years of hydrologic data, which included both years of severe drought and multiple years of prolonged drought, Nimbus estimated that approximately 24,700 acre feet of groundwater could be pumped annually without long-term loss of groundwater storage.

Current annual groundwater extraction from the Basin is estimated to be 7,252 acre feet. This extraction is by artificial methods including numerous municipal production wells, various industries' wells, and many residential wells. Therefore, approximately 17,448 acre feet of groundwater is available for extraction annually without adversely affecting the long-term storage of the basin. Because this estimate was arrived at in consideration of a lengthy period of record that included serious and prolonged drought, and because the volume in storage in the groundwater basin is so great, the Nimbus estimate of yearly pumpage can be considered a long-term reliable supply in all year types.

Under reliable estimates by the SWRCB and Nimbus, therefore, the total water supply available to meet future development is 23,448 acre feet of water (gross diversion or extraction), of which no more than 6,000 acre feet should be obtained from surface water sources until the estimate can be refined following execution and implementation of TROA.

STATE

Regional Water Quality Control Board, Lahontan Region (LRWQCB)

The RWQCB issues permits for activities that could cause impacts to surface waters and groundwater in the project area. Surface water and groundwater objectives of the LRWQCB are set forth in the Water Quality Control Plan for the Lahontan Region (Basin Plan). Chapter 3 of the Basin Plan includes general water quality objectives for all surface water and groundwater features for a variety of constituents and establishes the following specific criteria for Martis Creek at its confluence with the Truckee River:

TABLE 4.7-2
WATER QUALITY OBJECTIVES FOR MARTIS CREEK

Objective (mg/L except as noted) [1,2]								
TDS	**Cl**	**SO_4**	**P**	**B**	**NO_3-N**	**N**	**TKN**	**Fe**
150	25.0	8.0	0.05	-	1.00	1.45	0.45	0.40

[1] Values shown are mean of monthly mean for the period of record.
[2] Objectives are as mg/L and are defined as follows:
B: Boron — *Cl: Chloride*
N: Nitrogen, total — *NO3-N: Nitrogen as Nitrate*
TKN: Nitrogen, total Kjeldahl — *P: Phosphorus, total*

In addition, Chapter 4 of the Basin Plan prohibits the discharge of earthen materials into the 100-year floodplain Truckee River Hydrologic Unit (which includes Martis Creek and associated tributaries). However, exemptions may be granted by the LRWQCB that fall within the following categories of new projects:

(1) projects solely intended to reduce or mitigate existing sources of erosion or water pollution, or to restore the functional value to previously disturbed floodplain areas;

(2) bridge abutments, approaches, or other essential transportation facilities identified in an approved general plan;

(3) projects necessary to protect public health or safety or to provide essential public services;

(4) projects necessary for public recreation; or

(5) projects that will provide outdoor public recreation within portions of the 100-year floodplain that have been substantially altered by grading and/or filing activities which occurred prior to June 26, 1975.

In addition to meeting one of the following categories, the project must be consistent with findings set forth in Chapter 4 as well as LRWQCB Resolution 6-93-08.

LOCAL

Placer County Water Agency Martis Valley Groundwater Management Plan

The Placer County Water Agency has established the Martis Valley Groundwater Management Plan (1998). The Groundwater Management Plan (GMP) area is roughly half of the Martis Valley Community Plan Area. The GMP is pursuant to California State AB 3030 (codified into California Water Code Sections 10750, *et seq.*), which allows local agencies to develop groundwater management plans where the local agency service area overlies a state designated groundwater basin. The GMP acknowledges groundwater availability data that was available in 1998 (i.e. the interim safe yield determination by Truckee Donner Public Utility District in the late 1970s), but did not specifically establish standards associated with this data. The GMP identified the following direction regarding groundwater management:

1) Monitoring groundwater levels and quality;

2) Evaluating or reevaluating of safe yield; and

3) Coordinating management of the Martis Valley Groundwater Basin with other local agencies.

Subsequent to the GMP, the Ground Water Availability in the Martis Valley Ground Water Basin Report (Nimbus, 2001) has identified that there is 24,700 acre-feet annually of groundwater in Martis Valley available that can be utilized without changing the volume of groundwater in storage in Martis Valley over the long term. This report updates the 1970s work conducted by TDPUD and takes advantage of increased knowledge of the Martis Valley hydrogeology and professional hydrogeologist experience compared to that available the late 1970s.

PLACER COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

The Place County Flood Control & Conservation District was formed by legislative resolution on Senate Bill 1312 and made effective on August 23rd, 1984. Formulation and guidance of the District was guided by a consensus of other participating local government agencies including the Placer Resource Conservation District and Soil Conservation Services. Objective of the District is to reducing the effects of flooding by maintenance of drainage basins, use of detention/retention basins, technical support, perform studies, advise, collect data and coordinate with adjacent jurisdictions. This District is the agency with jurisdiction over aspects of stormwater management within the Plan Area.

Martis Valley General Plan Provisions Associated with Hydrological Resources

The Martis Valley General Plan (1990) "constitutes a more specific and definitive section of the Placer County General Plan." Policies are separated into subsections of Environmental Resource Policies and Community Development & Transportation Policies. Policies associated with hydrological resources include:

Environmental Resource Policies

1) Management of timber and watershed lands;

2) Preservation of riparian vegetation and timber lands;

3) Retention/protection of stream environment zones; maintenance of streamflows;

4) Maintenance of groundwater recharge areas;

5) Retention of existing Basin water quality;

6) Determination of the effects of land use on groundwater levels and quality, including effects on riparian vegetation and wetlands;

7) Continuation of water quality management and monitoring programs.

Community Development and Transportation Policies

1) Flexibility to adjust the location of residential developments;

2) Establishment of a single entity to control water and sewage facilities and services.

Placer County General Plan

The Placer County General Plan outlines a County-wide drainage and flood management program to prevent flooding, protect soils from erosion, and minimize impacts on existing drainage facilities. The County also recognizes the value in groundwaters as a potential source of potable water and will implement policies that will ensure the preservation and safe use of this resource. The following list identifies General Plan policies that pertain to projects in Placer County and in the Plan area.

Policy 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.

Policy 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.

Policy 4.C.13 In implementation of groundwater use policies, the County will recognize the significant differences between groundwaters found in bedrock or "hardrock" formations of the foothill/mountain region and those groundwaters found in the alluvial aquifers of the valley. The County should make distinctions between these water resources in its actions.

Policy 4.E.1 The County shall encourage the use of natural stormwater drainage systems to preserve and enhance natural features.

Policy 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 nature state.

Policy 4.E.3 The County shall consider using stormwater of adequate quality to replenish local groundwater basins, restore wetlands and riparian habitat, and irrigate agricultural lands.

Policy 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 Stormwater Management Manual and the County Land Development Manual.

Policy 4.E.5 The County shall continue to implement and enforce its Grading Ordinance and Flood Damage Prevention Ordinance.

Policy 4.E.6 The County shall continue to support the programs and policies and the watershed flood control plans developed by the Flood Control and Water Conservation District.

Policy 4.E.7 The County shall prohibit the use of underground storm drain systems in rural and agricultural areas, unless no other feasible alternatives are available for conveyance of stormwater from new development or when necessary to mitigate flood hazards.

Policy 4.E.8 The County shall consider recreational opportunities and aesthetics in the design of stormwater ponds and conveyance facilities.

Policy 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 too drainage courses.

Policy 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).

Policy 4.E.11 The County shall require new development to adequately mitigate increases in stormwater 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.

Policy 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.

Policy 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.

Policy 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.

Policy 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).

Policy 4.E.16 The County shall strive to protect domestic water supply canal systems from contamination resulting from spillage or runoff.

Policy 4.E.17 The County shall wherever feasible, require that proponents of new projects encase, or otherwise protect from contamination, domestic water supply canals where they pass through developments with lot sizes of 2.3 acres or less; where subdivision roads are constructed within 100 feet upslope or upstream from canals; and within all commercial, industrial, institutional, and multi-family developments.

Policy 4.E.18 The County shall require that proponents of new projects fence domestic water supply canals where they pass through development with lot sizes between 2.3 and 4.6 acres; and on a case-by-case basis as determined by the entity responsible for the canal. This fencing shall be installed inside the project property line, and the proponent or subsequent landowner shall be responsible for fence maintenance. Said fencing shall be designed to impede pedestrian trespass of the canal area and to impede any dumping of materials into the canal.

Policy 4.F.1 The County shall require that arterial roadways and expressways, residences, commercial and industrial uses and emergency facilities be protected, at a minimum, from a 100-year storm event.

Policy 4.F.2 The County shall recognize floodplains as a potential public resources to be managed and maintained for the public's benefit.

Policy 4.F.3 The County shall continue to work closely with the U.S. Army Corps of Engineers, the resource conservation district, the Federal Emergency Management Agency, the State Department of Water Resources, and the Placer County Flood Control District, in defining existing and potential flood problem areas.

Policy 4.F.4 The County shall require evaluation of potential flood hazards prior to approval of development projects. The County shall require proponents of new developments to submit accurate topographic and flow characteristics information and depiction of the 100-year floodplain boundaries under fully-developed, unmitigated runoff conditions.

Policy 4.F.5 The County shall attempt to maintain natural conditions within the 100-year floodplain of all rivers and streams except under the following circumstances:

a. Where work is required to manage and maintain the stream's drainage characteristics and where such work is done in accordance with the Placer County Flood Damage Prevention Ordinance, California Department of Fish and Game regulations, and Clean Water Act provisions administered by the U.S. Army Corps of Engineers; or

b. When facilities for the treatment of urban runoff can be located in the floodplain, provided that there is no destruction of riparian vegetation.

Policy 4.F.6 The County shall continue to coordinate efforts with local, state, and federal agencies to achieve adequate water quality and flood protection.

Policy 4.F.7 The County shall cooperate with the Placer County Flood Control and Water Conservation District, surrounding jurisdictions, the cities in the county, and other public agencies in the planning and implementing regional flood control improvements.

Policy 4. F.8 The County shall, where possible, view flood waters as a resource to be used for waterfowl habitat, aquifer recharge, fishery enhancement, agricultural water supply, and other suitable uses.

Policy 4.F.9 The County shall continue to implement floodplain zoning and undertake other actions required to comply with state floodplain requirements, and to maintain the County's eligibility under the Federal Flood Insurance Program.

Policy 4.F.10 The County shall preserve or enhance the aesthetic qualities of natural drainage courses in their natural or improved state compatible with flood control requirements and economic, environmental, and ecological factors.

Policy 4.F.11 To the extent that funding is available, the County shall work to solve flood control problems in areas where existing development has encroached in a floodplain.

Policy 4.F.12 The County shall promote the use of natural or non-structural flood control facilities, including off-stream flood control basins to preserve and enhance creek corridors.

Policy 4.F.13 The County shall continue to implement and enforce its Grading Ordinance and Flood Damage Prevention Ordinance.

Policy 4.F.14 The County shall ensure that new storm drainage systems are designed in conformance with the Placer County Flood Control and Water Conservation District's Stormwater Management Manual and the County's Land Development Manual.

Policy 6.A.1 The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species. Based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. The County may, however, allow exceptions, such as in the following cases:

a. Reasonable use of the property would otherwise be denied;

b. The location is necessary to avoid or mitigate hazards to the public;

c. The location is necessary for the repair of roads, bridges, trails, or similar infrastructure; or

d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.

Policy 6.A.2 The County shall require all development in the 100-year floodplain to comply with the provisions of the Placer County Flood Damage Prevention Ordinance.

Policy 6.A.3 The County shall require development projects proposing to encroach into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:

a. Avoid the disturbance of riparian vegetation;

b. Replace riparian vegetation (on-site, in-kind);

c. Restore another section of creek (in-kind); and/or,

d. Pay a mitigation fee for restoration elsewhere (e.g., wetland mitigation banking program).

Policy 6.A.4 Where creek protection is required or proposed, the County should require public and private developments to:

a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) shall be located to optimize resource protection. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;

b. Designate such easement or dedication areas (as described in a. above) as open space;

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major or eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

d. Provide recreation and public access near creeks consistent with other General Plan policies;

e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding or water pollution) and will include erosion and sediment control practices such as: 1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas; and/or are stabilized with permanent vegetation that will prevent the transport of sediment off site; and, 2) temporary vegetation sufficient to stabilize disturbed areas.

f. Provide for long-term corridor maintenance by providing a guaranteed financial commitment to the County which accounts for all anticipated maintenance activities.

Policy 6.A.5 The County shall continue to require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for agricultural activities.

Policy 6.A.6 The County shall require that natural watercourses are integrated into new development in such a way that they are accessible to the public and provide a positive visual element.

Policy 6.A.7 The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.

Policy 6.A.8 Where the stream environment zone has previously been modified by channelization, fill, or other human activity, the County shall require project proponents to restore such areas by means of landscaping, revegetation, or similar stabilization techniques as a part of development activities.

Policy 6.A.9 The County shall require that newly created parcels include adequate space outside of watercourses' setback areas to ensure that property owners will not place improvements (e.g., pools, patios, and appurtenant structures), within areas that require protection.

Policy 6.A.10 The County shall protect groundwater resources from contamination and further overdraft by pursuing the following efforts:

a. Identifying and controlling sources of potential contamination;

b. Protecting important groundwater recharge areas;

c. Supporting major consumptive use of groundwater aquifer(s) in the western part of the county only where it can be demonstrated that this use does not exceed safe yield and is appropriately balanced with surface water supply to the same area.

Policy 6.A.11 Open space located in watersheds, which serve reservoirs is important to the adequate performance of those reservoirs for their intended purposes and should be preserved and protected. The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and within 5,000 feet of the reservoir shall be considered as having an immediate effect.

Policy 6.A.12 The County shall encourage the protection of floodplain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.

Policy 6.B.1 The County shall support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.

Policy 6.B.2 The County shall require new development to mitigate wetland loss in both regulated and non-regulated wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability: (1) avoidance; (2) where avoidance is not possible minimization of impacts on the resource; or (3) compensation, including use of a mitigation banking program that provides the opportunity to mitigate impacts to rare,

threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.

Policy 6.B.3 The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.

Policy 6.B.5 The County shall require developments that affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, (a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; (b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plan; and, (c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alternation to a wetland is considered a less-than-significant impact under CEQA.

4.7.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A hydrologic or flooding impact of the proposed Martis Valley Community Plan Update would be considered significant if it would result in any of the following actions based on the following criteria:

1) Generate substantial stormwater runoff and/or alter surface water drainage patterns that would result in an increased severity of flooding within the Plan area or downstream;

2) Significantly degrade surface water and groundwater quality directly or indirectly;

3) Substantially deplete groundwater resources to such an extent that it would impact existing surface water features that rely on groundwater; or

4) Conflict with applicable local, state and/or federal policies and standards associated with water resources.

METHODOLOGY

The hydrology and water quality analysis is based on: 1) a review of published information, reports and plans regarding regional hydrology, climate, and geology; 2) consultation with agency representatives; and 3) analysis by Geosolutions. The analysis takes into account the density and type of land uses proposed under each of the three land use map options under consideration, as well as proposed and anticipated development in the Plan area and Martis Valley as a whole (future golf courses under application, conceptual ski terrain expansions). The reader is referred to **Table 3.0-1** and Section 4.0 (Introduction to the Analysis and Assumptions Used) regarding assumed land uses and development conditions in Martis Valley.

The project-level analysis focuses on water quality and drainage impacts on water features in the Plan area and the immediate area. Section 4.7.4 (Cumulative Setting, Impacts and

Mitigation Measures) addresses the project's contribution to cumulative impacts associated with the Truckee River Basin in relation to other development proposed in the Martis Valley area.

Impact 4.7.1 Construction Water Quality Impacts

PP Construction activities associated with subsequent development under the Proposed Land Use Diagram could cause accelerated soil erosion and sedimentation or the release of other pollutants to adjacent waterways. This would be a **significant** impact.

AA Construction activities associated with subsequent development under the Existing Martis Valley General Plan Land Use Map could cause accelerated soil erosion and sedimentation or the release of other pollutants to adjacent waterways. This would be a **significant** impact.

AB Construction activities associated with subsequent development under the Alternative 1 Land Use Map could cause accelerated soil erosion and sedimentation or the release of other pollutants to adjacent waterways. This would be a **significant** impact.

AC Construction activities associated with subsequent development under the Alternative 2 Land Use Map could cause accelerated soil erosion and sedimentation or the release of other pollutants to adjacent waterways. This would be a **significant** impact.

PP Proposed Land Use Diagram

Construction associated with subsequent development under the Community Plan would consist of substantial grading and vegetation removal activities that would increase soil erosion rates on the areas proposed for development. This will result in the exposure of raw soil materials to the natural elements (wind, rain, etc.). In rainy periods during the summer season grading operations may impact the surface runoff by increasing the amount of silt and debris carried by runoff. Areas with uncontrolled concentrated flow would experience loss of material within the graded areas and this could potentially impact the downstream water quality of Martis Creek and the Truckee River. As shown in **Table 3.0-2**, approximately 4,300 acres of the Plan area is anticipated to be substantially disturbed with urban levels of development under this land use map option, which includes proposed project sites such as Eaglewood, Northstar Village, and Hopkins Ranch. This estimate does not take into account proposed and conceptual ski terrain expansions by Northstar-at-Tahoe. Martis Creek was estimated to carry approximately 635 tons of suspended sediment load (Desert Research Institute, 2001), and this level of development could increase this load. It should be noted that a majority of the land area proposed for development under the Proposed Land Use Diagram consists of gentle slope conditions and tends to avoid drainage channel areas.

Refueling and parking of construction equipment and other vehicles onsite during construction may result in spills of oil, grease, or related pollutants that may discharge into Plan area drainages. Improper handling, storage, or disposal of fuels and materials or improper cleaning of machinery close to Martis Creek could cause water quality degradation.

Measures included in subsequent grading plans for development projects would be required to comply with County Grading Ordinance to help eliminate erosion potential and water quality degradation in Martis Creek. Future development would also be subject to review by the LRWQCB for compliance with NPDES requirements as well as with the Water Quality Control Plan for the Lahontan Region (Basin Plan). Based on review of the Proposed Land Use Diagram, it would appear that subsequent development under the Proposed Land Use Diagram would

require waterway crossings that would require the approval of an exemption by the LRWQCB to the waste discharge prohibitions set forth in Chapter 4 of the Basin Plan.

AA Existing Martis Valley General Plan Land Use Map

Construction associated with subsequent development under the Existing Martis Valley General Plan Land Use Map would consist of a similar level of land disturbance as the Proposed Land Use Diagram associated with substantial grading and vegetation removal activities that would increase soil erosion rates on the areas proposed for development. This will result in the exposure of raw soil materials to the natural elements (wind, rain, etc.). In rainy periods during the summer season grading operations may impact the surface runoff by increasing the amount of silt and debris carried by runoff. Areas with uncontrolled concentrated flow would experience loss of material within the graded areas and this could potentially impact the downstream water quality of Martis Creek and the Truckee River. As shown in **Table 3.0-3**, approximately 4,900 acres of the Plan area is anticipated to be substantially disturbed with urban levels of development under this land use map option, which includes proposed project sites such as Eaglewood, Northstar Village, and Hopkins Ranch. This estimate does not take into account proposed and conceptual ski terrain expansions by Northstar-at-Tahoe.

AB Alternative 1 Land Use Map

Construction associated with subsequent development under the Alternative 1 Land Use Map would consist of a similar level of land disturbance as the Proposed Land Use Diagram associated with substantial grading and vegetation removal activities that would increase soil erosion rates on the areas proposed for development. This will result in the exposure of raw soil materials to the natural elements (wind, rain, etc.). In rainy periods during the summer season grading operations may impact the surface runoff by increasing the amount of silt and debris carried by runoff. Areas with uncontrolled concentrated flow would experience loss of material within the graded areas and this could potentially impact the downstream water quality of Martis Creek and the Truckee River. As shown in **Table 3.0-4**, approximately 3,700 acres of the Plan area is anticipated to be substantially disturbed with urban levels of development under this land use map option, which includes proposed project sites such as Eaglewood, Northstar Village, and Hopkins Ranch. This estimate does not take into account proposed and conceptual ski terrain expansions by Northstar-at-Tahoe.

AC Alternative 2 Land Use Map

Construction associated with subsequent development under the Alternative 2 Land Use Map would consist of a similar level of land disturbance as the Proposed Land Use Diagram associated with substantial grading and vegetation removal activities that would increase soil erosion rates on the areas proposed for development. This will result in the exposure of raw soil materials to the natural elements (wind, rain, etc.). In rainy periods during the summer season grading operations may impact the surface runoff by increasing the amount of silt and debris carried by runoff. Areas with uncontrolled concentrated flow would experience loss of material within the graded areas and this could potentially impact the downstream water quality of Martis Creek and the Truckee River. As shown in **Table 3.0-5**, approximately 3,500 acres of the Plan area is anticipated to be substantially disturbed with urban levels of development under this land use map option, which includes proposed project sites such as Eaglewood, Northstar Village, and Hopkins Ranch. This estimate does not take into account proposed and conceptual ski terrain expansions by Northstar-at-Tahoe.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would provide some mitigation to construction water quality impacts.

Policy 6.E.3 *The County shall continue to implement and enforce its Grading Ordinance and Flood Damage Prevention Ordinance.*

Policy 6.E.10 *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.*

Policy 6.E.11 *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). Storm sewers are prohibited from connecting directly or indirectly to the TTSA sewer system.*

Policy 9.D.1 *The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species (see discussion of sensitive habitat buffers in Part 1 of the PCGP).*

In some cases, buffers shall be required which are substantially larger than noted above. Conversely, based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. In addition, the County may allow exceptions, such as in the following cases:

a. Reasonable use of the property would otherwise be denied;

b. The location is necessary to avoid or mitigate hazards to the public.

c. The location is necessary for the repair of roads, bridges, trails or similar infrastructure; or

d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement

Policy 9.D.2 *The County shall require that any permitted disturbance in the 100-year floodplain comply with the provisions of the Placer County Flood Damage Prevention Ordinance and any other existing regulations.*

Policy 9.D.3 *The County shall require development projects proposing to encroach (where it has been determined to be appropriate) into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:*

a. Avoid the disturbance of riparian vegetation;

b. Replace riparian vegetation (on-site, in-kind);

c. Restore another section of creek (in-kind) and/or;

d. Pay a mitigation fee for restoration elsewhere (e.g. wetland mitigation banking program).

Policy 9.D.4 *The County shall require public and private development to address creeks and riparian corridors as follows:*

a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) shall be located to optimize resource protection. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;

b. Designate such easement or dedication areas (as described in a. above) as open space;

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

d. Provide recreation and public access near creeks consistent with other General Plan policies;

e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: 1)turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall

be left in place until disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment off site; and/or 2) temporary vegetation is established sufficient to stabilize disturbed areas, and;

f. Provide for long-term creek corridor maintenance.

Policy 9.D.5 *The County shall continue to require the use of feasible and practical Best Management Practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for recreational development.*

Policy 9.D.7 *The County shall prohibit grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.*

Policy 9.D.8 *Where the stream environment zone has previously been modified by channelization, fill, or other human activity, the County shall require project proponents to restore such areas by means of landscaping, revegetation, or similar stabilization techniques as a part of development activities.*

Policy 9.D.9 *The County shall encourage the preservation and protection of open space located in watersheds, which serve reservoirs due to its importance in the adequate performance of those reservoirs for their intended purposes.*

The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and within 5,000 feet of the reservoir shall be considered as having an immediate effect. For Martis Valley, this includes Martis Creek Lake.

Policy 9.D.10 *The County shall encourage the protection of flood plain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific field work.*

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.*

Implementation Programs

Geology

3. *Continue to enforce the Placer County Grading Ordinance to ensue that areas of slope instability are adequately investigated and that any development incorporates appropriate design provisions to prevent landsliding.*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees/Plan Review Fees

4. *Require the preparation of drainage plans that direct runoff and drainage away from unstable slopes for construction is hillside areas.*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees/Plan Review Fees

6. *During the review of private development projects, required site specific studies shall include soil reports, slope analyses, grading plans, and erosion control and rehabilitation plans during environmental review, or at the first available opportunity, as needed.*

   Responsible Agency/Department: Development Review Committee
   Time Frame: On-going
   Funding: Permit fees/Plan Review Fees

7. *Through environmental review and project approval, avoid development on highly erosive soils and most slopes over 20%, if possible, and in all locations, slopes over 30%. Where development does occur in these areas, require the application of BMPs.*

   Responsible Agency/Department: Development Review Committee
   Time Frame: On-going
   Funding: Permit Fees.

8. *Continue the program of monitoring mitigation measures that relate to accelerated erosion and attendant problems.*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees/General Fund

Water Resources

10. *The County shall inform the public and prospective developers about those sections of the California Fish and Game Code that apply to diversion or obstruction of stream channels and pollution of waterways with detrimental material. This shall be done through distribution of educational materials with building permits and as a part of project review.*

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: General Fund

15. BMPs are structural and non-structural practices proven effective in soil erosion control and management of surface runoff. Eroding soils and surface water runoff transport pollutants, particularly plan nutrients and sediments, to the area's rivers and streams. Turf herbicides, pesticides, fertilizers, oil and grease contribute to the problem. Declines in water quality are directly attributable to the flow of non-point source pollutants into streams, rivers, and lakes. BMPs shall be implemented with every development project in the Martis Valley. The goal is to [1] stabilize the soil, [2] prevent erosion, and [3] divert runoff from impervious surfaces into infiltration systems. Within the Martis Valley, temporary BMPs are required while construction is underway and permanent BMPs are required to be in place prior to the development project being completed. Both temporary and permanent BMPs must be graphically shown on project plans.

Responsible Agency/Department: Department of Public Works
Time Frame: On-going
Funding: Permit Fees

18. Include mitigation measures for new development projects adopted pursuant to the Lahontan Regional Water Quality Control Board's requirements and permits issued under Section 404 of the Federal Clean Water Act.

Responsible Agency/Department: Development Review Committee
Time Frame: On-going
Funding: Permit Fees

Mitigation Measures

The following mitigation measures shall be incorporated into the Martis Valley Community Plan as policies under Goal 9.D of Natural Resources Section. The following mitigation measures shall apply to the Proposed Land Use Diagram and alternatives AA, AB and AC.

MM 4.7.1a The County shall require that each subsequent project applicant shall prepare a spill prevention and countermeasure plan describing measures to ensure proper collection and disposal of all pollutants handled or produced on the site during construction, including sanitary wastes, cement, and petroleum products. The plan shall be incorporated into project improvement plans.

MM 4.7.1b The County shall require each subsequent project clearly identify specific water quality control measures for Plan area waterways during construction activities. Water quality control features shall demonstrate that the water quality controls will ensure no increase in sediment or other pollutant loads in waterways and that storm water discharges are in compliance with all current requirements of the Lahontan Regional Water Quality Control Board (e.g., Water Quality Control Plan for the Lahontan Region).

MM 4.7.1c Subsequent development activities in the Plan area shall avoid disturbing or altering existing wetlands, natural waterway courses or channel conditions. Exceptions to this policy would include minor stream crossings and

improvements to the waterway that enhance the waterways natural condition to convey water and improvement water quality. Exceptions will be considered on a case-by-case basis by the County and the RWQCB and must be in compliance with the Water Quality Control Plan for the Lahontan Region (Basin Plan).

Implementation of the above policies, implementation programs and mitigation measures would mitigate construction water quality impacts to a **less than significant** level for the Proposed Land Use Diagram and alternatives AA, AB and AC.

Impact 4.7.2 Operational Surface Water Quality Impacts

PP Implementation of the Proposed Land Use Diagram could result in direct and indirect surface water quality impacts from operation of various land uses in the Plan area. This would be a **significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map could result in direct and indirect surface water quality impacts from operation of various land uses in the Plan area. This would be a **significant** impact.

AB Implementation of the Alternative 1 Land Use Map could result in direct and indirect surface water quality impacts from operation of various land uses in the Plan area. This would be a **significant** impact.

AC Implementation of the Alternative 2 Land Use Map could result in direct and indirect surface water quality impacts from operation of various land uses in the Plan area. This would be a **significant** impact.

PP Proposed Land Use Diagram

As described under Impact 4.7.1, subsequent development under the Proposed Land Use Diagram would result in substantial development and alteration of approximately 4,300 acres of the Plan area. Direct surface water quality impacts could occur from the following general land use activities in the Plan area:

- **Residential:** Maintenance of yards associated with the use of fertilizers, herbicides and pesticides and motor vehicle operation and maintenance.
- **Commercial:** Maintenance of landscape area associated with the use of fertilizers, herbicides and pesticides and motor vehicle operation and maintenance.
- **Recreation:** Maintenance of golf courses associated with the use of fertilizers, herbicides and pesticides (currently there are two existing golf courses in the and three proposed in the Plan area). Hiking, mountain biking, off-road vehicle use on un-paved roads and trails and ski terrain maintenance resulting in sedimentation of waterways.
- **Roadway Maintenance:** Snow removal activities (e.g., application of sand to roadways).

Runoff would typically contain oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), nutrients, sediment and other pollutants. Precipitation during the early portion of the wet season (November to April) displaces these pollutants into the stormwater runoff resulting in high pollutant concentrations in the initial wet weather runoff. This initial runoff, containing peak pollutant levels, is referred to as the "first flush" of storm events. It is

estimated that during the rainy season, the first flush of heavy metals and hydrocarbons would occur during the first five inches of seasonal rainfall.

The amount and type of runoff generated by the various projects would be greater than that under existing conditions due to increases in impervious surfaces. There would be a corresponding increase in urban runoff pollutants and "first flush" roadway contaminants such as heavy metals, oil, grease, as well as an increase in nutrients (i.e., fertilizers), and other chemicals from landscaped areas. These constituents would result in water quality impacts to onsite and offsite drainage flows to Martis Creek and it tributaries as well as the Truckee River.

In addition to direct surface water quality impacts, subsequent development under the Proposed Land Use Diagram would result in indirect surface water quality impacts associated with human domestic pet intrusion into wetlands and waterways in the Plan area as well as add to wastewater effluent discharges to the Truckee River by the Tahoe-Truckee Sanitation Agency Water Reclamation Plant (the environmental effects of Water Reclamation Plant expansion has been addressed in the Tahoe-Truckee Sanitation Agency Water Reclamation Plant Expansion Project EIR [State Clearinghouse No. 98052005]).

AA Existing Martis Valley General Plan Land Use Map

As described under Impact 4.7.1, subsequent development under the Existing Martis Valley General Plan Land Use Diagram would result in substantial development and alteration of approximately 4,900 acres of the Plan area. Direct and indirect surface water quality impacts could occur from the following general land use activities in the Plan area similar to the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

As described under Impact 4.7.1, subsequent development under the Alternative 1 Land Use Map would result in substantial development and alteration of approximately 3,700 acres of the Plan area. Direct and indirect surface water quality impacts could occur from the following general land use activities in the Plan area similar to the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

As described under Impact 4.7.1, subsequent development under the Alternative 2 Land Use Map would result in substantial development and alteration of approximately 3,500 acres of the Plan area. Direct and indirect surface water quality impacts could occur from the following general land use activities in the Plan area similar to the Proposed Land Use Diagram.

<u>Policies and Implementation Programs</u>

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would help mitigate this impact.

Policy 6.E.6 *The County shall 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).*

Policy 6.E.8 *The County shall encourage project designs that minimize drainage concentrations and impervious coverage and maintain, to the extent feasible, natural site drainage conditions.*

Policy 6.E.10 *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.*

Policy 6.E.11 *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). Storm sewers are prohibited from connecting directly or indirectly to the TTSA sewer system.*

Policy 9.D.1 *The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species (see discussion of sensitive habitat buffers in Part 1 of the PCGP).*

In some cases, buffers shall be required which are substantially larger than noted above. Conversely, based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. In addition, the County may allow exceptions, such as in the following cases:

a. Reasonable use of the property would otherwise be denied;

b. The location is necessary to avoid or mitigate hazards to the public.

c. The location is necessary for the repair of roads, bridges, trails or similar infrastructure; or

d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.

Policy 9.D.4 *The County shall require public and private development to address creeks and riparian corridors as follows:*

a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development)

shall be located to optimize resource protection. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;

b. Designate such easement or dedication areas (as described in a. above) as open space;

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

d. Provide recreation and public access near creeks consistent with other General Plan policies;

e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: 1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment off site; and/or 2) temporary vegetation is established sufficient to stabilize disturbed areas, and;

f. Provide for long-term creek corridor maintenance.

Policy 9.D.5 *The County shall continue to require the use of feasible and practical Best Management Practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for recreational development.*

Policy 9.D.9 *The County shall encourage the preservation and protection of open space located in watersheds, which serve reservoirs due to its importance in the adequate performance of those reservoirs for their intended purposes.*

The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and within 5,000 feet of the reservoir shall be considered as having an immediate effect. For Martis Valley, this includes Martis Creek Lake.

Policy 9.D.10 *The County shall encourage the protection of flood plain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.*

Policy 9.F.1 *The County shall encourage the preservation and enhancement of natural open space within the riparian areas of the watercourses and drainageways found in the Martis Valley as one means of minimizing the adverse effects of land development upon the chemical and physical quality of waters therein.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific field work.*

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.*

Implementation Programs

Stormwater Drainage

1. *Review development projects for compliance with the goals, policies and specific discussions contained in the Public Facilities and Services section and throughout the Plan.*

   Responsible Agency/Department: Board of Supervisors, Planning Commission, Land Development Departments
   Time frame: Ongoing
   Funding: Application fees

16. *The County shall prepare and adopt ordinances and programs as necessary and appropriate to implement and fund current and future watershed management, water quality protection, and water conservation plans of the Placer County Flood Control and Water Conservation District.*

    Responsible Agency/Department: Board of Supervisors, Department of Public Works
    Time frame: Ongoing
    Funding: Development Fees, General Fund

17. *The County shall prepare and adopt ordinances and programs as necessary and appropriate to implement required actions under state and federal stormwater quality programs.*

    Responsible Agency/Department: Board of Supervisors, Department of Public Works

Time frame: Ongoing
Funding: Development Fees, General Fund

18. The County shall develop brochures and other methods to educate the public and developers regarding the potential impacts of development on drainage, flooding, and water quality.

Responsible Agency/Department: Department of Public Works, Flood Control and Water Conservation District, Department of Environmental Health
Time frame: Ongoing
Funding: General Fund

Water Resources

15. BMPs are structural and non-structural practices proven effective in soil erosion control and management of surface runoff. Eroding soils and surface water runoff transport pollutants, particularly plan nutrients and sediments, to the area's rivers and streams. Turf herbicides, pesticides, fertilizers, oil and grease contribute to the problem. Declines in water quality are directly attributable to the flow of non-point source pollutants into streams, rivers, and lakes. BMPs shall be implemented with every development project in the Martis Valley. The goal is to [1] stabilize the soil, [2] prevent erosion, and [3] divert runoff from impervious surfaces into infiltration systems. Within the Martis Valley, temporary BMPs are required while construction is underway and permanent BMPs are required to be in place prior to the development project being completed. Both temporary and permanent BMPs must be graphically shown on project plans.

Responsible Agency/Department: Department of Public Works
Time Frame: On-going
Funding: Permit Fees

18. Include mitigation measures for new development projects adopted pursuant to the Lahontan Regional Water Quality Control Board's requirements and permits issued under Section 404 of the Federal Clean Water Act.

Responsible Agency/Department: Development Review Committee
Time Frame: On-going
Funding: Permit Fees

<u>Mitigation Measures</u>

The following mitigation measures shall apply to the Proposed Land Use Diagram and Alternatives AA, AB and AC.

The following mitigation measure shall be incorporated into the Martis Valley Community Plan as policies under Goal 6.E of the Public Facilities & Services Section.

MM 4.7.2a The County shall require that each subsequent project develop a surface water quality control program to be incorporated into the project's storm water drainage system design. This program would specify the design of planned water quality facilities to be used in the project's drainage system, including details and methods for intercepting and improving surface water quality as well as maintenance of facilities. Water quality control features

shall demonstrate that the water quality controls will ensure no increase in sediment or other pollutant loads in waterways and that storm water discharges are in compliance with all current requirements of the Lahontan Regional Water Quality Control Board.

The following mitigation measures shall be incorporated into the Martis Valley Community Plan as policies under Goal 9.D of the Natural Resources Section.

MM 4.7.2b In addition to the setback requirements set forth in Policy 9.D.1, subsequent projects will be conditioned to prohibit application of fertilizers, pesticides and herbicides within waterway corridors and wetland areas. Exact buffer distances from waterways and wetlands for chemical application shall be determined on a case-by-case basis based on technical analysis of the project and in consultation with the County and the Lahontan Regional Water Quality Control Board.

MM 4.7.2c The County will require that future golf courses be designed to reduce the threat to surrounding waterways and wetland areas. Specifically by minimizing total acreage of managed turf, the need for fertilizers and chemicals would be minimized and the size of natural areas would be maximized. Natural areas would promote wildlife habitat and provide buffers to the environment from higher trafficked areas. Landscaped areas shall be restricted to only greens, tees, and fairways. The golf courses shall be designed to retain natural surface drainage patterns with buffer areas and will control and divert runoff away from greens, tee, fairways and other managed turf areas to prevent leaching and erosion of chemicals applied in these areas.

The County shall also require proper chemical management (i.e., Chemical Application Management Plans [CHAMP]) for the operation of new golf courses. New golf courses shall utilize appropriate chemical management objectives via direct application of procedures that ensure water quality objectives are meet as defined by the Lahontan Regional Water Quality Control Board and California Inland Surface Waters Plan. Specific water quality objectives for new golf courses shall ensure the biostimulatory substances, floating materials, oil and grease, pesticides and sediment shall not be in sufficient concentrations to cause a nuisance, adversely affect the beneficial uses of on-site surface waters, runoff or groundwater or exceed water quality criteria set forth in the Water Quality Control Plan for the Lahontan Region (Basin Plan). Water quality objectives for nine types of element/compounds is set by the Lahontan Regional Water Quality Control Board and are presented in the Basin Plan.

The CHAMP or similar management plan shall incorporate the following:

- A description of golf course design features that prevent direct discharges of surface runoff into stream channels and groundwater.
- A description of chemicals authorized for use and approved within the State of California, along with guidelines for their application. Guidelines shall include restrictions on their use near drainage systems. Chemicals include fertilizers, herbicides, fungicides, insecticides and rodenticides.

- Guidelines on the application of fertilizers and soil amendments that take into consideration the physical characteristics and nutrient content of the soil on the golf course site.
- Guidelines for the irrigation of the golf course that take into consideration the field capacity of soil types and the timing with chemical applications.
- A water quality monitoring program that includes sampling would be timed with the application of soil amendments or on a regularly scheduled basis. This monitoring program shall also be implemented with consideration of the RWQCB water quality objectives for the Martis Creek at its confluence the Truckee River.
- Chemical storage requirements and chemical spill response and chemical inventory response plans would be prepared and implemented.
- Pesticide concentrations shall not be allowed to accumulate in bottom sediments or aquatic life, nor can chlorinated hydrocarbon pesticides be found at detectable concentrations in surface waters. Maximum Concentration Levels (MCL), per the Water Quality Goals for California Inland Surface Water for Human Health and Freshwater Aquatic Life Protection shall be met for waters in golf course lakes and other surface water bodies including streams and springs. Also, groundwaters shall not contain any chemical contaminants derived from operations in excess of the MCLs specified for domestic drinking water supplies in the CCR, Title 22, Division 4, Chapter 15 for the turf management chemical compounds including, but not limited to, 2,4-D, Atazine, Bentazon, Carbofuran, Glyphosate and Simazine.

MM 4.7.2d The County shall require that subsequent development projects provide open fencing and signage restricting area residents from intruding in waterway and wetland areas and providing information regarding the sensitivity of these resources to include requirements for domestic pet control.

MM 4.7.2e The County shall require that snow storage areas shall be located outside of areas that drain directly into waterways, except where storm drainage and treatment facilities are provided.

Implementation of the above policies, implementation programs, and mitigation measures would reduce impacts to surface water quality resulting from urban runoff to **less than significant** for the Proposed Land Use Diagram and alternatives AA through AC.

Impact 4.7.3 Groundwater Quality Impacts

PP Implementation of the Proposed Land Use Diagram could result in the degradation of groundwater quality resulting from future land uses. This would be a **potentially significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map could result in the degradation of groundwater quality resulting from future land uses. This would be a **potentially significant** impact.

AB Implementation of the Alternative 1 Land Use Map could result in the degradation of groundwater quality resulting from future land uses. This would be a **potentially significant** impact.

AC Implementation of the Alternative 2 Land Use Map could result in the degradation of groundwater quality resulting from future land uses. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

Development of various projects would urbanize certain zones in the Plan area and these areas would generated runoff that would contain oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), other household pollutants, and nutrients (i.e., fertilizers), and other chemicals from landscaped areas. Rural residential development in areas designated Forest (F) may utilize individual septic systems that could also contribute to groundwater quality impacts if such systems are not properly designed**.** If annual runoff generated from urbanize areas went untreated and were allowed to discharge to areas that support natural settings an estimated 25.3 percent of this volume of water could infiltrate into the subsurface and ultimately recharge the underlying aquifer and negatively impact the natural quality of groundwater.

AA Existing Martis Valley Community Plan Land Use Map

The Existing Martis Valley Community Plan Land Use Map would result in a similar design as the Proposed Land Use Diagram. This alternative also has the potential to result in groundwater quality impacts.

AB Alternative 1 Land Use Map

The Alternative 1 Land Use Map would result in a similar design as the Proposed Land Use Diagram. This alternative also has the potential to result in groundwater quality impacts.

AC Alternative 2 Land Use Map

The Alternative 2 Land Use Map would result in a similar design as the Proposed Land Use Diagram. This alternative also has the potential to result in groundwater quality impacts.

<u>Policies and Implementation Programs</u>

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would help mitigate this impact.

Policy 6.C.6 *The County shall protect the watersheds of all surface and subsurface 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.*

Policy 6.D.1 *The County shall limit the expansion of all but large lot (10 acres+) developments to areas where community wastewater treatment systems can be provided.*

Policy 6.D.5 *The County shall permit on-site sewage treatment and disposal on parcels larger than 1 acre where access to a wastewater treatment facility is not available and all current County and State regulations can be met, parcels have the area, soils, and other characteristics that permit such disposal facilities without threatening surface or groundwater quality or posing any other health hazards. Where the County will approve individual on-site sewage treatment and disposal, appropriate hydrologic/geologic testing and reporting by a qualified professional, will be required.*

Policy 6.D.6 *The County shall require that the on-site treatment, development, operation, maintenance and monitoring of disposal systems complies with the requirements and standards of the County Division of Environmental Health and the Lahontan Regional Water Quality Control Board.*

Policy 6.D.7 *The County shall facilitate extension of septic tank effluent pumping (STEP) service or conventional wastewater collection service to areas with failing on-site systems.*

Policy 9.D.1 *The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species (see discussion of sensitive habitat buffers in Part 1 of the PCGP).*

In some cases, buffers shall be required which are substantially larger than noted above. Conversely, based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. In addition, the County may allow exceptions, such as in the following cases:

a. Reasonable use of the property would otherwise be denied;

b. The location is necessary to avoid or mitigate hazards to the public.

c. The location is necessary for the repair of roads, bridges, trails or similar infrastructure; or

d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.

Policy 9.D.4 *The County shall require public and private development to address creeks and riparian corridors as follows:*

a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development)

shall be located to optimize resource protection. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;

b. Designate such easement or dedication areas (as described in a. above) as open space;

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

d. Provide recreation and public access near creeks consistent with other General Plan policies;

e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: 1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment off site; and/or 2) temporary vegetation is established sufficient to stabilize disturbed areas, and;

f. Provide for long-term creek corridor maintenance.

Policy 9.D.5 *The County shall continue to require the use of feasible and practical Best Management Practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for recreational development.*

Policy 9.D.9 *The County shall encourage the preservation and protection of open space located in watersheds, which serve reservoirs due to its importance in the adequate performance of those reservoirs for their intended purposes.*

The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and within 5,000 feet of the reservoir shall be considered as having an immediate effect. For Martis Valley, this includes Martis Creek Lake.

Policy 9.D.10 *The County shall encourage the protection of flood plain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.*

Policy 9.F.1 *The County shall encourage the preservation and enhancement of natural open space within the riparian areas of the watercourses and drainageways found in the Martis Valley as one means of minimizing the adverse effects of land development upon the chemical and physical quality of waters therein.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific field work.*

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.*

Implementation Programs

Water Supply & Delivery

8. *The County should identify precise locations of severe groundwater contamination or overdrafting. The County shall work with water users in these areas to investigate methods for shifting to reliance on surface water supplies or other appropriate solutions.*

   Responsible Agency/Department: Health Department, Department of Public Works
   Time frame: As needed
   Funding: General Fund or other identified source

12. *As part of the groundwater monitoring and modeling program employed by the Environmental Health Division, the locations where polluted groundwaters are discovered shall be reported to the appropriate water purveyor.*

    Responsible Agency/Department: Division of Environmental Health
    Time frame: On-going
    Funding: General Fund

13. *Where study shows that groundwater can likely be used without adversely affecting quality or quantity, require that appropriate monitoring programs be established.*

    Responsible Agency/Department: Division of Environmental Health
    Time frame: On-going
    Funding: Impact fees

Sewage Collection, Treatment and Disposal

14. *Pursuant to County Ordinance (Chapter 4, Subchapter 1, Section 4.45), require that as part of the environmental review process, each new development proposing to use onsite sewage disposal systems be required to provide appropriate soils testing and study, and be required to provide acceptable preliminary onsite sewage disposal system designs.*

    Responsible Agency/Department: Division of Environmental Health
    Time frame: On-going
    Funding: Permit fees

15. *Where testing cannot establish acceptable onsite sewage system designs, require reduced density by elimination of lots which cannot sustain onsite sewage disposal systems.*

    Responsible Agency/Department: Division of Environmental Health
    Time frame: On-going
    Funding: Permit fees

Stormwater Drainage

1. *Review development projects for compliance with the goals, policies and specific discussions contained in the Public Facilities and Services section and throughout the Plan.*

    Responsible Agency/Department: Board of Supervisors, Planning Commission, Land Development Departments
    Time frame: Ongoing
    Funding: Application fees

16. *The County shall prepare and adopt ordinances and programs as necessary and appropriate to implement and fund current and future watershed management, water quality protection, and water conservation plans of the Placer County Flood Control and Water Conservation District.*

    Responsible Agency/Department: Board of Supervisors, Department of Public Works
    Time frame: Ongoing
    Funding: Development Fees, General Fund

17. *The County shall prepare and adopt ordinances and programs as necessary and appropriate to implement required actions under state and federal stormwater quality programs.*

    Responsible Agency/Department: Board of Supervisors, Department of Public Works
    Time frame: Ongoing
    Funding: Development Fees, General Fund

18. The County shall develop brochures and other methods to educate the public and developers regarding the potential impacts of development on drainage, flooding, and water quality.

Responsible Agency/Department: Department of Public Works, Flood Control and Water Conservation District, Department of Environmental Health
Time frame: Ongoing
Funding: General Fund

Water Resources

15. BMPs are structural and non-structural practices proven effective in soil erosion control and management of surface runoff. Eroding soils and surface water runoff transport pollutants, particularly plan nutrients and sediments, to the area's rivers and streams. Turf herbicides, pesticides, fertilizers, oil and grease contribute to the problem. Declines in water quality are directly attributable to the flow of non-point source pollutants into streams, rivers, and lakes. BMPs shall be implemented with every development project in the Martis Valley. The goal is to [1] stabilize the soil, [2] prevent erosion, and [3] divert runoff from impervious surfaces into infiltration systems. Within the Martis Valley, temporary BMPs are required while construction is underway and permanent BMPs are required to be in place prior to the development project being completed. Both temporary and permanent BMPs must be graphically shown on project plans.

Responsible Agency/Department: Department of Public Works
Time Frame: On-going
Funding: Permit Fees

18. Include mitigation measures for new development projects adopted pursuant to the Lahontan Regional Water Quality Control Board's requirements and permits issued under Section 404 of the Federal Clean Water Act.

Responsible Agency/Department: Development Review Committee
Time Frame: On-going
Funding: Permit Fees

Mitigation Measures

The following mitigation measures shall be incorporated into the Martis Valley Community Plan as policies under Goal 9.D of the Natural Resources Section. The following mitigation measures shall apply to the Proposed Land Use Diagram and alternatives AA, AB and AC.

MM 4.7.3 Future land uses that are anticipated to utilize hazardous materials or waste shall be required to provide adequate containment facilities to ensure that surface water and groundwater resources are protected from accidental releases. This shall include double-containment, levees to contain spills, and monitoring wells for underground storage tanks, as required by local, state and federal standards.

Implementation of the above policies, implementation programs, and mitigation measure as well as mitigation measures MM 4.7.2a through e would reduce impacts to groundwater quality resulting from urban runoff to **less than significant** for the Proposed Land Use Diagram and alternatives AA through AC.

Impact 4.7.4 Groundwater Recharge Areas Impacts

PP Implementation of the Proposed Land Use Diagram would result in the increase of impervious surfaces in the Plan area. However, this increase in impervious surfaces is not expected to substantially impact groundwater recharge. This would be a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would result in the increase of impervious surfaces in the Plan area. However, this increase in impervious surfaces is not expected to substantially impact groundwater recharge. This would be a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map would result in the increase of impervious surfaces in the Plan area. However, this increase in impervious surfaces is not expected to substantially impact groundwater recharge. This would be a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map would result in the increase of impervious surfaces in the Plan area. However, this increase in impervious surfaces is not expected to substantially impact groundwater recharge. This would be a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Development of the Plan area under the Proposed Land Use Diagram and alternatives AA through AC would result in an increase in impervious surfaces that could potentially limit the ability of groundwater recharge to occur from infiltration of precipitation. However, a majority of the land area planned for development is located within Sections 5, 6, 21, 23, 26, 27, 28, and 31 through 36, which are located in areas of shallow bedrock consisting of lava, tuff, breccia and volcaniclastic deposits ranging from andesite to basalt (see **Figure 4.7-4**). Test pits and well data in these areas verify that the depth to volcanic bedrock generally ranges from at the surface to 50 feet below the ground surface, with the depth to bedrock increasing from west to east (Black Eagle, 1999; GeoTrans, 2000). Near surface groundwater encountered in these areas is generally limited to localized perched and upper aquifer groundwater conditions that do not appear to be substantially tied to the middle/lower aquifer, but do provide for diversion of groundwater to the northern and eastern portions of the Basin. Given these geologic conditions, these areas do not substantially contribute directly to groundwater recharge of the middle/lower aquifer. More favorable geologic conditions for groundwater recharge are located in Sections 19, 20, and a portion of 29 (see **Figure 4.7-4**). As shown in **Figures 3.0-5** through **3.0-8**, a majority of this area is proposed to be designated as open space, which would not be significantly impacted by the placement of impervious surfaces.

As shown below, the implementation of the Proposed Land Use Diagram and alternatives AA through AC would also designate the majority of the Plan area as open space or a low intensity land use type that would not result in a substantial amount of impervious surface (i.e., Forest and Forest Residential).

TABLE 4.7-3
LAND AREA TO REMAIN IN OPEN SPACE OR A LOW INTENSITY USE[1]

Land Use Map	Acreage In Open Space or Low Intensity Use in Acres	Percentage of Total Plan Area
Proposed Land Use Diagram (PP)	21,484	84%
Existing Martis Valley General Plan (AA)	20,840	82%
Alternative 1 (AB)	22,184	87%
Alternative 2 (AC)	22,256	87%

[1] *Low intensity use includes the following land use designations: Forest, Forest Residential, Recreation, Water, and Valley Residential.*

In addition to the low amount of land area anticipated to be developed, the intensity of land uses proposed are low intensity with the majority of residential development (approximately 12 to 16 percent of the total land area of the Plan area under the land use map alternatives) ranging from 0.4 to 5 dwelling units per acre.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would further ensure that groundwater recharge is not impacted.

Policy 6.C.6 *The County shall protect the watersheds of all surface and subsurface 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.*

Policy 9.D.9 *The County shall encourage the preservation and protection of open space located in watersheds, which serve reservoirs due to its importance in the adequate performance of those reservoirs for their intended purposes.*

The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and within 5,000 feet of the reservoir shall be considered as having an immediate effect. For Martis Valley, this includes Martis Creek Lake.

Policy 9.D.10 *The County shall encourage the protection of flood plain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.*

Implementation Programs

Water Resources

12. *The County shall cooperate with the Placer County Water Agency and Truckee Donner Public Utility District in the preparation and implementation of a comprehensive surface and groundwater management program to ensure the long-term protection and maintenance of surface and groundwater resources. This water management program shall include at least the following elements:*

    a. *County leadership of the process and a commitment to its integrity and inclusiveness;*

    b. *Coordination and cooperation with other public and private agencies, organizations, and groups that have an interest in water resources management in the county or surrounding areas.*

    c. *An inventory of water supply and quality information and demand estimates, using as much available information as possible, with the objective of creating an easily accessible, comprehensive, and regularly updated database that can be shared by water management agencies;*

    d. *Identification, documentation, and prioritization of the most significant water supply sources and pressing local water quality management problems;*

    e. *Identification of existing ongoing water management and regulatory polices, programs, and standards by the various agencies and organizations with an interest in water resources management;*

    f. *Recognition and incorporation of ongoing compatible water management efforts into a comprehensive approach to water resources management to implement the goals and policies of this General Plan;*

    g. *Identification of any regulatory or policy "gaps" that can and should be addressed by the County;*

    h. *Application of sound water resources management principles, including watershed land use management, wetlands and vegetation management, non-point source pollution control, waste disposal monitoring and controls,*

    i. *Application of sustainable multiple-use water management principles and incorporation of diverse and potentially compatible land use objectives, including provision of open space and recreation opportunities, watershed and habitat protection, flood control, and water provision to meet future recreational, ecological, and community development needs; and*

    j. *Utilization of innovative and alternative funding mechanisms form sources outside of the County.*

    Responsible Agency/Department: PCWA, TDPUD, Environmental Health Department, Planning Department, Public Works Department

Time Frame: FY 2002 and beyond
Funding: Cooperative MOU with other agencies/private grants/impact fees/General Fund

Given the geologic conditions, proposed policies and implementation programs and proposed land use layouts under the Proposed Land Use Diagram and Alternatives AA through AC, the impact is considered **less than significant**.

Mitigation Measures

None required.

Impact 4.7.5 Increased Groundwater Usage Impacts

PP Implementation of land uses under the Proposed Land Use Diagram would increase groundwater usage in Martis Valley, which could adversely impact groundwater resources as well as interactions between groundwater and surface water. This would be a **potentially significant** impact.

AA Implementation of land uses under the Existing Martis Valley General Plan Land Use Diagram would increase groundwater usage in Martis Valley, which could adversely impact groundwater resources as well as interactions between groundwater and surface water. This would be a **potentially significant** impact.

AB Implementation of land uses under the Alternative 1 Land Use Map would increase groundwater usage in Martis Valley, which could adversely impact groundwater resources as well as interactions between groundwater and surface water. This would be a **potentially significant** impact.

AC Implementation of land uses under the Alternative 2 Land Use Map would increase groundwater usage in Martis Valley, which could adversely impact groundwater resources as well as interactions between groundwater and surface water. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

The groundwater impact discussion is divided into two discussion areas provided below and include groundwater resources and interactions between groundwater and surface water.

Groundwater Resources

Table 4.7-4 summarizes Placer County Water Agency water demand estimates for buildout under the Proposed Land Use Diagram.

TABLE 4.7-4
WATER DEMAND ESTIMATES FOR THE PROPOSED LAND USE DIAGRAM

Land Use Designation	Acres	Dwelling Units	GPD/ DU	GPD/ Acre	Acre Feet/ Year	Depletion Factor (%)	Net Depletion Acre Feet/Year
General Commercial	39			2,600	114	8%	9
Residential[1]	21,254	8,524	500		4,773	34%	1,623
High Density Residential (10-15 du/ac)	18	108	300		36	34%	12
Tourist/Resort Commercial (15 du/ac)[3]	49	588	300		198	34%	67
Professional Office	6			2,600	17	8%	1
Public /Quasi Public	31			2,600	90	8%	7
Open Space[2]	3,660				3,085	Varies	2,007
Water	509			0	0	0	
Total		***9,220***			***8,313***		***3,726***

[1] *"Residential" includes Forest, Medium Density Residential, Low Density Residential, Rural Residential and Forest Residential as designated in Table 3.0-2.*

[2] *Open space water demands include the existing 18-hole golf course at Northstar-at-Tahoe, the existing 18-hole golf course at Lahontan, the existing 9-hole golf course at Lahontan 2, the proposed 18-hole golf course at Hopkins Ranch, the proposed 18-hole golf course at Eaglewood, the conceptual 9- and 18-hole golf courses anticipated at Siller Ranch, the conceptual 18-hole golf course at Waddle Ranch, current snow-making at Northstar-at-Tahoe, conceptual snow-making at Siller Ranch and agriculture and wetlands water use at Lahontan.*

[3] *Since residential development would generate the most water demand, it is assumed the entire acreage is committed to residential.*

Source: Toy, 2002; Antonucci, 2001

In addition to buildout under the Proposed Land Use Diagram, the remaining portions of Martis Valley (Town of Truckee, Nevada County) are expected to generate a water demand of approximately 13,000 to 14,000 acre-feet annually (Antonucci, 2001). Thus, the total water demand for Martis Valley (both Placer and Nevada County) at buildout is anticipated to be approximately 21,000 to 22,000 acre-feet annually. The availability of groundwater has been investigated by Nimbus Engineers. Based upon thirty years of hydrologic data, which included both years of severe drought and multiple years of prolonged drought, Nimbus estimated that approximately 24,700 acre feet of groundwater could be pumped annually without long-term loss of groundwater storage. In addition to groundwater resources, up to 6,000 acre feet of surface water may be available following execution and implementation of TROA. Thus, there are adequate water resources available to serve the Proposed Land Use Diagram as well as buildout of the Martis Valley area.

Interactions Between Groundwater and Surface Water

As identified previously and in the Ground Water Availability in the Martis Valley Ground Water Basin report, the groundwater conditions in Martis Valley does appear to result in discharges to surfaces as evidenced by monitoring data along the Truckee River as well as the existence of springs and seeps in the Plan area (e.g., Northstar-at-Tahoe, west of Siller Ranch, Eaglewood). Existing and future groundwater production for domestic use are expected to utilize the middle/lower aquifer. While it is assumed that there is some interaction between the upper aquifer and middle/lower aquifer, this interaction appears to be limited given the geologic conditions in the Plan area. Specifically, boring data from the installation of wells in the general vicinity of Schaffer Mill Road and the Truckee-Tahoe Airport have all identified water bearing

formations (sediments associated with the Lousetown Formation and Truckee Formation) and non-bearing formations (lava associated with the Lousetown Formation Volcanics) associated with the upper and middle/lower aquifers at varying depths and thickness (GeoTrans, 2000). In addition, the Ground Water Availability in the Martis Valley Ground Water Basin Report identifies that there is a continuous clay member at the base of the upper aquifer that limits the transfer of groundwater based on well data from the Tahoe-Truckee Sanitation Agency and also identifies that hydrogeologic and water level data indicates that the middle/lower aquifer responds as a confined aquifer (Nimbus, 2001). Given these conditions and that future development and anticipated well facilities under the Proposed Land Use Diagram would be located in areas where geologic conditions generally do not favor direct interactions between the upper aquifer and the middle/lower aquifer, it is anticipated that potential impacts to Plan area surface water features from increased groundwater production would be minimal. Groundwater discharge reductions to the Truckee River would be offset by increased discharges of approximately 11,000 acre-feet annually from the Tahoe-Truckee Sanitation Agency's plant expansion as well as improved timing and magnitude of seasonal river flows and enhanced flows for consumptive, environmental and fishery uses associated with the implementation of TROA.

AA Existing Martis Valley General Plan Land Use Map

The groundwater impact discussion is divided into two discussion areas provided below and include groundwater resources and interactions between groundwater and surface water.

Groundwater Resources

Table 4.7-5 summarizes Placer County Water Agency water demand estimates for buildout under the Existing Martis Valley General Plan Land Use Map.

TABLE 4.7-5
WATER DEMAND ESTIMATES FOR THE EXISTING MARTIS VALLEY GENERAL PLAN LAND USE MAP

Land Use Designation	Acres	Dwelling Units	GPD/ DU	GPD/ Acre	Acre Feet/ Year	Depletion Factor (%)	Net Depletion Acre Feet/Year
General Commercial	26			2,600	76	8%	6
Residential[1]	18,267	10,607	500		5,940	34%	2,020
High Density Residential (15.2 du/ac)	6	73	300		25	34%	9
Ski-Based Commercial (15 du/ac)[3]	84	1,008	300		339	34%	115
Public Service	83			2,600	242	8%	19
Recreation	130			50	7	80%	6
Open Space[2,1]	6,439				1,720	Varies	963
Water	509			0	0	0	
Total		***11,688***			***8,349***		***3,138***

[1] *"Residential" includes Forest, High Density Residential (3-6 du/ac), Medium Density Residential, Low Density Residential, Valley Residential and Open Space (1 du/ac) as designated in Table 3.0-3.*

[2] *Open space water demands include the existing 18-hole golf course at Northstar-at-Tahoe, the existing 18-hole golf course at Lahontan, the existing 9-hole golf course at Lahontan 2, current snow-making at Northstar-at-Tahoe, conceptual snow-making at Siller Ranch and agriculture and wetlands water use at Lahontan.*

[3] *Since residential development would generate the most water demand, it is assumed the entire acreage is committed to residential.*

Source: Toy, 2002; Antonucci, 2001

In addition to buildout under the Existing Martis Valley General Plan Land Use Map, the remaining portions of Martis Valley (Town of Truckee, Nevada County) are expected to generate a water demand of approximately 13,000 to 14,000 acre-feet annually (Antonucci, 2001). Thus, the total water demand for Martis Valley (both Placer and Nevada County) at buildout is anticipated to be approximately 21,000 to 22,000 acre-feet annually. The availability of groundwater has been investigated by Nimbus Engineers. Based upon thirty years of hydrologic data, which included both years of severe drought and multiple years of prolonged drought, Nimbus estimated that approximately 24,700 acre feet of groundwater could be pumped annually without long-term loss of groundwater storage. In addition to groundwater resources, up to 6,000 acre feet of surface water may be available following execution and implementation of TROA. Thus, there are adequate water resources available to serve the Existing Martis Valley General Plan Land Use Map as well as buildout of the Martis Valley area.

Interactions Between Groundwater and Surface Water

The Existing Martis Valley General Plan Land Use Map would result in the same effects to the interaction between groundwater and surface water as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

The groundwater impact discussion is divided into two discussion areas provided below and include groundwater resources and interactions between groundwater and surface water.

Groundwater Resources

Table 4.7-6 summarizes Placer County Water Agency water demand estimates for buildout under the Alternative 1 Land Use Map.

TABLE 4.7-6
WATER DEMAND ESTIMATES FOR THE ALTERNATIVE 1 LAND USE MAP

Land Use Designation	Acres	Dwelling Units	GPD/ DU	GPD/ Acre	Acre Feet/ Year	Depletion Factor (%)	Net Depletion Acre Feet/Year
General Commercial	22			2,600	64	8%	5
Residential[1]	18,310	9,139	500		5,118	34%	1,740
High Density Residential (10-15 du/ac)	6	90	300		30	34%	10
Tourist/Resort Commercial (15 du/ac)[3]	82	1,082	300		364	34%	124
Professional Office	1			2,600	3	8%	1
Public /Quasi Public	35			2,600	102	8%	8
Open Space[2]	6,584				1,720	Varies	963
Water	509			0	0	0	
Total		***10,311***			***7,401***		***2,851***

[1] *"Residential" includes Forest, Medium Density Residential, Low Density Residential, Rural Residential and Forest Residential as designated in Table 3.0-4.*

[2] *Open space water demands include the existing 18-hole golf course at Northstar-at-Tahoe, the existing 18-hole golf course at Lahontan, the existing 9-hole golf course at Lahontan 2, current snow-making at Northstar-at-Tahoe, conceptual snow-making at Siller Ranch and agriculture and wetlands water use at Lahontan.*

[3] *Since residential development would generate the most water demand, it is assumed the entire acreage is committed to residential.*

Source: Toy, 2002; Antonucci, 2001

In addition to buildout under the Alternative 1 Land Use Map, the remaining portions of Martis Valley (Town of Truckee, Nevada County) are expected to generate a water demand of approximately 13,000 to 14,000 acre-feet annually (Antonucci, 2001). Thus, the total water demand for Martis Valley (both Placer and Nevada County) at buildout is anticipated to be approximately 21,000 acre-feet annually. The availability of groundwater has been investigated by Nimbus Engineers. Based upon thirty years of hydrologic data, which included both years of severe drought and multiple years of prolonged drought, Nimbus estimated that approximately 24,700 acre feet of groundwater could be pumped annually without long-term loss of groundwater storage. In addition to groundwater resources, up to 6,000 acre feet of surface water may be available following execution and implementation of TROA. Thus, there are adequate water resources available to serve the Alternative 1 Land Use Map as well as buildout of the Martis Valley area.

Interactions Between Groundwater and Surface Water

The Alternative 1 Land Use Map would result in the same effects to the interaction between groundwater and surface water as the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

The groundwater impact discussion is divided into two discussion areas provided below and include groundwater resources and interactions between groundwater and surface water.

Groundwater Resources

Table 4.7-7 summarizes Placer County Water Agency water demand estimates for buildout under the Alternative 2 Land Use Map.

TABLE 4.7-7
WATER DEMAND ESTIMATES FOR THE ALTERNATIVE 2 LAND USE MAP

Land Use Designation	Acres	Dwelling Units	GPD/ DU	GPD/ Acre	Acre Feet/ Year	Depletion Factor (%)	Net Depletion Acre Feet/Year
General Commercial	29			2,600	84	8%	7
Residential[1]	21,093	7,248	500		4,059	34%	1,380
High Density Residential (10-15 du/ac)	18	108	300		36	34%	12
Tourist/Resort Commercial (15 du/ac)[3]	100	600	300		202	34%	69
Professional Office	12			2,600	35	8%	3
Public /Quasi Public	29			2,600	84	8%	7
Open Space[2]	3,730				3,085	Varies	2,007
Water	509			0	0	0	
Total		***7,956***			***7,585***		***3,485***

[1] *"Residential" includes Forest, Medium Density Residential, Low Density Residential, Rural Residential and Forest Residential as designated in Table 3.0-2.*

[2] *Open space water demands include the existing 18-hole golf course at Northstar-at-Tahoe, the existing 18-hole golf course at Lahontan, the existing 9-hole golf course at Lahontan 2, the proposed 18-hole golf course at Hopkins Ranch, the proposed 18-hole golf course at Eaglewood, the conceptual 9- and 18-hole golf courses anticipated at Siller Ranch, the conceptual 18-hole golf course at Waddle Ranch, current snow-making at Northstar-at-Tahoe, conceptual snow-making at Siller Ranch and agriculture and wetlands water use at Lahontan.*

[3] *Since residential development would generate the most water demand, it is assumed the entire acreage is committed to residential.*

Source: Toy, 2002; Antonucci, 2001

In addition to buildout under the Alternative 2 Land Use Map, the remaining portions of Martis Valley (Town of Truckee, Nevada County) are expected to generate a water demand of approximately 13,000 to 14,000 acre-feet annually (Antonucci, 2001). Thus, the total water demand for Martis Valley (both Placer and Nevada County) at buildout is anticipated to be approximately 21,000 acre-feet annually. The availability of groundwater has been investigated by Nimbus Engineers. Based upon thirty years of hydrologic data, which included both years of severe drought and multiple years of prolonged drought, Nimbus estimated that approximately 24,700 acre feet of groundwater could be pumped annually without long-term loss of groundwater storage. In addition to groundwater resources, up to 6,000 acre feet of surface water may be available following execution and implementation of TROA. Thus, there are adequate water resources available to serve the Alternative 2 Land Use Map as well as buildout of the Martis Valley area.

Interactions Between Groundwater and Surface Water

The Alternative 1 Land Use Map would result in the same effects to the interaction between groundwater and surface water as the Proposed Land Use Diagram.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would help mitigate this impact.

Policy 6.C.1 *The County shall require proponents of new development to demonstrate the availability of a long-term, reliable and adequate supply of pure, wholesome, healthful, and potable water as well as any necessary water for irrigation or other purposes. The County shall require written certifications 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 hydrologic testing, and/or report(s) from qualified professionals will be required substantiating the long-term availability of sufficient and suitable groundwater.*

Policy 6.C.3 *The County shall require that new development adjacent to surface and subsurface bodies of water used as domestic water sources adequately mitigate potential water quality impacts on these water bodies.*

Policy 6.C.4 *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; and,

c. Encouraging retrofitting existing development with water-conserving devices

Implementation Programs

Water Supply and Delivery

6. The County shall work with local water purveyors to adopt and implement a water availability monitoring program that includes the following components:

a. A private well sampling program to evaluate the quality of groundwater supplied to newly constructed private domestic wells;

b. A program to evaluate the quantity and quality of groundwater in small public water systems (the County shall support state monitoring of larger systems);

c. A program to monitor and evaluate surface water quality in major reservoirs and rivers, and

d. A geo-based, digitized database which plots groundwater and water well information which will assist in reaching conclusions about groundwater quality and quantity.

Responsible Agency/Department: Environmental Health Division, Domestic water purveyors, California Groundwater Association (a professional organization)
Time frame: As funding becomes available
Funding: User fees, CSA fees for service, grants, and loans

8. The County should identify precise locations of severe groundwater contamination or overdrafting. The County shall work with water users in these areas to investigate methods for shifting to reliance on surface water supplies or other appropriate solutions.

Responsible Agency/Department: Health Department, Department of Public Works
Time frame: As needed
Funding: General Fund or other identified source

10. Before allowing individual wells to be the domestic water source in new land developments, require, as part of the environmental review process, demonstration through test wells, water quality analyses, and where appropriate through groundwater pumping and modeling, that the groundwater be a reliable and adequate source of and potable water to each user.

Responsible Agency/Department: Division of Environmental Health
Time frame: On-going
Funding: Permit fees

13. Where study shows that groundwater can likely be used without adversely affecting quality or quantity, require that appropriate monitoring programs be established.

Responsible Agency/Department: Division of Environmental Health
Time frame: On-going
Funding: Impact fees

Water Resources

12. *The County shall cooperate with the Placer County Water Agency and Truckee Donner Public Utility District in the preparation and implementation of a comprehensive surface and groundwater management program to ensure the long-term protection and maintenance of surface and groundwater resources. This water management program shall include at least the following elements:*

    a. *County leadership of the process and a commitment to its integrity and inclusiveness;*

    b. *Coordination and cooperation with other public and private agencies, organizations, and groups that have an interest in water resources management in the county or surrounding areas.*

    c. *An inventory of water supply and quality information and demand estimates, using as much available information as possible, with the objective of creating an easily accessible, comprehensive, and regularly updated database that can be shared by water management agencies;*

    d. *Identification, documentation, and prioritization of the most significant water supply sources and pressing local water quality management problems;*

    e. *Identification of existing ongoing water management and regulatory polices, programs, and standards by the various agencies and organizations with an interest in water resources management;*

    f. *Recognition and incorporation of ongoing compatible water management efforts into a comprehensive approach to water resources management to implement the goals and policies of this General Plan;*

    g. *Identification of any regulatory or policy "gaps" that can and should be addressed by the County;*

    h. *Application of sound water resources management principles, including watershed land use management, wetlands and vegetation management, non-point source pollution control, waste disposal monitoring and controls,*

    i. *Application of sustainable multiple-use water management principles and incorporation of diverse and potentially compatible land use objectives, including provision of open space and recreation opportunities, watershed and habitat protection, flood control, and water provision to meet future recreational, ecological, and community development needs; and*

    j. *Utilization of innovative and alternative funding mechanisms form sources outside of the County.*

Mitigation Measure

The following mitigation measure shall be incorporated into the Martis Valley Community Plan as a policy under Goal 6.C of the Public Facilities and Service Section. This mitigation measure shall apply to the Proposed Land Use Diagram and alternatives AA, AB and AC.

MM 4.7.5 The County, in coordination with the Placer County Water Agency and the Northstar Community Services District, shall require that proponents of new development demonstrate that new well facilities or expanded operation of existing well facilities will be in compliance with Section 204(c)1(B) of P.L. 101-618 and/or any subsequent standard set forth in the Truckee River Operation Agreement that requires that the placement be designed to avoid substantial effects to surface water flows or conditions. Well tests, identification of setback from waterway, appropriate hydrologic testing and/or reports from qualified professionals shall be provided verifying that no substantial impact to surface waters will occur.

Implementation of the Proposed Land Use Diagram and alternatives AA, AB and AC would not result in overdrafting of groundwater resources in Martis Valley and would be within the current allotted amount of water anticipated under TROA. Implementation of the above proposed policies and implementation programs and Mitigation Measure MM 4.7.5 would ensure that would ensure that increased groundwater usage would not significantly impact surface water features and would mitigate the potential impact to **less than significant**.

Impact 4.7.6 Flood Hazard Impacts

PP Implementation of the Proposed Land Use Diagram would increase impervious surfaces and would alter drainage conditions and rates in the Plan area, which would result in potential flooding impacts. However, implementation of proposed Community Plan policies and implementation programs would make this a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would increase impervious surfaces and would alter drainage conditions and rates in the Plan area, which would result in potential flooding impacts. However, implementation of proposed Community Plan policies and implementation programs would make this a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map would increase impervious surfaces and would alter drainage conditions and rates in the Plan area, which would result in potential flooding impacts. However, implementation of proposed Community Plan policies and implementation programs would make this a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map would increase impervious surfaces and would alter drainage conditions and rates in the Plan area, which would result in potential flooding impacts. However, implementation of proposed Community Plan policies and implementation programs would make this a **less than significant** impact.

PP Proposed Land Use Diagram

A vast majority of the Plan area, per the Federal Emergency Management Agency (FEMA) via their National Flood Insurance Program, is in a Zone X designation – "Areas determined to be outside 500 year floodplain". While most of the Plan area is dominated by terrain not prone to flooding there are low lying areas along Martis Creek that are subject to 100-year floods.

Because of this condition FEMA has classified several thousand acres of land along Martis Creek into a Zone A floodplain category – "Special Flood Hazard area (100-year flood)". The size of this acreage is approximately 1,300 acres that are located mostly in Sections 19, 20, 29, and 30. This area is located up stream from Martis Creek Lake, along side State Route 267, and in an area where drainage channels of the Martis, West Martis, Middle Martis and East Martis Creeks converge. A smaller strip of land located along both sides of Martis Creek in low lying terrain is also classified as Zone A.

Subsequent development under the Proposed Land Use Diagram would be located outside of the designated 100-year floodplain. The 100-year floodplain would be designated as Open Space. However, this land use map option would result in the substantial development of approximately 4,300 acres of the Plan area, which would increase impervious surfaces and would alter drainage conditions and rates.

AA Existing Martis Valley General Plan Land Use Map

A vast majority of the Plan area, per the Federal Emergency Management Agency (FEMA) via their National Flood Insurance Program, is in a Zone X designation – "Areas determined to be outside 500 year floodplain". While most of the Plan area is dominated by terrain not prone to flooding there are low lying areas along Martis Creek that are subject to 100-year floods. Because of this condition FEMA has classified several thousand acres of land along Martis Creek into a Zone A floodplain category – "Special Flood Hazard area (100-year flood)". The size of this acreage is approximately 1,300 acres that are located mostly in Sections 19, 20, 29, and 30. This area is located up stream from Martis Creek Lake, along side State Route 267, and in an area where drainage channels of the Martis, West Martis, Middle Martis and East Martis Creeks converge. A smaller strip of land located along both sides of Martis Creek in low lying terrain is also classified as Zone A.

Subsequent development under the existing Martis Valley General Plan Land Use Map would be located outside of the designated 100-year floodplain. The 100-year floodplain would be designated as Open Space. However, this land use map option would result in the substantial development of approximately 4,900 acres of the Plan area, which would increase impervious surfaces and would alter drainage conditions and rates.

AB Alternative 1 Land Use Map

A vast majority of the Plan area, per the Federal Emergency Management Agency (FEMA) via their National Flood Insurance Program, is in a Zone X designation – "Areas determined to be outside 500 year floodplain". While most of the Plan area is dominated by terrain not prone to flooding there are low lying areas along Martis Creek that are subject to 100-year floods. Because of this condition FEMA has classified several thousand acres of land along Martis Creek into a Zone A floodplain category – "Special Flood Hazard area (100-year flood)". The size of this acreage is approximately 1,300 acres that are located mostly in Sections 19, 20, 29, and 30. This area is located up stream from Martis Creek Lake, along side State Route 267, and in an area where drainage channels of the Martis, West Martis, Middle Martis and East Martis Creeks converge. A smaller strip of land located along both sides of Martis Creek in low lying terrain is also classified as Zone A.

Subsequent development under the Alternative 1 Land Use Map would be located outside of the designated 100-year floodplain. The 100-year floodplain would be designated as Open Space. However, this land use map option would result in the substantial development of approximately 3,700 acres of the Plan area, which would increase impervious surfaces and would alter drainage conditions and rates.

AC Alternative 2 Land Use Map

A vast majority of the Plan area, per the Federal Emergency Management Agency (FEMA) via their National Flood Insurance Program, is in a Zone X designation – "Areas determined to be outside 500 year floodplain". While most of the Plan area is dominated by terrain not prone to flooding there are low lying areas along Martis Creek that are subject to 100-year floods. Because of this condition FEMA has classified several thousand acres of land along Martis Creek into a Zone A floodplain category – "Special Flood Hazard area (100-year flood)". The size of this acreage is approximately 1,300 acres that are located mostly in Sections 19, 20, 29, and 30. This area is located up stream from Martis Creek Lake, along side State Route 267, and in an area where drainage channels of the Martis, West Martis, Middle Martis and East Martis Creeks converge. A smaller strip of land located along both sides of Martis Creek in low lying terrain is also classified as Zone A.

Subsequent development under the Alternative 2 Land Use Map would be located outside of the designated 100-year floodplain. The 100-year floodplain would be designated as Open Space. However, this land use map option would result in the substantial development of approximately 3,500 acres of the Plan area, which would increase impervious surfaces and would alter drainage conditions and rates.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would mitigate drainage and flooding impacts to less than significant.

Policy 6.E.2 *The County shall ensure that new storm drainage systems are designed in conformance with the Placer County Flood Control and Water Conservation District's Stormwater Management Manual and the County Land Development Manual.*

Policy 6.E.3 *The County shall continue to implement and enforce its Grading Ordinance and Flood Damage Prevention Ordinance.*

Policy 6.E.4 *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.*

Policy 6.E.7 *The County shall require new development to adequately mitigate increases in stormwater peak flows and/or volume. Mitigation measures must take into consideration impacts on adjoining lands in the Town of Truckee and Nevada County adjacent to Placer County, and Martis Lake and its tributaries.*

Policy 6.E.8 *The County shall encourage project designs that minimize drainage concentrations and impervious coverage and maintain, to the extent feasible, natural site drainage conditions.*

Policy 6.E.9 *The County shall require that new development conform with the applicable programs, policies and recommendations of the Placer County Flood Control and Water Conservation District.*

Policy 6.E.10 *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.*

Policy 6.F.1 *The County shall require that arterial roadways and expressways, residences, commercial and industrial uses and emergency facilities be protected, at a minimum, from a 100-year storm event.*

Policy 6.F.3 *The County shall continue to work closely with the U.S. Army Corps of Engineers, the Resource Conservation District, the Federal Emergency Management Agency, the State Department of Water Resources, and the Placer County Flood Control District, in defining existing and potential flood problem areas.*

Policy 6.F.4 *The County shall require evaluation of potential flood hazards prior to approval of development projects. The County shall require proponents of new development to submit accurate topographic and flow characteristics information and depiction of the 100-year floodplain boundaries under fully developed, unmitigated runoff conditions.*

Policy 6.F.5 *The County shall maintain natural conditions within the 100-year floodplain of all rivers and streams except under the following circumstances:*

a. Where work is required to manage and maintain the stream's drainage characteristics and where such work is done in accordance with the Placer County Flood Damage Prevention Ordinance, California Department of Fish and Game regulations, and Clean Water Act provisions administered by the U.S. Army Corps of Engineers; or

b. When facilities for the treatment of urban runoff can be located in the floodplain, provided that there is no destruction of riparian vegetation.

c. For the construction of bridges or other similar drainage crossings.

d. Where recreational facilities can be safely and sensitively located.

Policy 6.F.7 *The County shall cooperate with the Placer County Flood Control and Water Conservation District, surrounding jurisdictions, the cities in the county, and other public agencies in planning and implementing regional flood control improvements.*

Policy 6.F.9 *The County shall continue to implement floodplain zoning and undertake other actions required to comply with FEMA requirements, and to maintain the County's eligibility under the National Flood Insurance Program.*

Policy 6.F.12 *The County shall ensure that new storm drainage systems are designed in conformance with the Placer County Flood Control and Water*

Conservation District's Stormwater Management Manual and the County's Land Development Manual.

Implementation Programs

Storm Drainage

18. The County shall develop brochures and other methods to educate the public and developers regarding the potential impacts of development on drainage, flooding, and water quality.

Responsible Agency/Department: Department of Public Works, Flood Control and Water Conservation District, Department of Environmental Health
Time frame: Ongoing
Funding: General Fund

Flood Protection

19. The County shall continue to implement and enforce its Grading Ordinance and Flood Damage Prevention Ordinance.

Responsible Agency/Department: Department of Public Works
Time frame: Ongoing
Funding: Permit fees

20. The County shall continue to implement and fund programs necessary to comply with Flood Control Plans and Policies of the Placer County Flood Control and Water Conservation District.

Responsible Agency/Department: Department of Public Works
Time frame: Ongoing
Funding: Permit fees

21. The County shall continue to implement zoning policies which minimize potential loss of property and threat to human life caused by flooding.

Responsible Agency/Department: Planning Department, Department of Public Works
Time frame: Ongoing
Funding: Permit fees

Mitigation Measure

None required.

4.7.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

As previously described, the Plan area is located within the Truckee River watershed, which consists of approximately 2,720 square miles consisting of Lake Tahoe, Truckee River and Pyramid Lake systems. However, this cumulative analysis is focused on the Truckee area portion of the watershed, which extends from the outflow of Lake Tahoe to the California/Nevada state line

and includes Placer County, Town of Truckee and Nevada County (approximately 428 square miles). This is the area that was evaluated under Desert Research Institute as part of the Water Quality Assessment and Modeling of the California Portion of the Truckee River Basin Report. Groundwater issues were focused on the Martis Valley Groundwater Basin, which is described in the Ground Water Availability in the Martis Valley Ground Water Basin Report prepared by Nimbus Engineers (March 2001) and generally includes the Town of Truckee, Placer County and Nevada County.

Table 3.0-1 and **Figures 3.0-4, 4.0-1** and **4.0-2** illustrates proposed and conceptual development projects in the Martis Valley area, (which includes conceptual expansion of the Northstar-at-Tahoe Ski Resort), that would contribute to cumulative water resource impacts.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.7.7 Cumulative Water Quality Impacts

PP Construction activities and operation of land uses under the Proposed Land Use Diagram would contribute to water quality impacts from development of other projects in the region. This would be a **cumulative significant** impact.

AA Construction activities and operation of land uses under the Existing Martis Valley General Plan Land Use Map would contribute to water quality impacts from development of other projects in the region. This would be a **cumulative significant** impact.

AB Construction activities and operation of land uses under the Alternative 1 Land Use Map would contribute to water quality impacts from development of other projects in the region. This would be a **cumulative significant** impact.

AC Construction activities and operation of land uses under the Alternative 2 Land Use Map would contribute to water quality impacts from development of other projects in the region. This would be a **cumulative significant** impact.

PP Proposed Land Use Diagram

As described under Impacts 4.7.1, 4.7.2 and 4.7.3, approximately 4,300 acres of the Plan area is anticipated to be substantially disturbed with urban levels of development under this land use map option. This would add to other potential development activities in the region listed in **Table 3.0-1** as well as conceptual development proposed at Northstar-at-Tahoe. Construction and operation of these land uses may result in significant increases in pollutants in the Truckee River watershed and potential groundwater contamination. The Truckee River is currently a Section 303(d) listed waterway for sediment.

AA Existing Martis Valley General Plan Land Use Map

As described under Impacts 4.7.1, 4.7.2 and 4.7.3, approximately 4,900 acres of the Plan area is anticipated to be substantially disturbed with urban levels of development under this land use map option. This would add to other potential development activities in the region listed in **Table 3.0-1** as well as conceptual development proposed at Northstar-at-Tahoe. Construction and operation of these land uses may result in significant increases in pollutants in the Truckee River watershed and potential groundwater contamination. The Truckee River is currently a Section 303(d) listed waterway for sediment.

AB Alternative 1 Land Use Map

As described under Impacts 4.7.1, 4.7.2 and 4.7.3, approximately 3,700 acres of the Plan area is anticipated to be substantially disturbed with urban levels of development under this land use map option. This would add to other potential development activities in the region listed in **Table 3.0-1** as well as conceptual development proposed at Northstar-at-Tahoe. Construction and operation of these land uses may result in significant increases in pollutants in the Truckee River watershed and potential groundwater contamination. The Truckee River is currently a Section 303(d) listed waterway for sediment.

AC Alternative 2 Land Use Map

As described under Impacts 4.7.1, 4.7.2 and 4.7.3, approximately 3,500 acres of the Plan area is anticipated to be substantially disturbed with urban levels of development under this land use map option. This would add to other potential development activities in the region listed in **Table 3.0-1** as well as conceptual development proposed at Northstar-at-Tahoe. Construction and operation of these land uses may result in significant increases in pollutants in the Truckee River watershed and potential groundwater contamination. The Truckee River is currently a Section 303(d) listed waterway for sediment.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation to water quality impacts. The reader is referred to Impacts 4.7.1, 4.7.2 and 4.7.3 regarding applicable proposed policies and implementation programs.

Mitigation Measures

Implementation of the proposed policies, implementation programs identified under Impact 4.7.1 and 4.7.2 and mitigation measures MM 4.7.1a through c, MM 4.7.2a through e and MM 4.7.3 would mitigate the Community Plan's contribution to construction water quality impacts to a **less than significant** level for the Proposed Land Use Diagram and alternatives AA, AB and AC.

Impact 4.7.8 Cumulative Groundwater Recharge Area Impacts

PP Implementation of the Proposed Land Use Diagram would not contribute to a substantial loss of groundwater recharge area. This would be a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would not contribute to a substantial loss of groundwater recharge area. This would be a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map would not contribute to a substantial loss of groundwater recharge area. This would be a **less than significant** impact.

AC Implementation of the Alternative 1 Land Use Map would not contribute to a substantial loss of groundwater recharge area. This would be a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Development of the Plan area under the Proposed Land Use Diagram and alternatives AA through AC would contribute to an increase in impervious surfaces in Martis Valley that could

potentially limit the ability of groundwater recharge to occur from infiltration of precipitation. As described under Impact 4.7.4, a majority of the land area planned for development is located within Sections 5, 6, 21, 23, 26, 27, 28, and 31 through 36, which are located in areas of shallow bedrock consisting of lava, tuff, breccia and volcaniclastic deposits ranging from andesite to basalt (see **Figure 4.7-4**). Test pits and well data in these areas verify that the depth to volcanic bedrock ranges from at the surface to 50 feet below the ground surface, with the depth to bedrock generally increasing from west to east (Black Eagle, 1999; GeoTrans, 2000). Near surface groundwater encountered in these areas is generally limited to localized perched and upper aquifer groundwater conditions that do not appear to be substantially tied to the middle/lower aquifer, but do provide for diversion of groundwater to the northern and eastern portions of the Basin. Given these geologic conditions, these areas do not substantially contribute directly to groundwater recharge of the middle/lower aquifer. More favorable geologic conditions for groundwater recharge are located in Sections 19, 20, and a portion of 29 (see **Figure 4.7-4**). As shown in **Figures 3.0-5** through **3.0-8**, a majority of this area is proposed to be designated as open space, which would not be significantly impacted by the placement of impervious surfaces.

As shown **Table 4.7-3**, the implementation of the Proposed Land Use Diagram and alternatives AA through AC would also designate the majority of the Plan area as open space or a low intensity land use type that would not result in a substantial amount of impervious surface (i.e., Forest and Forest Residential).

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan. The reader is referred to Impact 4.7.4 regarding applicable policies. Compliance with these Plan policies and implementation programs would further ensure that groundwater recharge is not impacted.

Mitigation Measure

None required.

Impact 4.7.9 Cumulative Groundwater Usage Impacts

PP Implementation of land uses under the Proposed Land Use Diagram would contribute to further increases in groundwater usage in Martis Valley, which could adversely impact groundwater resources. This would be a **cumulative significant** impact.

AA Implementation of land uses under the Existing Martis Valley General Plan Land Use Map would contribute to further increases in groundwater usage in Martis Valley, which could adversely impact groundwater resources. This would be a **cumulative significant** impact.

AB Implementation of land uses under the Alternative 1 Land Use Map would contribute to further increases in groundwater usage in Martis Valley, which could adversely impact groundwater resources. This would be a **cumulative significant** impact.

AC Implementation of land uses under the Alternative 2 Land Use Map would contribute to further increases in groundwater usage in Martis Valley, which could adversely impact groundwater resources. This would be a **cumulative significant** impact.

PP Proposed Land Use Diagram

Groundwater Resources

As described under Impact 4.7.5, buildout under the Proposed Land Use Diagram in combination with buildout in Martis Valley (Placer County and Nevada County) is anticipated to be approximately 21,000 to 22,000 acre-feet annually. The availability of groundwater has been investigated by Nimbus Engineers. Based upon thirty years of hydrologic data, which included both years of severe drought and multiple years of prolonged drought, Nimbus estimated that approximately 24,700 acre feet of groundwater could be pumped annually without long-term loss of groundwater storage. In addition to groundwater resources, up to 6,000 acre feet of surface water may be available following execution and implementation of TROA. Thus, there are adequate water resources available to serve the Proposed Land Use Diagram as well as buildout of the Martis Valley area. It should be noted, however, that these water usage estimates do not take into account potential future snow-making facility expansions at the Northstar-at-Tahoe Ski Resort.

Interactions Between Groundwater and Surface Water

As identified previously and in the Ground Water Availability in the Martis Valley Ground Water Basin report, the groundwater conditions in Martis Valley does appear to result in discharges to surface waters as evidenced by monitoring data along the Truckee River as well as the existence of springs and seeps in the Plan area (e.g., Northstar-at-Tahoe, west of Siller Ranch, Eaglewood). Existing and future groundwater production for domestic use are expected to utilize the middle/lower aquifer. While it is assumed that there is some interaction between the upper aquifer and middle/lower aquifer, this interaction appears to be limited given the geologic conditions in the Plan area. Specifically, boring data from the installation of wells in the general vicinity of Schaffer Mill Road and the Truckee-Tahoe Airport have all identified water bearing formations (sediments associated with the Lousetown Formation and Truckee Formation) and non-bearing formations (lava associated with the Lousetown Formation Volcanics) associated with the upper and middle/lower aquifers at varying depths and thickness (GeoTrans, 2000). In addition, the Ground Water Availability in the Martis Valley Ground Water Basin Report identifies that there is a continuous clay member at the base of the upper aquifer that limits the transfer of groundwater based on well data from the Tahoe-Truckee Sanitation Agency and also identifies that hydrogeologic and water level data indicates that the middle/lower aquifer responds as a confined aquifer (Nimbus, 2001). Given these conditions and that future development and anticipated well facilities under the Proposed Land Use Diagram would be located in areas where geologic conditions generally do not favor direct interactions between and upper aquifer and the middle/lower aquifer, it is anticipated potential impacts to Plan area surface water features from increased groundwater production would be minimal. Additional groundwater pumping in the Truckee area would not impact surface water features in the Plan area given its down gradient location (groundwater in the Plan area generally flows northeast and along the Truckee River). Groundwater discharge reductions to the Truckee River would be offset by increased discharges of approximately 11,000 acre-feet annually from the Tahoe-Truckee Sanitation Agency's plant expansion as well as improved timing and magnitude of seasonal river flows and enhanced flows for consumptive, environmental and fishery uses associated with the implementation of TROA.

AA Existing Martis Valley General Plan Land Use Map

As described under Impact 4.7.5, buildout under the Existing Martis Valley General Plan Land Use Map in combination with buildout in Martis Valley (Placer County and Nevada County) is anticipated to be approximately 21,000 to 22,000 acre-feet annually. The availability of

groundwater has been investigated by Nimbus Engineers. Based upon thirty years of hydrologic data, which included both years of severe drought and multiple years of prolonged drought, Nimbus estimated that approximately 24,700 acre feet of groundwater could be pumped annually without long-term loss of groundwater storage. In addition to groundwater resources, up to 6,000 acre feet of surface water may be available following execution and implementation of TROA. Thus, there are adequate water resources available to serve the Existing Martis Valley General Plan Land Use Map as well as buildout of the Martis Valley area. It should be noted, however, that these water usage estimates do not take into account potential snowmaking facility expansions at the Northstar-at-Tahoe Ski Resort.

Interactions Between Groundwater and Surface Water

The Existing Martis Valley General Plan Land Use Map would result in the same effects to the interaction between groundwater and surface water as the Proposed Land Use Diagram under cumulative conditions.

AB Alternative 1 Land Use Map

As described under Impact 4.7.5, buildout under the Alternative 1 Land Use Map in combination with buildout in Martis Valley (Placer County and Nevada County) is anticipated to be approximately 21,000 acre-feet annually. The availability of groundwater has been investigated by Nimbus Engineers. Based upon thirty years of hydrologic data, which included both years of severe drought and multiple years of prolonged drought, Nimbus estimated that approximately 24,700 acre feet of groundwater could be pumped annually without long-term loss of groundwater storage. In addition to groundwater resources, up to 6,000 acre feet of surface water may be available following execution and implementation of TROA. Thus, there are adequate water resources available to serve the Alternative 1 Land Use Map as well as buildout of the Martis Valley area. It should be noted, however, that these water usage estimates do not take into account potential snowmaking facility expansions at the Northstar-at-Tahoe Ski Resort.

Interactions Between Groundwater and Surface Water

The Alternative 1 Land Use Map would result in the same effects to the interaction between groundwater and surface water as the Proposed Land Use Diagram under cumulative conditions.

AC Alternative 2 Land Use Map

As described under Impact 4.7.5, buildout under the Alternative 2 Land Use Map in combination with buildout in Martis Valley (Placer County and Nevada County) is anticipated to be approximately 21,000 acre-feet annually. The availability of groundwater has been investigated by Nimbus Engineers. Based upon thirty years of hydrologic data, which included both years of severe drought and multiple years of prolonged drought, Nimbus estimated that approximately 24,700 acre feet of groundwater could be pumped annually without long-term loss of groundwater storage. In addition to groundwater resources, up to 6,000 acre feet of surface water may be available following execution and implementation of TROA. Thus, there are adequate water resources available to serve the Alternative 2 Land Use Map as well as buildout of the Martis Valley area. It should be noted, however, that these water usage estimates do not take into account potential snowmaking facility expansions at the Northstar-at-Tahoe Ski Resort.

Interactions Between Groundwater and Surface Water

The Alternative 2 Land Use Map would result in the same effects to the interaction between groundwater and surface water as the Proposed Land Use Diagram under cumulative conditions.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation to groundwater resource impacts. The reader is referred to Impacts 4.7.5 regarding applicable proposed policies and implementation programs.

Mitigation Measures

Implementation of the proposed policies, implementation programs identified under Impact 4.7.5 and Mitigation Measure MM 4.7.5 would mitigate the Community Plan's contribution to construction water quality impacts to a **less than significant** level for the Proposed Land Use Diagram and alternatives AA, AB and AC.

Impact 4.7.10 Cumulative Flood Hazards

PP Implementation of the Proposed Land Use Diagram would increase impervious surfaces and alter drainage conditions and rates in the Plan area, which could contribute to regional flooding impacts. However, implementation of proposed Community Plan policies and implementation programs would mitigate the Community Plan's contribution and would make this a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would increase impervious surfaces and alter drainage conditions and rates in the Plan area, which could contribute to regional flooding impacts. However, implementation of proposed Community Plan policies and implementation programs would mitigate the Community Plan's contribution and would make this a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map would increase impervious surfaces and alter drainage conditions and rates in the Plan area, which could contribute to regional flooding impacts. However, implementation of proposed Community Plan policies and implementation programs would mitigate the Community Plan's contribution and would make this a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map would increase impervious surfaces and alter drainage conditions and rates in the Plan area, which could contribute to regional flooding impacts. However, implementation of proposed Community Plan policies and implementation programs would mitigate the Community Plan's contribution and would make this a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

As described under Impact 4.7.6, subsequent development under the Proposed Land Use Diagram and alternatives AA through AC would be located outside of the designated 100-year floodplain. However, development under each of these land use map options would result in

the increase in impervious surfaces as well as alteration of drainage patterns. This would impact downstream areas.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are identified in Impact 4.7.6. Compliance with these Plan policies and implementation programs would mitigate drainage and flooding impacts to less than significant.

Mitigation Measure

None required.

REFERENCES

Antonucci, 2001. Antonucci, David C., Civil & Environmental Engineer. May 22, 2001, Technical Memorandum On the Water Demand and Net Depletion for Martis Valley Groundwater Basin.

Bailey, E.H. (ed.). 1966. *Geology of Northern California*. Bulletin 190. Sacramento, Calif.: California Division of Mines and Geology.

Black Eagle, 1999. Black Eagle Consulting, Inc. *Preliminary Geotechnical Investigation, Siller Ranch, Placer County, California*. December 1999.

California Department of Water Resources. *California's Groundwater*. Bulletin No. 118. Sacramento, Calif.: Resources Agency.

California Regional Water Quality Control Board, Lahontan Region. 1995. *Water Quality Control Plan for the Lahontan Region*. South Lake Tahoe, Calif.

Driscoll, Fletcher G., 1986, Ground Water & Wells, Johnson Division, pg 107.

Geological Survey, 1992, Martis Peak Quadrangle, California, 7.5 Minute Series Topographic Map, U.S. Department of Interior.

Geological Survey, 1992, Truckee Quadrangle, California, 7.5 Minute Series Topographic Map, U.S. Department of Interior.

GeoTrans, 2000. GeoTrans, Inc. *Report on Groundwater Resources Potential, Eaglewood Subdivision, Martis Valley, California*. November 14, 2000.

Glazner Environmental Consulting, 1999, Wetland Delineation for the 480+/- acres, Eaglewood Project, Placer County, CA.

Green, J., 1959, Geochemical table of the elements for 1959, Geol. Soc. Am. Bull. 70, pg 1127-1184.

Heath, Ralph C., 1998, Basic Ground Water Hydrology, U.S. Geological Survey Water-Supply Paper 2220, pg 86.

Kennedy, David N., 1990, California Well Standards, California Department of Water Resources, Bulletin 74-90 (Supplement to Bulletin 74-81).

Larson, Geri B., 1994, Soil Survey of Tahoe National Forest Area, California, United States Department of Agriculture, Pacific Southwest Region.

Masterton, William L., Slowinski, Emil J., 1973, Chemical Principles, W. B. Saunders Company, Saunders Golden Series, 3rd Edition, pg 407.

McGraw., David, July 2001, Water Quality Assessment and Modeling of the California Portion of the Truckee River Basin, Division of Hydrologic Science, Desert Research Institute, Publication No. 41170.

Nimbus Engineers, 2001, Ground Water Availability in the Martis Valley Ground Water Basin, Nevada & Placer Counties, California, pg 35.

Placer County Planning Dept., 1990, Martis Valley General Plan.

Placer County Planning Dept., 1994, Placer County General Plan Update.

Rose, Arthur W., Hawkes, Herbert E., Webb, John S., 1979, Geochemistry in Mineral Exploration, Academic Press, 2nd Edition.

Taylor, S.R., 1964, Abundance of chemical elements in the continental crust: a new table, Geochim. Cosmochim, Acta 28, 1273-1286.

Toy, 2001. Toy, Mal. Placer County Water Agency. *Telephone conversation.* August, 2001.

Toy, Mal, June 11th, 2001, Technical Memorandum Regarding Surface Water Availability in Martis Valley, Placer County Water Agency.

Toy, Mal, June 12, 2001, Technical Memorandum Regarding Future Buildout Water Demand in Martis Valley, Placer County Water Agency.

Toy, Mal, August 1, 2001, PCWA Response To Notice Of Preparation of a Draft EIR for the Martis Valley Community Plan Update, Placer County Water Agency.

Toy, 2002. Toy, Mal. Placer County Water Agency. *Personal Correspondence*. April 2002.

Truckee Donner Public Utility District. 1998. *Water Quality Report, Truckee Water System*. Truckee, Calif.

United States Bureau of Reclamation. 1986. *Seismotectonic Study of the Truckee/Lake Tahoe Area, Northern Sierra Nevada, California*.

United States Geological Survey. 1992. *Truckee Quadrangle, California, 7.5 Minute Series (Topographic)*, map. Reston, Va.: U.S. Geological Survey.

Wedepohl, K.H., 1969-1978, Handbook of Geochemistry, Vols 2-4, Springer-Verlag, Berlin.

Uniform Building Code, Latest Edition, International Conference of Building.

SECTION 4.8
GEOLOGY AND SOILS

This section describes the geology of the Plan area and general vicinity and analyzes issues such as potential exposure of people and property to geologic hazards, landform alteration, and erosion. In addition, potential seismic/geologic hazards such as earthquakes, landslides, soil erosion and avalanche are discussed.

4.8.1 EXISTING SETTING

MARTIS VALLEY AREA TOPOGRAPHY & LOCAL GEOLOGY

Martis Valley Setting

Martis Valley is an area of 70 square miles located near the Town of Truckee in the central Sierra Nevada Mountains, north of and adjacent to the Lake Tahoe Basin. Martis Valley spans portions of both Placer and Nevada Counties. The Truckee River traverses the northern boundary of the Martis Valley, flowing east toward Reno. Martis Creek, a major tributary of the Truckee River, flows through the valley from south to north.

Plan Area Setting

The Plan area includes approximately 35 square miles of land area generally bounded by Placer/Nevada County line to the north, Highway 89 to the west, the Lake Tahoe Basin to the south and the California/Nevada state line to the east. Long narrow valleys typify the Martis Valley area with moderate to steep sloping hillsides that bound them on either side. The topography of the Plan area is part of the Truckee Basin that ranges from nearly flat valley floors in the central portion of the region to gentle to steep sloping terrain along eastern and southern boundaries of the Plan area. **Figure 4.8-1** illustrates the existing topography of the Martis Valley Community Plan area.

During the last glacial period, glaciers were the main sculptors of the existing terrain in the Martis Valley watershed. They shaped valleys and deposited rock debris over large areas including the Plan area. As a result, the region's topography is atypical with high rugged slopes such as those located in the southern part of the Plan area and the lower valley floor along the Placer/Nevada County border. Within the Martis Valley basin and along Martis Creek at the Placer/Nevada County border the land elevation is approximately 5,830 feet above mean sea level (msl). But, in the eastern portion of the Plan area Martis Peak rises up to approximately 8,742 feet msl. To the south, Mt. Pluto dominates the skyline at an elevation of approximately 8,617 feet msl. High ground between these two peaks is maintained by ridgelines that separate Martis Valley from the Tahoe Basin to the south. From these ridges the ground surface falls away in a northerly direction until it meets the floor of Martis Valley.

The Martis Creek watershed is contained within the Truckee Basin that is part of an intermountain graben situated at the northern end of the Upper Truckee Canyon. Throughout the Truckee Basin and across a large portion of the Plan area there are Miocene-Pliocene andesites underlying the terrain and helping to maintain the area's high relief. Small isolated areas are also underlain by bedrock consisting of Pliocene andesite and Pleistocene basalt. Deposition of both these units postdate the Pliocene-Pleistocene deformation that took place within this region prior to its recent glaciation. In low lying areas of the Martis Valley basin the surface is covered mostly be lower Pleistocene nonmarine sedimentary rocks composed of fluvial and lacustrine gravel, sand, silt and clay, and upper Pleistocene glacial deposits.

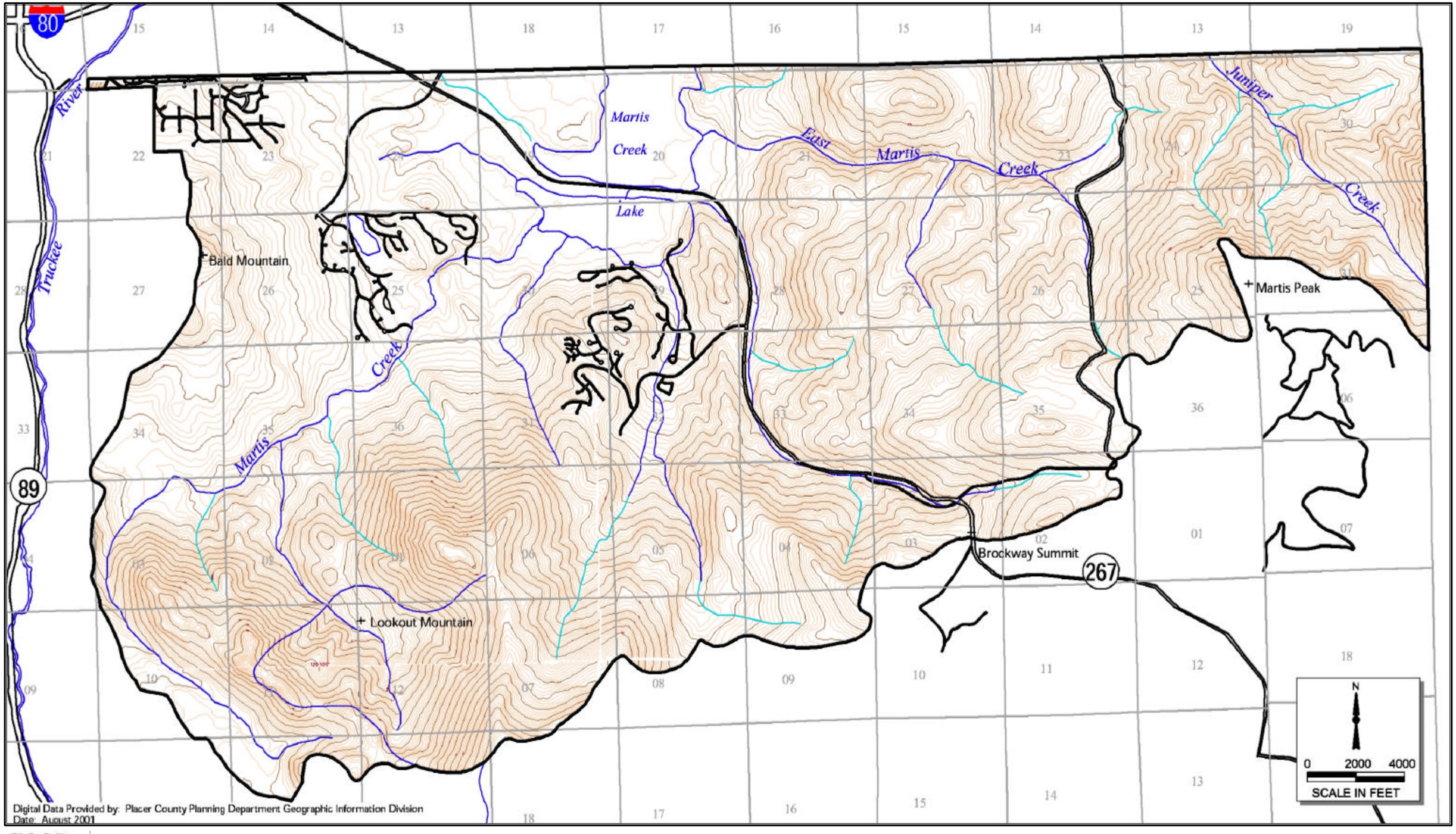

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FIGURE 4.8-1
TOPOGRAPHIC CONDITIONS

The Truckee and Tahoe Basins, and Sierra Valley all appear to be related parts of a large graben situated along a westerly margin of the Basin and Range province. Large-scale analysis indicates that generation of this province may have been the result of oblique extension caused by a combination of internal extension and dextral shear regimes related to the dextral shearing mechanism of the San Andreas Fault located along the western margin of the North American Plate.

On a smaller scale the geometry of late Tertiary and Quaternary faults in the western Basin and Range province, including faults located within the Truckee Basin, can be used to characterize the regional strain that has affected the study area. Numerous faults previously located by others within the Plan area are shown on **Figure 4.8-2.** These faults occur mostly in four distinct orientations and are related by orthorhombic symmetry. This pattern relates their orientation to regional tectonic strain with the same trend. The age of most of these faults can be inferred from offsets of the mafic lava flows located in the Plan area and surrounding region. According to Axelrod (1962), Birkeland (1963) and Latham (1985), most movement on those faults located in the area occurred from five and one million years ago. Subsequent studies have been performed on faults in the northwestern portion of the Plan area associated with the Lahontan community and proposed development associated with Eaglewood (Blackburn, 2000; GeoTrans, 2000) and Siller Ranch (Black Eagle, 1999). The technical studies have identified one fault structure as active, which is located on Siller Ranch in map Sections 26 and 35 (see **Figure 4.8-2**). The status of suspected faults in Sections 23 and 25 appear not to be active and may not exist at all based on technical review, trenching and well monitoring data (Placer County, 1993; Blackburn, 2000; GeoTrans, 2000).

It was also concluded that faulting in the area north of Lake Tahoe represents the failure of rocks in which an inherent regional strain with principal axes oriented S78E, N12E, with vertical dip was once present. The two horizontal principal strains are both extensional with magnitudes within a factor of three. This strain is approximated by superposition of an ESE-WNW extension and right lateral simple shear across a vertical plane striking N30W. These observations were consistent with Basin and Range evidence found on the larger scale and compatible with a hypothesis that the region is not purely extensional, but also possesses a diffuse right lateral shear component.

Slope Stability

In general the steeper hillsides located in the Plan area are concentrated in areas where ground surface elevations are greater than 6,500 feet msl and underlain by Miocene-Pliocene volcanic rocks of andesitic composition. Below this elevation and at the foot of steeper hillsides the terrain becomes more flat as it leaves mountains areas and onto valley floors and open meadows. **Figure 4.8-2** shows the slope conditions located within the Martis Valley Community Plan area. These hillsides have been classified into stability criteria that were previously utilized in the development of the 1975 Martis Valley General Plan. There are three distinct classifications for the slope stability in this region:

- The first classification is **high stability**. This classification designates areas that require little support or have no stability problems under normal conditions. There are some areas within this classification that can become unstable with tectonic movement or earthquakes.

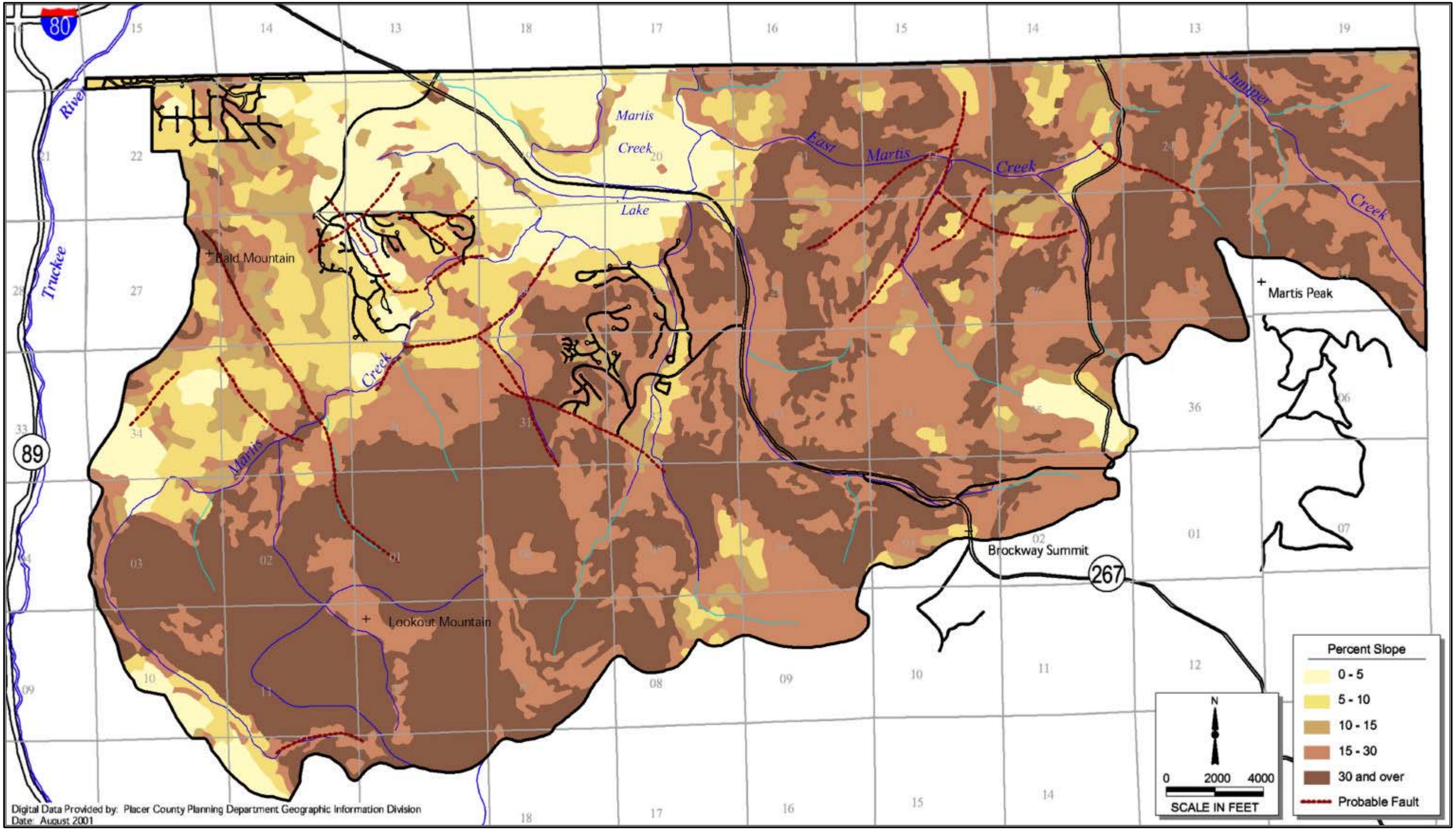

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FIGURE 4.8-2
SLOPE AND FAULT CONDITIONS

- The second classification is **moderate stability**. This classification designates those areas where some slope stability measures are probably needed prior to any construction. There is a possibility of low stability with tectonic movement or earthquakes.

- The third and last classification is **low stability**, which is defined as unsuitable for construction. These areas are hazardous during earthquakes and susceptible to high rates of erosion under normal conditions.

The majority of the Martis Valley Community Plan area is classified as having moderate to high stability. Low stability areas are generally located east of State Route 267 and in the northeastern portion of the Community Plan area. Similar conditions are located in areas with land use designations consisting of either Open Space or Forest under the existing Martis Valley General Plan.

Avalanches

The term avalanche, if unmodified, refers to down slope movements of a mass of snow and/or ice, and this mass of frozen water can also be accompanied by other materials. Avalanches are classified by the type of snow involved. These include climax, combination, damp snow, delayed action, direct action, dry snow, hangfire, and windslab avalanches. Sometimes the term avalanche is used to describe those landslides in which the material catches a pocket of underlying air thus reducing underlying friction and resulting in incredibly rapid downslope movement of snow and/or ice. As movement becomes much more rapid because of lower cohesion, higher water content and steeper slopes the definition for an avalanche can grade from debris slides to debris flows and from debris slide to debris avalanche. Debris slides and, less commonly, debris avalanches may have slump blocks at their heads. In debris slides, the moving mass breaks up into smaller and smaller particles as it advances toward the foot of the slope and the movement is usually slow. In debris avalanches, progressive failure is more rapid and the whole mass, either because it is quite wet or because it is on a steep slope, liquefies, at least in part and flows and tumbles downhill. These movements are commonly along a stream channel and may advance well beyond the foot of the slope. Debris avalanches generally take place along long narrow drainage ways and often leave a serrated or V-shaped scar tapering uphill at the head in contrast to the horseshoe-shaped scarp of a slump.

The setting in which conditions for avalanche are favorable consists of a combination of factors including steepness of slope, exposure, snow pack composition, wind, temperature, rate of snow fall, and other interacting factors outlined in the Placer County Code, Chapter 35, Section 35.01. Avalanches most frequently occur on northerly- and easterly-facing slopes inclined at angles greater than 29 degrees, but under the right combination of factors avalanches can be released under a wide variety of slopes with any aspect.

The Plan area has a typically maritime climate with generally deep snow packs, mild temperatures and strong southerly to southwesterly winds. Although avalanches have the potential to occur on steeper slopes in the Plan area, they are not likely to occur on the terrain that is dominated by more subtle surface features. There have been no records of avalanches occurring in the area.

Faults and Seismicity

Earthquakes threaten manmade improvements by either directly shearing the ground surface beneath structures, and/or by causing the ground to oscillate back-and-forth or side-to-side as their energy waves migrate through earth's subsurface materials. Based on review of available professional and published reports the potential for both mechanisms appears to be present in certain locations within the Plan area. In the past, geologists have prepared various reports in an attempt to delineate the potential level of seismic risk imposed on improvements in the Martis Valley area by future earthquakes that may originate from faults located within the Plan area, in the Truckee basin and within the surrounding region.

Surface Rupture

The ground surface may rupture due to shearing action at a fault's trace or intersection with the ground surface. The types of ground failure will be the result of the type of movement along the fault including right lateral, left lateral, normal, thrusting or combination of these movements. According to above published reports, several normal faults are located across the Plan area and in the immediate surrounding area. Therefore, in the event of movement along one of these faults, the hanging-wall block will most likely move downward in relation the foot-wall block, thus causing the ground surface across the fault to step downward. This differential movement could destroy structures situated atop the fault including foundations underneath structures, roadways and earth embankments. The degree of differential movement would be a function of relative movement of hanging and footwalls located adjacent to the fault. Because of the seismic characteristics in this portion of the Basin and Range province, overall movement along fault structures will likely be more oblique with a small striking component present with the more dominant dip component. Known fault traces in the Plan area are shown in **Figure 4.8-2**.

Ground Shaking

The Plan area is located within Seismic Zone 3, an area with potential for earthquake damage. In populated areas, the greatest potential for loss of life and property damage is a result of ground shaking from a nearby earthquake. The degree of damage depends on many interrelated factors. Among these factors are the Richter magnitude, focal depth, distance from the causative fault, source mechanism, duration of shaking, high rock accelerations, type of surficial deposits or bedrock, degree of consolidation of surficial deposits, presents of high groundwater, topography, and design, type, and quality of building construction.

The risk of damage to manmade structures may also be caused by ground oscillating back-and-forth or side-to-side as earthquake "P" or "S" energy waves migrate through earth's subsurface materials, respectively. Since numerous fault structures are present within the Plan area (**Figure 4.8-2**) and the region, there is a high probability that the region will experience a seismic event sometime in the future that could result in shaking of the ground surface. Two of these faults including the Stampede Valley (Also Dog Valley Fault zone) and Lake Tahoe Faults have experienced movement within the past 10,000 years and are therefore considered as active. According the CDMG Open File Report 92-1, both faults are capable of producing a maximum credible earthquake of 6.5 magnitude that could result in the generation of 0.2 g to 0.3 g peak ground accelerations in certain portions of the Plan area. Also, CDMG Map Sheet 48, titled Seismic Shaking Hazards Map indicates that the above accelerations have a 10 percent chance of being exceeded in 50 years. These conclusions are also stated in the CDMG OFR 96-08 and USGS OFR 96-706.

Conversely, Blackburn reported that a 0.6 g peak ground acceleration is possible in certain areas of the Plan area according to a Caltrans Seismic Hazard Map (1996). Apparently, Caltrans believes that a southerly terminus to the Stampede Valley Fault is located in Martis Valley and approximately 2 miles southeasterly of Truckee and one mile southwesterly of the Truckee Airport. Based on available data, direct evidence confirming this condition is not available.

Map Sheet 48 also suggests the Plan area is situated in a region that has endured damage of at least VII on the Modified Mercalli Intensity (MMI) scale. Areas experiencing this intensity of damage due to seismic activity typically experience slight to moderate damage in older (masonry) structures and considerable damage in poorly built or inadequately designed structures. The MMI scale has a range of values from I to XII with the lowest value representing the least intensity of damage from a seismic event. On the other hand a seismic event generating a MMI value of XII will generate total damage to manmade improvements and eyewitnesses can see the seismic wave move along the ground surface. The following **Table 4.8-1** is an outline of a generalized relationship between the Richter Magnitude and Modified Mercalli Scales.

TABLE 4.8-1
MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

Richter Magnitude Scale M_s=1+2/3 I_o	Modified Mercali Scale	Effects Of Intensity
1.67 (0.1-0.9)	I	Not felt except by a very few under especially favorable circumstances.
2.33 (1.0-2.9)	II	Felt by only a few persons at rest, especially on upper floors of building. Delicately suspended objects may swing.
3.0 (3.0-3.9)	III	Felt quite noticeably in doors, especially on upper floors of building, but many people do not recognize it as an earthquake. Standing cars may rock slightly. Vibration like passing a truck. Duration estimated.
3.67 (4.0-4.5)	IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like heavy truck striking building. Standing cars rocked noticeably.
4.33 (4.6-4.9)	V	Felt by nearly everyone, many awakened. Some dishes, windows, and so on broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
5.0 (5.0-5.5)	VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster and damaged chimneys. Damage slight.
5.67 (5.6-6.4)	VII	Everyone runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars.
6.33 (6.5-6.9)	VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monument, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving in cars disturbed.

Richter Magnitude Scale M_s=1+2/3 I_o	Modified Mercali Scale	Effects Of Intensity
7.0 (7.0-7.4)	IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
7.67 (7.5-7.9)	X	Some well built structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Railway lines bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks.
8.33 (8.0-8.4)	XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of services. Earth slumps and land slips in soft ground. Rails bent greatly.
9.0 (8.5+)	XII	Total damage. Waves seen on ground. Lines of sight and level distorted. Objects thrown into the air.

M_s = Surface wave magnitude, I_o = Epicentral intensity. Intensity scale comparison by Richter (1958). Richter Magnitudes in parenthesis are by CDMG. MMI Table by Bolt.

Liquefaction

The threat of damage to future improvements from liquefaction appears low because subsurface conditions underlying most of the Plan area (shallow soil overlaying bedrock) are generally lacking in the required combination of deep saturated soils, soil type and high ground water needed for failure. In order for liquefaction to occur there must be a sudden large decrease in shearing strength in cohesionless saturated soils along with an associated large increase in the ground water's pore water pressure. The development of this condition can result from the propagation a shock wave (acceleration) generated by an earthquake, but again the pre-existing combination of subsurface conditions must also be in place.

Pre-existing conditions needed for liquefaction may be present where lakes are retained behind earth-filled dam structures. Seepage of water through earthen dams can cause localized high ground water pressures and conditions within the dam structure that could cause liquefaction to occur within the structure during a seismic event. If an earthquake did occur then failure of the dam could take place. Areas underlain by deep non-drained fills may also be susceptible.

Other Potential Geologic Hazards

Though the surrounding region is dominated by evidence of past volcanic activity the likelihood of immediate exposure to magmatic eruptions of lava, mudflow, and pyroclastics appears to be low. Recent volcanic activity is lacking and the mechanism to help ensure this stability is currently in place within the surrounding region. Also, swarms of deep to shallow earthquakes have not been detected in the surrounding region thus indicating that upward flow of magma is absent. Likewise, any evidence of nearby geothermal activity is absent thus indicating there is no immediate threat to the area by developing vents.

Also absent are mechanisms related to glaciers, elevated wind velocities, and large/fast moving bodies of water. Therefore the existing dynamic equilibrium within the interstice of the

atmosphere, biosphere, hydrosphere and lithosphere indicates the risk by mass wasting of terrain within boundaries of the Plan area is minimal.

Soils

The Martis Valley Community Plan area and surrounding region are underlain mostly by upper Cenozoic andesites. This material is a fine-grained extrusive rock that is equivalent in geochemistry to granodiorite and diorite, which are medium to coarse-grained intrusives. Their mineral assemblage is composted from zero to approximately 10 percent quartz, 50 to 60 percent feldspar that is mostly dominated by sodium plagioclase, 10 percent mica (wet minerals), and approximately 20 percent amphibole. These minerals are dominated by a geochemistry that is typical of the silicates and composed of silica, oxygen, sodium, iron, magnesium, calcium, aluminum, and potassium. Andesite is a fine-grained volcanic rock with intermediate composition and its color falls between acidic (felsitic) and ultrabasic (basaltic) rocks. It is commonly porphyritic, in that larger crystals are found in a finer grained mineral matrix. This characteristic is due mainly to two or more stages of cooling by the lava as it migrates upward then out onto the ground surface.

Residual soils found on the ground surface are considered as erosional end-member products of the underlying andesitic bedrock. According the U.S. Department of Agriculture in cooperation with the Soil Conservation Service, University of California Agricultural Experiment Station and through the U.S. Forest Service utilizing their Soil Survey for the Tahoe National Forest, the Plan area is covered by several soil types. These residual soils typically consist of particles with a wide grain size distribution ranging from smaller clays to larger cobbles and boulders. The larger rock fragments tend to be angular to subangular but as they evolve through the natural process of chemical disintegration they become subrounded to rounded. **Figure 4.8-3** provides a map of the various soils located in the Martis Valley Community Plan area. A listing of their physical constraints, hydrologic capacities and engineering characteristics are tabulated in **Table 4.8-2.**

The classification system used by the Soil Conservation Service typically classifies soils into four categories. Class 1 soils are easy to manage, Class 2 soils are readily manageable, Class 3 soils are moderately difficult to manage, and Class 4 soils are very difficult to manage. Class 1 and 2 type soils are on slopes less than 30 percent, while Class 3 type soils are on slope between 30 percent to 50 percent, and 4 type soils are on slope greater than 50 percent. A management modifier as listed below accompanies each classification.

a. "S" if slope stability is low and "s" if it is moderate;

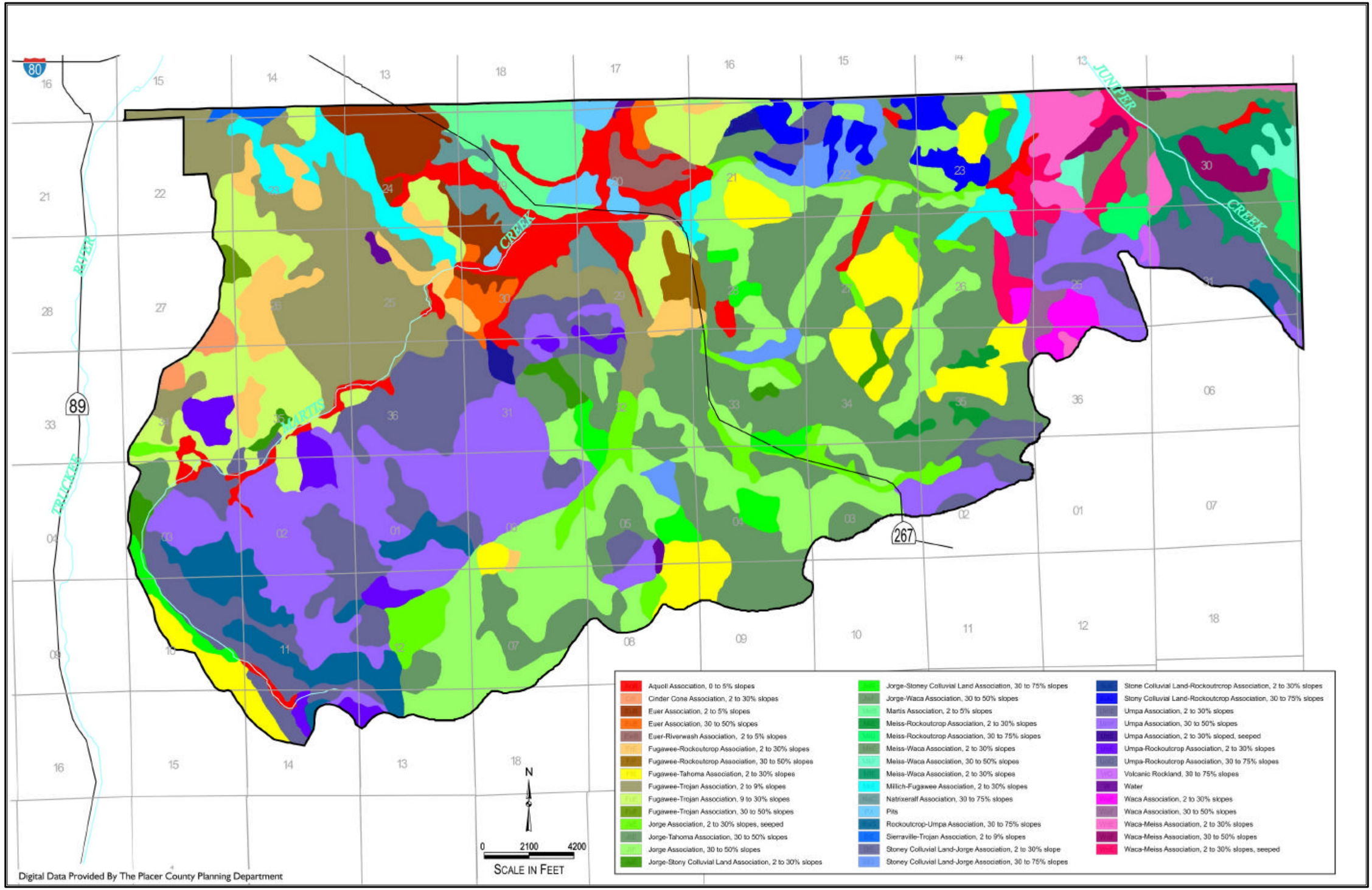
b. "E" if the maximum erosion hazard is high or very high and "e" if it is moderate;

c. "D" if the soil depth is less than 10 inches and "d" if it is 10 to 20 inches;

d. "P" if the upper 20 inches of soil has an available water capacity of less than 1.2 inches and "p" if it is 1.2 to 1.4 inches;

e. "W" if the soil is poorly drained and "w" if it is somewhat poorly drained; and

f. "X" if cobbles or stones comprise greater than 15 percent of the surface and "x" if they comprise 3 to 15 percent of surface.



Digital Data Provided By The Placer County Planning Department

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FIGURE 4.8-3
PLAN AREA SOILS

TABLE 4.8-2
SOIL MAPPING UNITS

Map Unit Name	Erosion Potential	Drainage	Sub Soil Permeability	Effective Depth	Water Holding Capacity	FSSC Class	Limitations For Road Construction
Aquoll association - 0-5% slopes Aquolls (90%) (Wet Meadows)	Low	Poor/VP	Slow/VS	Variable	3" +	NC	Severe
Cinder cone association - 2-30% slopes	Low	ND	ND	ND	ND	N/A	Slight/Mod
Euer association - 2-5% slopes	Low	Well	Slow	18-24"	1.5-2.5"	5, 6	Slight
Euer association - 5-30% slopes	Low	Well	Slow	18-25:	1.5-2.5"	5, 6	Slight
Euer riverwash association - 2-5% slopes	Low/Mod	ND	ND	ND	ND	5, 6	Mod/Severe
Fugawee rock outcrop association - 2-30% slopes	Low/Mod	Well	Moderate	24-40"	4.0-6.0"	5	Mod/Severe
Fugawee rock outcrop association - 30-50% slopes	High	Well	Moderate	24-40"	4.0-6.0"	5	Mod/Severe
Fugawee - Tahoma association - 2-30% slopes	Moderate	Well	Moderate	24-40"	4.0-6.0"	5, 6	Moderate
Fugawee - Tahoma association - 30-50% slopes	High	Well	Moderate	24-40"	4.0-6.0"	5, 6	Moderate
Fugawee - Trojan association - 2-9% slopes	Low	ND	ND	ND	ND	4, 5	Slight
Fugawee - Trojan association - 9-30% slopes	Moderate	ND	ND	ND	ND	4, 5	Slight/Mod
Fugawee - Trojan association - 30-50% slopes	High	ND	ND	ND	ND	4, 5	Moderate
Jorge association - 2-30% slopes	Low/Mod	Well	Moderate	40-60"	3.5-5.0"	4	Moderate
Jorge association - 30-50% slopes	Mod/High	ND	ND	ND	ND	N/A	Moderate
Jorge association - 30-75% slopes	Low/Mod	ND	ND	ND	ND	N/A	Low/Mod
Jorge - Waca association - 30-75% slopes	Mod/High	ND	ND	ND	ND	4, 5	Mod/High
Martis association - 2-5% slopes	Low	Well	Slow/Mod	18-44"	1.5-4.5"	NC	Slight
Meiss - rock outcrop association - 2-30% slopes	Low/Mod	Excessive	Moderate	10-20"	1-2"	NC	Severe
Meiss - rock outcrop association - 30-75% slopes	Moderate	Excessive	Moderate	10-20"	1-2"	NC	Severe
Meiss - Waca association - 2-30% slopes	Moderate	ND	ND	ND	ND	NC	Mod/Severe
Meiss - Waca association - 30-50% slopes	High	ND	ND	ND	ND	NC	Mod/Severe
Meiss - Waca association 2-30% slopes, seeped	Moderate	ND	ND	ND	ND	NC	Mod/Severe
Millich - Fugawee association - 2-30% slopes	Moderate	Moderate	Slow	3-18"	1.5-2"	N/A	Mod/Severe

Map Unit Name	Erosion Potential	Drainage	Sub Soil Permeability	Effective Depth	Water Holding Capacity	FSSC Class	Limitations For Road Construction
Natrixeralf - association - 2-9% slopes	Moderate	Moderate	Very Slow	5-10"	1-2"	N/A	Mod/Severe
Pits (gravel, cinder)	Low	ND	ND	ND	ND	N/A	Moderate
Rock outcrop - Umpa association - 30-75% slopes	High	ND	ND	ND	ND	5	Severe
Sierraville - Trojan association - 2-30% slopes	Moderate	Well	Moderate	40-60"	6-10"	4, 5	Moderate
Stony colluvial land - Jorge association - 2-30% slopes	Low	ND	ND	ND	ND	N/A	Slight/Mod
Stony colluvial land - Jorge association - 30-75% slopes	Low/Mod	ND	ND	ND	ND	N/A	Mod/Severe
Stony colluvial land - rock outcrop association - 2-30% slopes	Low	ND	ND	ND	ND	N/A	Mod/Severe
Stony colluvial land - rock outcrop association - 30-75% slopes	Low	ND	ND	ND	ND	N/A	Severe
Umpa association - 2-30% slopes	Moderate	Well	Moderate	20-40"	2-3.5"	4, 5	Moderate
Umpa association - 30-50% slopes	High	Well	Moderate	20-40"	2-3.5"	4, 5	Moderate
Umpa association - 2-30% slopes, seeps	Moderate	Well	Moderate	20-40"	2-3.5"	4, 5	Mod/Severe
Umpa - rock outcrop association - 2-30% slopes	Low/Mod	ND	ND	ND	ND	N/A	Mod/Severe
Umpa - rock outcrop association - 30-75% slopes	High	ND	ND	ND	ND	N/A	Severe
Volcanic rock land - 30-75% slopes	High	ND	ND	ND	ND	N/A	Severe
Water (lakes, ponds)	-	-	-	-	-	N/A	-
Waca association - 2-30% slopes	Moderate	Well	Moderate	21-40"	2-3.5"	4	Moderate
Waca association - 30-50% slopes	High	Well	Moderate	21-40"	2-3.5"	4	Moderate
Waca association - 2-30% slopes, seeped	Moderate	Well	Moderate	21-40"	2-3.5"	4	Mod/Severe
Waca - Meiss association - 2-30% slopes	Moderate	ND	ND	ND	ND	NC	Mod/Severe
Waca - Meiss association - 30-50% slopes	High	ND	ND	ND	ND	NC	Mod/Severe
Waca - Meiss association - 2-30% slopes, seeped	Moderate	ND	ND	ND	ND	NC	Mod/Severe

FSSC= Forest Survey Site Class for timber productivity.
N/A= No classification given.
NC= Not capable
ND = No data
VS = Very Slow
Mod = Moderate

A substantial area within the Martis Valley Community Plan area is in low-lying terrain where soil types are classified into Class 1 and 2 categories. Above valley floors and in densely forested hillsides soils are typically classified into Class 2 and 3 categories and in these areas land uses are considered suitable for habitat and aesthetic purposes. Class 4 type soils are typically located on mountain peaks, ridges, and hillsides located at elevations above the timberline. Based on the information provided in **Table 4.8-2** the soils located across the Plan area vary substantially regarding their erosion potential, ability to drain and suitability for use in engineered fills.

Timber productivity of soils is a separate component expressed by the Forest Survey Site Class (FSSC) which is an expression of the volume of bole wood produced on one acre per year in a normal, even-aged stand at culmination and mean annual increment. The FSSC component is shown below and listed in **Table 4.8-2**:

TABLE 4.8-3
SOIL SUITABILITY FOR TIMBER PRODUCTION CLASSIFICATIONS

FSSC	Volume of Bole Wood (lbs/acre)
1	> 225
2	165 to 225
3	120 to 165
4	85 to 120
5	50 to 85
6	20 to 50
7	< 20

Mineral Resources

Using data contained in CDMG Open–File Report 95-10, titled Mineral Land Classification of Placer County, CA, the Plan area was classified for its mineral resource potential. According to this document the area northerly of Lake Tahoe and between the Town of Truckee and North Shore are in the westerly margin of the Basin and Range Province. It is an area located easterly of the eastern metamorphic terrain of the Sierra Nevada Mountains and dominated by Cenozoic volcanic rocks. As previously stated the Plan area is underlain mostly be andesitic lava flows.

According to OFR 95-10 the following mineral categories and classifications apply to the Plan area:

- Category - Deposits formed by mechanical concentration.

  Classification – For this category the entire Plan area is classified as MRZ-4 or area of unknown mineral resource significance.

- Category – Deposits form by hydrothermal processes.

  Classification – For this category one specific site within the Plan area is classified as MRZ-3a$^{(h-15)}$. MRZ-3 is for areas of undetermined mineral resource significance. The Elizabethtown prospect is a gold and silver lode prospect located near the Brockway Summit in T17N, R17E, in Section 33. This prospect was active in 1861 but work at the site

was short lived. Two selected samples collected from the site did not reveal anomalous amounts of ore or indicator minerals.

- Category – Deposits of construction aggregate resources, industrial mineral deposits and deposits formed by magmatic segregation processes.

  Classification – For this category an area approximately 2,000 acres in size is situated on both sides of State Highway 267 in the north-central portion of the Plan area and is classified as MRZ-3a(sg-15). It is considered to be composed of glacial deposits suitable for aggregate.

- Category – Areas with identified mineral resource significance for all minerals.

  Classification – MRZ-2 is designation for this category, but no areas with this designation are located within the Plan area.

- Category – Areas of no mineral resource significance.

  Classification - MRZ-1 is the designation for this category, but no areas with this designation are located within the Plan area.

The Plan area is mostly covered by the MRZ-4 classification. Sites described by this classification are considered to be in "areas of no known mineral occurrences where geologic information does not rule out either the presence or absence of significant mineral resources". The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations, but it must be emphasized that MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding the mineral occurrence.

For the north-central portion of the Plan area, the County uses MRZ-3a classification for those areas containing known mineral occurrences of undetermined mineral resource significance. This area is contained in Sections 19, 20, 21, 30 of T 17 N, R 17 E. The classification is further subdivided with a (sg-15) superscript on the "a" designator. The total classification for this area is MRZ-3a(sg-15). This classification has the following description - "Glacial Deposits: The areas mapped as glacial deposits are classified for aggregate". Construction aggregate is commercially produced from glacial out wash deposits in the Martis Valley area in adjacent Nevada County, and some aggregate is also commercially produced from similar deposits in Placer County around Donner Lake and in the Hirschdale area.

4.8.2 REGULATORY FRAMEWORK

STATE

California Division Of Mines and Geology

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (prior to January 1, 1994 called the Alquist-Priolo Special Studies Zones Act – CCR, Title 14, Section 3600) sets forth the policies and Criteria of the State Mining and Geology Board that governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy cross the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface

faulting or fault creep within Earthquake Fault Zones delineated of maps officially issued by the State Geologist. Working definitions include:

- *Fault* – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- *Fault Zone* – a zone of related faults, which commonly are braided, and sub parallel, but may be branching and divergent. A fault zone has a significant with (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- *Potentially Active Fault* – a fault that showed evidence of surface displacement during Quaternary time (last 1.6 million years) for the purpose of evaluation for possible zonation. No longer used.
- *Sufficiently Active Fault* – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches; and,
- *Well-Defined Fault* – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

"Sufficiently Active" and "Well Defined" are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

LOCAL

Martis Valley General Plan

The 1975 Martis Valley General Plan provides the two following policies to address geology within the Martis Valley Community Plan area.

Environmental Resources Policy

9. Conservation of economic mineral deposits should be practiced and their source locations protected from incompatible land use.

Community Development and Transportation Policy

18. The avalanche hazard areas for the ski slope and development areas must be precisely determined. Evaluation of the effectiveness of possible control measures, including recommendations of the absolute limits of development in various areas, must be made with each project report.

Placer County General Plan

The 1994 Placer County General Plan provides regulatory framework for geologic resources.

Policy 1.J.1 The County shall require new mining operations to be designed to provide a buffer between existing or likely adjacent uses, minimize incompatibility with

nearby uses, and adequately mitigate their environmental and aesthetic impacts.

Policy 1.J.2 The County shall require that new non-mining land uses adjacent to existing mining operations be designed to provide a buffer between the new development and the mining operations. The buffer distance will be based upon an evaluation of noise, aesthetics, drainage, operating conditions, topography, lighting, traffic, operating hours and air quality.

Policy 1.J.3 The County shall discourage the development of any uses that would be incompatible with adjacent mining operations or would restrict future extraction of significant mineral resources.

Policy 1.J.4 The County shall discourage the development of incompatible land uses in areas that have been identified as having potentially significant mineral resources.

Policy 1.J.5 The County shall require that all mining operations prepare and implement reclamation plans that mitigate environmental impacts and incorporate adequate security to guarantee proposed reclamation.

Policy 1.J.6 The County shall require that plans for mining operations incorporate adequate measures to minimize impacts to local residents and county roadways.

Policy 8.A.1 The County shall require the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards (i.e., ground shaking, landslides, liquefaction, critically expansive soils, avalanche).

Policy 8.A.2 The County shall require submission of a preliminary soils report, prepared by a registered civil engineer and based upon adequate test borings, for every major subdivision and for each individual lot where critically expansive soils have been identified or are expected to exist.

Policy 8.A.3 The County shall prohibit the placement of habitable structures or individual sewage disposal systems on or in critically expansive soils unless suitable mitigation measures are incorporated to prevent the potential risks of these conditions.

Policy 8.A.4 The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent land sliding.

Policy 8.A.5 In landslide hazard areas, the County shall prohibit avoidable alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems; removal of vegetative cover; and steepening of slopes and undercutting the bases of slopes.

Policy 8.A.6 The County shall require the preparation of drainage plans for development in hillside areas that direct runoff and drainage away from unstable slopes.

Policy 8.A.7 In areas subject to severe ground shaking, the County shall require that new structures intended for human occupancy be designed and constructed to minimize risk to the safety of occupants.

Policy 8.A.8 County shall continue to support scientific geologic investigations, which refine, enlarge, and improve the body of knowledge on active fault zones, unstable areas, severe ground shaking, avalanche potential, and other hazardous conditions in Placer County.

Policy 8.A.9 The County shall require that the location and/or design of any new buildings, facilities, or other development in areas subject to earthquake activity minimize exposure to danger from fault rupture or creep.

Policy 8.A.10 The County shall require that new structures permitted in areas of high liquefaction potential be sited, designed, and constructed to minimize the dangers from damage due to earthquake induced liquefaction.

Policy 8.A.11 The County shall limit development in areas of steep or unstable slopes to minimize hazards caused by landslides or liquefaction.

Policy 8.A.12 The County shall not issue permits for new development in potential avalanche hazard areas (PAHA) as designated in the Placer County Avalanche Management Ordinance unless project proponents can demonstrate that such development will be safe under anticipated snow loads and conditions of an avalanche.

Policy 8.H.1 The County shall maintain maps of potential avalanche hazard areas.

Policy 8.H.2 The County shall require new development in areas of avalanche hazard to be sited, designed, and constructed to minimize avalanche hazards.

Placer County Avalanche Management Program

Placer County's avalanche management program defines Potential Avalanche Hazard Areas (PAHAs) as those areas where the minimum probability of avalanche occurrence is greater than 1 in 100 per year or where avalanche damage has already occurred. The Placer County Department of Public Works and property owners that rent their property to the public are required to post information, described below, in facilities located in PAHAs explaining avalanche hazards and available emergency services. The following are relevant Placer County General Plan policies related to avalanche hazards.

According to the Placer County Avalanche Management Ordinance (Ordinance No. 4331-B), specific project related information must include:

- Information that a structure is within a PAHA;
- A warning that avalanche control work, including the use of explosives, may be carried out and that avalanche control personnel may provide special advisories or instructions;
- A warning that authorities may attempt to contact property owners during periods of severe storm events, but that the responsibility of the occupants to use good judgment during such events; and

- Identification of local radio stations that provide weather information, phone numbers of the Office of Emergency Services and other local emergency offices, and available brochures about avalanches.

The County will not issue a building permit for construction in a PAHA without certifying that the structure will be safe under the anticipated snow loads and conditions of an avalanche, or as an alternative, without a recorded statement that discloses that special construction methods were not employed. In general, structures must be constructed of reinforced concrete or other reinforced masonry at least as high as the depth of an expected avalanche because constructing wood-frame structures that will withstand forces greater than 1 ton per square meter is considered economically infeasible. Currently, the Plan area is not covered in the Placer County Avalanche Management Ordinance.

4.8.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The CEQA Guidelines (Appendix G) indicate that a proposed project may have potentially significant geologic impacts if it exposes people to potential impacts involving: fault rupture, liquefaction, landslides or mudslides, unstable soil conditions from excavation or filling, land subsidence, or disruption of unique geologic features.

The proposed Martis Valley Community Plan Update would have significant geologic impacts if it would result in:

- locating structures for human occupancy within the trace of an active fault;
- exposing people to strong seismic ground shaking;
- potential damage from liquefaction;
- exposing people to hazards from tsunami or seiches inundation or volcanic hazards;
- exposing people or property to hazards from landslides, mudflows or avalanches;
- causing erosion, changes in topography or unstable soil conditions from excavation, grading, of filling;
- potential damage from expansive soils;
- creating land use conflicts that would preclude the protection of mineral resources at the site; or
- altering or destroying a unique geologic feature.

The following geologic hazards are not present in the Plan area: tsunami, seiche, or land subsidence. In addition, future projects to be developed within the Plan area are located outside of any designated Mineral Resource Zones that identify potential mineral resource significance. Thus, no significant mineral resource impacts are expected to occur as a result of implementation of any of the Martis Valley Community Plan Alternatives. Since geologic

conditions in the Plan area do not include ultramafic rock conditions that could support naturally occurring asbestos, no public health exposure impacts to asbestos are expected to occur.

METHODOLOGY

Evaluation geology and related soils located within the proposed Plan area was based on review of regional reports prepared by consultants and memorandums prepared by various departments in Placer County and the State of California.

The Proposed Land Use Diagram and Alternatives AA through AC have residential holding capacities ranging between 11,688 to 7,956 dwelling units along with various uses including commercial, forest, residential, open space, recreational, and access and internal roads, and utilities. Based on these plans detailed grading to generate cuts and fills are anticipated to construct roads and building pads. However, to date detailed grading and improvement plans are not complete for all development areas proposed in the Plan area. Thus, the geologic and soil stability analysis is a qualitative evaluation of subsequent development under the Proposed Land Use Diagram and Alternatives AA through AC.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.8.1 Geologic Stability and Suitability of the Martis Valley Community Plan Area

PP Subsequent development under the Proposed Land Use Diagram could expose future residents and structures to geologic instability. However, Community Plan proposed policies and implementation programs would ensure adequate consideration of geologic stability issues. This would be a **less than significant** impact.

AA Subsequent development under the Existing Martis Valley General Plan Land Use Map could expose future residents and structures to geologic instability. However, Community Plan proposed policies and implementation programs would ensure adequate consideration of geologic stability issues. This would be a **less than significant** impact.

AB Subsequent development under the Alternative 1 Land Use Map could expose future residents and structures to geologic instability. However, Community Plan proposed policies and implementation programs would ensure adequate consideration of geologic stability issues. This would be a **less than significant** impact.

AC Subsequent development under the Alternative 2 Land Use Map could expose future residents and structures to geologic instability. However, Community Plan proposed policies and implementation programs would ensure adequate consideration of geologic stability issues. This would be a **less than significant** impact.

PP Proposed Land Use Diagram

As previously described, the Plan area is generally considered to be geologically stable for proposed developments based on various technical reports prepared by County and State agencies. However, there has been no extensive geologic subsurface investigation has been performed for the entire Plan area to verify degree of geologic stability, siting of critically expansive soils, liquefaction and avalanche potential, and overall engineering characteristics of

earth materials that may be situated beneath future roadways and foundations. While a majority of the Plan area would be developed on relatively gentle terrain, there are several development areas located within moderate to steep sloped areas. Improper consideration of site-specific geologic conditions could result in damage and/or failure of project facilities and buildings.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would have a similar land use pattern and would result in the same geologic stability issues as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would have a similar land use pattern and would result in the same geologic stability issues as the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would have a similar land use pattern and would result in the same geologic stability issues as the Proposed Land Use Diagram.

Policies and Implementation Programs

The Martis Valley Community Plan Update includes the following policies and implementation programs that would reduce the severity of this impact to **less than significant** for the Proposed Land Use Diagram and Alternatives AA through AC.

Policy 9.A.1 *The County shall require the preparation of a soils or geologic investigation prior to permitting development in areas of known or suspected geological or seismic hazards (i.e., seismically induced ground shaking, landslides, liquefaction, critically expansive soils, avalanche).*

Policy 9.A.2 *The County shall require submission of a preliminary soils report, prepared by a registered civil or geotechnical engineer and based upon adequate test borings, for every major subdivision and for each individual lot where critically expansive soils have been identified or are expected to exist.*

Policy 9.A.3 *The County shall prohibit the placement of habitable structures or individual sewage disposal systems on or in critically expansive soils unless suitable mitigation measures are incorporated to prevent the potential risks of these conditions.*

Policy 9.A.4 *The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landsliding.*

Policy 9.A.5 *In landslide hazard areas, the County shall prohibit alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems; removal of vegetative cover; and steepening of slopes and undercutting the bases of slopes.*

Policy 9.A.6 *The County shall require that drainage plans for development in mountainous and sloping areas that direct runoff and drainage away from unstable slopes.*

Policy 9.A.7 *The County shall continue to support scientific geologic investigations, which refine, enlarge, and improve the body of knowledge on active fault zones, unstable areas, severe groundshaking, avalanche potential, and other hazardous conditions in Placer County.*

Policy 9.A.9 *The County shall limit development in areas of steep (in excess of 30% or in some cases between 20 and 30%) or unstable slopes to minimize hazards caused by landslides or liquidefaction and to reduce grading and disturbance to such slopes.*

Implementation Programs

Geology

2. *Require the preparation of a soils and/or geologic investigation prior to permitting development in areas of known or suspected geological or seismic hazards (i.e., seismically induced groundshaking, landslides, liquefaction, critically expansive soils).*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees/ Plan Review Fees

3. *Continue to enforce the Placer County Grading Ordinance to ensure that areas of slope instability are adequately investigated and that any development incorporates appropriate design provisions to prevent landsliding.*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees/ Plan Review Fees

4. *Require the preparation of drainage plans that direct runoff and drainage away from unstable slopes for construction in hillside areas.*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees/Plan Review Fees

6. *During the review of private development projects, required site-specific studies shall include soil reports, slope analyses, grading plans, and erosion control and*

rehabilitation plans during environmental review, or at the first available opportunity, as needed.

Responsible Agency/Department: Development Review Committee
Time Frame: On-going
Funding: Permit fees/Plan Review Fees

Mitigation Measure

None required.

Impact 4.8.2 Seismic Hazards

PP Subsequent development under the Proposed Land Use Diagram could expose future residents and structures to seismic hazards associated with fault rupture and ground shaking. This would be a **potentially significant** impact.

AA Subsequent development under the Existing Martis Valley General Plan Land Use Map could expose future residents and structures to seismic hazards associated with fault rupture and ground shaking. This would be a **potentially significant** impact.

AB Subsequent development under the Alternative 1 Land Use Map could expose future residents and structures to seismic hazards associated with fault rupture and ground shaking. This would be a **potentially significant** impact.

AC Subsequent development under the Alternative 2 Land Use Map could expose future residents and structures to seismic hazards associated with fault rupture and ground shaking. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

As shown on **Figure 4.8-2**, several faults have been located in the Plan area. Most of these faults are steeply dipping structures most of which are oriented between north and northwest and parallel to the regional trend of late Cenozoic faults. As previously described, at least one of these faults has been identified as active and is located within the Siller Ranch area (map Sections 26 and 35). If any of these faults were to experience renewed movement the ground surface adjacent to their trace would likely become offset with vertical displacement and thus create a vertical fault rupture. In addition to fault rupture future residents and structures could be exposed to ground shaking from earthquakes located along on and off-site faults. If earthquakes originate from off-site faults the ground motions they generate would probably produce strong horizontal motion, but an event originating from an on-site fault would likely produce very strong vertical movements as well.

Earthquakes originating on any of the region's active or potentially active faults could produce moderate to strong shaking of the ground across the Plan area, especially if the magnitude and location of the seismic event is strong and nearby. As previously described the Plan area is located within Seismic Zone 3, (moderate seismic risk zone) because earthquakes are possible on any of the surrounding faults.

Based on location and seismic history of the region proposed buildings to be constructed in future developments in the Plan area should be designed to seismic design standards for Seismic

Zone 3 as provided in Uniform Building Code (UBC). Also, as defined per site-specific geotechnical investigations the potential for liquefaction should also be evaluated because soils with varied grain-size distributions do occur across various projects in the Plan area and high groundwater conditions also exist in some areas.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would have a similar land use pattern and would result in the same seismic hazard issues as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would have a similar land use pattern and would result in the same seismic hazard issues as the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would have a similar land use pattern and would result in the same seismic hazard issues as the Proposed Land Use Diagram.

Policies and Implementation Programs

The Martis Valley Community Plan Update includes the following policies and implementation programs that would reduce the severity of this impact.

Policy 9.A.1. The County shall require the preparation of a soils or geologic investigation prior to permitting development in areas of known or suspected geological or seismic hazards (i.e., seismically induced ground shaking, landslides, liquefaction, critically expansive soils, avalanche).

Policy 9.A.7. The County shall continue to support scientific geologic investigations, which refine, enlarge, and improve the body of knowledge on active fault zones, unstable areas, severe groundshaking, avalanche potential, and other hazardous conditions in Placer County.

Policy 9.A.8. The County shall require that the location and/or design of any new buildings, facilities, or other development in areas subject to earthquake activity minimize exposure to danger from fault rupture or creep.

Implementation Programs

Geology

2. Require the preparation of a soils and/or geologic investigation prior to permitting development in areas of known or suspected geological or seismic hazards (i.e., seismically induced groundshaking, landslides, liquefaction, critically expansive soils).

Responsible Agency/Department: Department of Public Works
Time Frame: On-going

Funding: Permit Fees/ Plan Review Fees

5. *Enforce the Uniform Building Code for seismic concerns, including masonry building design requirements.*

   Responsible Agency/Department: Building Department
   Time Frame: Ongoing
   Funding: Permit Fees

Mitigation Measures

The following mitigation measures shall be incorporated into the Martis Valley Community Plan and apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC. Mitigation measure MM 4.8.2a shall be included in the plan as an implementation program under Geology and MM 4.8.2b shall be included as a policy under Goal 9.A of the Natural Resources Section.

MM 4.8.2a As part of the geotechnical subsurface investigation work (Geology Implementation Program 2), an onsite seismic hazards analysis for subsequent projects and their supporting infrastructure will be performed to further locate and identify active fault traces. Because of their presence additional exploration will be required across these structures in several locations to accurately map their trends across the region. This information shall be utilized to adjust, if needed, the configuration of subsequent projects to ensure future structures will not be located on or near an active fault. Appropriate setbacks must then be defined per results of field investigations, and guidelines contained in UBC and CDMG (Fault-Rupture Hazard Zones in California, Special Report 42 standards). No special setbacks or project design modifications will be required if technical studies fail to identify the presence of a suspected fault or if the fault is determined to be inactive.

MM 4.8.2b Future residential units, structures, project utilities, and infrastructure shall be designed to withstand expected seismic forces that could sustain both horizontal and vertical oscillations and net displacements of earth material along local active fault(s). This may include strengthening of foundations, offsets of structures, engineering of flexible utility connections to accommodate warping, and distributive deformation associated with faulting. These designs will meet requirements outlined by Uniform Building Code and California Department of Mines and Geology.

Implementation of the above policies, implementation programs and mitigation measures would reduce potential seismic impacts to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.8.3 Soil Erosion

PP Subsequent development under the Proposed Land Use Diagram would include minor to major grading over large areas of land that could result in increased soil erosion above existing conditions. This would be a **potentially significant** impact.

AA Subsequent development under the Existing Martis Valley General Plan would include minor to major grading over large areas of land that could result in increased soil erosion above existing conditions. This would be a **potentially significant** impact.

AB Subsequent development under the Alternative 1 Land Use Map would include minor to major grading over large areas of land that could result in increased soil erosion above existing conditions. This would be a **potentially significant** impact.

AC Subsequent development under the Alternative 2 Land Use Map would include minor to major grading over large areas of land that could result in increased soil erosion above existing conditions. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

Subsequent development under the Proposed Land Use Diagram would include grading of sites (e.g., cut and fill and recontouring of existing slope conditions), including areas on gentle to moderate slopes. Approximately 4,300 acres would be disturbed under the Proposed Land Use Diagram. Construction activities could result in wind erosion and sedimentation of the various branches of Martis Creek and adjoining waterways. The reader is referred to Section 4.7 (Hydrology and Water Quality) regarding a further description of anticipated surface water quality impacts associated with development of the Plan area.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would include grading of sites (e.g., cut and fill and recontouring of existing slope conditions), including areas on gentle to moderate slopes. Approximately 4,900 acres would be disturbed under the Existing Martis Valley General Plan Land Use Map. Construction activities could result in wind erosion and sedimentation of the various branches of Martis Creek and adjoining waterways. The reader is referred to Section 4.7 (Hydrology and Water Quality) regarding a further description of anticipated surface water quality impacts associated with development of the Plan area.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would include grading of sites (e.g., cut and fill and recontouring of existing slope conditions), including areas on gentle to moderate slopes. Approximately 3,700 acres would be disturbed under the Alternative 1 Land Use Map. Construction activities could result in wind erosion and sedimentation of the various branches of Martis Creek and adjoining waterways. The reader is referred to Section 4.7 (Hydrology and Water Quality) regarding a further description of anticipated surface water quality impacts associated with development of the Plan area.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would include grading of sites (e.g., cut and fill and recontouring of existing slope conditions), including areas on gentle to moderate slopes. Approximately 3,500 acres would be disturbed under the Alternative 2 Land Use Map. Construction activities could result in wind erosion and sedimentation of the various branches of Martis Creek and adjoining waterways. The reader is referred to Section 4.7

(Hydrology and Water Quality) regarding a further description of anticipated surface water quality impacts associated with development of the Plan area.

Policies and Implementation Programs

New development projects in the Plan area would be required to adhere to the Martis Valley Community Plan policies and implementation programs listed below that would reduce the severity of this impact.

Policy 6.E.3 *The County shall continue to implement and enforce its Grading Ordinance and Flood Damage Prevention Ordinance.*

Policy 6.E.10 *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.*

Policy 6.E.11 *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). Storm sewers are prohibited from connecting directly or indirectly to the TTSA sewer system.*

Policy 9.D.1 *The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species (see discussion of sensitive habitat buffers in Part 1 of the PCGP).*

In some cases, buffers shall be required which are substantially larger than noted above. Conversely, based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. In addition, the County may allow exceptions, such as in the following cases:

a. Reasonable use of the property would otherwise be denied;

b. The location is necessary to avoid or mitigate hazards to the public.

c. The location is necessary for the repair of roads, bridges, trails or similar infrastructure; or

d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement

Policy 9.D.2 *The County shall require that any permitted disturbance in the 100-year floodplain comply with the provisions of the Placer County Flood Damage Prevention Ordinance and any other existing regulations.*

Policy 9.D.3 *The County shall require development projects proposing to encroach (where it has been determined to be appropriate) into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:*

a. Avoid the disturbance of riparian vegetation;

b. Replace riparian vegetation (on-site, in-kind);

c. Restore another section of creek (in-kind) and/or;

d. Pay a mitigation fee for restoration elsewhere (e.g. wetland mitigation banking program).

Policy 9.D.4 *The County shall require public and private development to address creeks and riparian corridors as follows:*

a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) shall be located to optimize resource protection. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;

b. Designate such easement or dedication areas (as described in a. above) as open space;

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

d. Provide recreation and public access near creeks consistent with other General Plan policies;

e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: 1)turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment off site; and/or 2) temporary vegetation is established sufficient to stabilize disturbed areas, and;

f. Provide for long-term creek corridor maintenance.

Policy 9.D.5 *The County shall continue to require the use of feasible and practical Best Management Practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for recreational development.*

Policy 9.D.7 *The County shall prohibit grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.*

Policy 9.D.8 *Where the stream environment zone has previously been modified by channelization, fill, or other human activity, the County shall require project proponents to restore such areas by means of landscaping, revegetation, or similar stabilization techniques as a part of development activities.*

Policy 9.D.9 *The County shall encourage the preservation and protection of open space located in watersheds, which serve reservoirs due to its importance in the adequate performance of those reservoirs for their intended purposes.*

The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and within 5,000 feet of the reservoir shall be considered as having an immediate effect. For Martis Valley, this includes Martis Creek Lake.

Policy 9.D.10 *The County shall encourage the protection of flood plain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the*

standards contained in the PCGP unless a larger buffer is warranted based on site-specific fieldwork.

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.*

Policy 9.H.7 *The County shall work with the Placer County Air Pollution Control District (PCAPCD) to reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible. The County should include PM10 control measures as conditions of approval of subdivision maps, site plans, and grading permits. The County should inform developers of the requirements of the District's PM10 mitigation requirements when they apply for a grading permit.*

Policy 9.H.8 *The County may require new development projects to submit an air quality analysis. Based on this analysis, the County shall require appropriate mitigation measures consistent with the PCAPCD's current list of Best Available Mitigation Measures and/or the most recent version of the Air Quality Attainment Plan.*

Implementation Programs

Geology

3. *Continue to enforce the Placer County Grading Ordinance to ensue that areas of slope instability are adequately investigated and that any development incorporates appropriate design provisions to prevent landsliding.*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees/Plan Review Fees

4. *Require the preparation of drainage plans that direct runoff and drainage away from unstable slopes for construction is hillside areas.*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees/Plan Review Fees

6. *During the review of private development projects, required site specific studies shall include soil reports, slope analyses, grading plans, and erosion control and rehabilitation plans during environmental review, or at the first available opportunity, as needed.*

   Responsible Agency/Department: Development Review Committee
   Time Frame: On-going
   Funding: Permit fees/Plan Review Fees

7. *Through environmental review and project approval, avoid development on highly erosive soils and most slopes over 20%, if possible, and in all locations, slopes over 30%. Where development does occur in these areas, require the application of BMPs.*

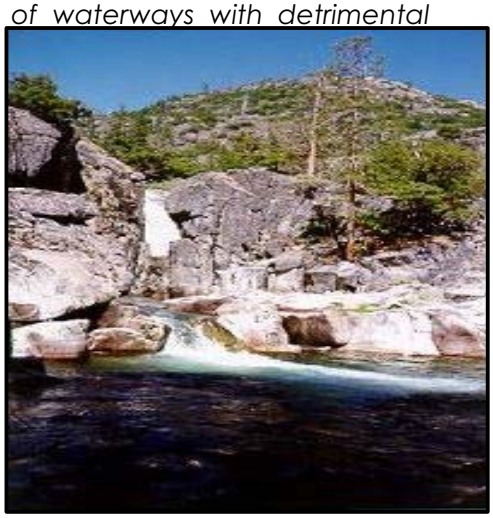
   Responsible Agency/Department: Development Review Committee
   Time Frame: On-going
   Funding: Permit Fees.

8. *Continue the program of monitoring mitigation measures that relate to accelerated erosion and attendant problems.*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees/General Fund

Water Resources

10. *The County shall inform the public and prospective developers about those sections of the California Fish and Game Code that apply to diversion or obstruction of stream channels and pollution of waterways with detrimental material. This shall be done through distribution of educational materials with building permits and as a part of project review.*



    Responsible Agency/Department: Planning Department
    Time Frame: On-going
    Funding: General Fund

15. *BMPs are structural and non-structural practices proven effective in soil erosion control and management of surface runoff. Eroding soils and surface water runoff transport pollutants, particularly plan nutrients and sediments, to the area's rivers and streams. Turf herbicides, pesticides, fertilizers, oil and grease contribute to the problem. Declines in water quality are directly attributable to the flow of non-point source pollutants into streams, rivers, and lakes. BMPs shall be implemented with every development project in the Martis Valley. The goal is to [1] stabilize the soil, [2] prevent erosion, and [3] divert runoff from impervious surfaces into infiltration systems. Within the Martis Valley, temporary BMPs are required while construction is underway and permanent BMPs are required to be in place prior to the development project being completed. Both temporary and permanent BMPs must be graphically shown on project plans.*

    Responsible Agency/Department: Department of Public Works
    Time Frame: On-going
    Funding: Permit Fees

18. *Include mitigation measures for new development projects adopted pursuant to the Lahontan Regional Water Quality Control Board's requirements and permits issued under Section 404 of the Federal Clean Water Act.*

    Responsible Agency/Department: Development Review Committee
    Time Frame: On-going
    Funding: Permit Fees

Mitigation Measures

Implementation of the above policies and implementation programs as well as mitigation measures MM 4.7.1a through c would reduce potential soil erosion impacts to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.8.4 Avalanche Hazards

PP Subsequent development under the Proposed Land Use Diagram may result in the placement structures and residents in areas that could be exposed to avalanche hazards. This would be a **potentially significant** impact.

AA Subsequent development under the Existing Martis Valley General Plan Land Use Map may result in the placement structures and residents in areas that could be exposed to avalanche hazards. This would be a **potentially significant** impact.

AB Subsequent development under the Alternative 1 Land Use Map may result in the placement structures and residents in areas that could be exposed to avalanche hazards. This would be a **potentially significant** impact.

AC Subsequent development under the Alternative 2 Land Use Map may result in the placement structures and residents in areas that could be exposed to avalanche hazards. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

There are no records of avalanches occurring in the Plan area. However, the Plan area is not covered under the Placer County Avalanche Management Ordinance and no extensive avalanche hazard mapping of the Plan area has been performed. Subsequent development under the Proposed Land Use Diagram in map Sections 5, 6, 27, 28, 31, 33 through 36 (see **Figure 4.8-2**) are proposed for development and contain north-facing slopes that are adjacent to areas with slopes 30 percent and above. Development in these areas may expose certain improvements to the threat of damage by snow and ice flows, especially if improvements are located at the base of high, steep hillsides with terrain that can funnel, concentrate and increase the flow of snow/ice from up slope areas. Any buildings and other improvements located at the base of these areas would be exposed to the down hill movements of these flows and the threat of being pushed off their foundations and down slope.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would have a similar land use pattern and would result in the same potential avalanche hazard issues as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would have a similar land use pattern and would result in similar potential avalanche hazard issues as the Proposed Land Use Diagram. However, this alternative would avoid potentially exposing future structures and residents to avalanche hazards from avoiding large-scale development in map Sections 27, 28, 33 and 34 east of SR 267.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would have a similar land use pattern and would result in similar potential avalanche hazard issues as the Proposed Land Use Diagram. However, this alternative would avoid potentially exposing future structures and residents to avalanche hazards from avoiding large-scale development in map Sections 27, 28, 33 and 34 east of SR 267.

Policies and Implementation Programs

New development projects in the Plan area would be required to adhere to the Martis Valley Community Plan policies listed below that would reduce the severity of this impact.

Policy 9.B.1 *The County shall maintain maps of potential avalanche hazard areas.*

Policy 9.B.2 *The County shall require new development in areas of avalanche hazard to be sited, designed, and constructed to minimize avalanche hazards.*

Mitigation Measure

The following mitigation measure shall be incorporated into the Martis Valley Community Plan Update as an implementation program in the Geology portion of the Natural Resources Section and apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

MM 4.8.4 During review of any project would be located along a north-facing slope adjacent to areas with slopes 30 percent or greater, Placer County shall require each subsequent project provide the County with an avalanche hazard investigation report for their project. This report will document field investigations of surface conditions in areas where construction of all structures is proposed as well as typical snow accumulation and climate conditions. Evaluation of surface materials will be made to evaluate slope stability characteristics of underlying near surface conditions and probable snow conditions that will likely by present during various storm conditions. Avalanche hazard areas shall be mapped and the site design shall be modified to avoid these areas. If avoidance is infeasible, structures to be placed in the avalanche hazard areas shall designed to withstand

anticipated snow loads and conditions of an avalanche consistent with the Placer County Avalanche Management Program.

Implementation of the above policies and mitigation measures would mitigate avalanche hazards in the project area to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

4.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

SETTING

Geotechnical impacts tend to be site specific rather than cumulative in nature and each development site would be subject to, at a minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent within the region. Impacts regarding surficial deposits, namely erosion and sediment deposition, can be cumulative in nature within a watershed. The reader is referred to Section 4.7 (Hydrology and Water Quality) regarding cumulative water quality impacts from soil erosion and Section 4.6 (Air Quality) regarding dust (particulate matter) generation.

IMPACTS AND MITIGATION

Impact 4.8.5 Cumulative Geologic Impacts

PP Development under the Proposed Land Use Diagram could result in site-specific geologic hazards for area residents. This is considered a **less than significant** cumulative impact.

AA Development under the existing Martis Valley Community Plan Land Use Map could result in site-specific geologic hazards for area residents. This is considered a **less than significant** cumulative impact.

AB Development under the Alternative 1 Land Use Map could result in site-specific geologic hazards for area residents. This is considered a **less than significant** cumulative impact.

AC Development under the Alternative 2 Land Use Map could result in site-specific geologic hazards for area residents. This is considered a **less than significant** cumulative impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Impacts associated with geologic and seismic hazards would be site-specific to the Plan area and would not contribute significantly to existing geologic and seismic hazards in Martis Valley. The project contains mitigation measures to abate the Plan area geologic and seismic hazards. As a result, the proposed project is not anticipated to contribute to cumulative human heath impacts. Impacts are considered to be **less than significant**.

Mitigation Measure

None required.

REFERENCES

Axelrod, D.I., 1962, Post-Pliocene uplift of the Sierra Nevada, California: Geol. Soc. America Bulletin, Vol. 73, p 183-198.

Birkeland, P.W., 1963, Pleistocene Volcanism of the Truckee Area, North of Lake Tahoe, California: Geological Society of America Bulletin, v 74, n. 12, pp. 1453-1464.

Blackburn, 2000. Blackburn Consulting. *Fault Study Report Eaglewood I.* January 18, 2000.

Black Eagle, 1999. Black Eagle Consulting, Inc. *Preliminary Geotechnical Investigation Siller Ranch.* December 1999.

California Division of Mines and Geology, 1995. Mineral Land Classification of Placer County, California. Open File Report 95010.

California Division of Mines and Geology, 1992, Peak Acceleration from Maximum Credible Earthquakes in California (Rock and Stiff-Soil Sites), Open File Report 92-01.

California Division of Mines and Geology, 1996. Probabilistic Seismic Hazard Assessment for the State of California. Open-file Report 96-08.

California Division of Mines and Geology, 1999, Seismic Shaking Hazard Maps of California, Map Sheet 48.

GeoTrans, 2000. GeoTrans, Inc. *Report on Groundwater Resource Potential Eaglewood Subdivision.* November 14, 2000.

Hart, Earl W., Bryant, William A., 1997, Fault-Rupture Hazard Zones in California, California Division of Mines & Geology, Special Report 42.

Jennings, C.W., 1994. Fault Activity Map of California and Adjacent Areas. California Department of Conservation, Division of Mines and Geology. Map No. 6, 1994.

Latham, T.S., Jr., 1985, Stratigraphy, Structure, and Geochemistry of Plio-Pleistocene Volcanic Rocks of the Basin and Range Province Near Truckee, California: University of California, Davis, unpublished Ph.D. thesis, 341 p.

Placer County, 1993. *Gooseneck Ranch Final Environmental Impact Report.* September 14, 1993.

Saucedo, G.J., Wagner, D.L., 1992, Geologic Map of the Chico Quadrangle, CA, Map No. 7A, California Division of Mines & Geology, Scale 1:250,000.

U.S. Geological Survey, 1992, Martis Peak 7 ½ Minute Quadrangle Map, Department of Interior.

U.S. Geological Survey, 1992, Truckee 7 ½ Minute Quadrangle Map, Department of Interior.

SECTION 4.9
BIOLOGICAL RESOURCES

This biological resources section summarizes the natural resources present within the Martis Valley Community Plan area (Plan Area), including vegetation communities present, the wildlife species occurring, and sensitive habitats located within the Plan area. This section also identifies impacts associated with the adoption of the Proposed Land Use Diagram (PP) (the Existing Martis Valley Community Plan Land Use Map – AA, the Alternative 1 Land Use Map – AB, and the Alternative 2 Land Use Map-AC) as well as impacts identified with 3 land use map alternatives. Mitigation measures are provided for each impact. Cumulative impact analysis is also provided in this section. This biological resources section was prepared by Foothill Associates.

4.9.1 SETTING

The following sections describe the regional and local planning area setting, as well as the natural resources present within the Plan area.

REGIONAL SETTING

The Sierra Nevada mountain range spans from northern California to the south-central portion of California, occurring along the state's easternmost border. The Sierra Nevada supports multiple vegetation types, which vary depending on elevation and available moisture. Elevations within the Sierra Nevada range from approximately 1,900 to 12,000 feet above mean sea level (MSL). Vegetation communities within the Sierra Nevada mountain range include lower and upper montane coniferous forests, subalpine forests, and nonconiferous vegetation. Lower montane coniferous forests include vegetation types such as ponderosa pine, white fir-mixed conifer, and giant sequoia communities. Red fir, Jeffrey pine, and lodgepole pine communities comprise the Sierra Nevada's upper montane forests. Subalpine forests occur in elevations above upper montane coniferous forests and include mountain hemlock, western white pine, whitebark pine, foxtail pine, and limber pine communities. Nonconiferous vegetation is found throughout the Sierra Nevada at ranging elevations and includes communities such as montane chaparral, riparian scrub, and montane meadows (Barbour & Major, 1990).

LOCAL SETTING

The Plan area is located east of State Route (SR) 89 and south of Interstate 80 (I-80) in Placer County. The Plan area spans approximately 25,570 acres of the Sierra Nevada mountains, ranging in elevations from 5,800 feet to 8,600 feet above Mean Sea Level (MSL). Current land uses within the Plan area include residential, timberland, commercial, resort/recreational, and public. A majority of the Plan area is currently undeveloped. Dominant vegetation communities present within the Plan area include mixed coniferous forest, Great Basin sage scrub, red fir forest, and montane meadow. Major watersheds located within the planning area include Martis, Juniper, and Monte Carlo Creeks. These water features flow from higher elevations in the southern portions of Martis Valley into Martis Creek Lake, which is located in the northern portion of the planning area.

BIOLOGICAL COMMUNITIES

The Plan area supports mixed coniferous forest, red fir forest, Great Basin sagebrush scrub, montane chaparral, montane meadow, ruderal, riparian scrub, stream, and open water habitats. These habitats are mapped in **Figure 4.9-1**. The dominant vegetation and wildlife species associated with these habitats are described below. In addition, vegetation associations occurring within each habitat are identified in **Figure 4.9-2**.

Wildlife and plant species known to occur within the Martis Valley are listed in **Appendix 4.9**.

The information provided in **Figure 4.9-1**, **Figure 4.9-2**, and throughout this section pertaining to general vegetation associations within the Plan area is based on data provided by the U.S. Forest Service (USFS) Remote Sensing Lab and the Tahoe National Forest (TNF), aerial photo interpretation, and field reconnaissance.

Mixed Coniferous Forest

Vegetation

Mixed coniferous forest is the dominant habitat found within the Plan area. This habitat totals over 15,000 acres of the planning area and is comprised of 5 major vegetation associations: eastside pine, lodgepole pine, mixed conifer, subalpine conifer, and white fir. Dominant tree species found in mixed coniferous forest habitats include Jeffrey pine (*Pinus jeffreyi*), white fir (*Abies concolor*), sugar pine (*Pinus lambertiana*), ponderosa pine (*Pinus ponderosa*), lodgepole pine (*Pinus contorta* ssp. *murrayana*), and western white pine (*Pinus monticola*). Plant species known to grow in the understory include Indian paintbrush (*Castilleja pinetorum*), snowberry (*Symphoricarpos mollis*), mule ears (*Wyethia mollis*), Sierra currant (*Ribes nevadense*), and mountain pride (*Penstemon newberryi*) (Placer County & Nevada County, 1974).

Wildlife

Mixed coniferous forest provides cover, foraging, and breeding habitat for a large diversity of resident and migratory wildlife. Avian species associated with these habitats include western tanager (*Piranga ludoviciana*), western wood peewee (*Contopus sordidulus*), hairy woodpecker (*Picoides villosus*), mountain chickadee (*Poecile gambeli*), white-breasted nuthatch (*Sitta carolinensis*), brown-headed cowbird (*Molothrus ater*), chipping sparrow (*Spizella passerina*), Oregon junco (*Junco hyemalis thurberi*), yellow-rumped warbler (*Dendroica coronata*), northern flicker (*Colaptes auratus*), and Steller's jay (*Cyanocitta stelleri*). Mammalian species associated with mixed coniferous forest habitats include lodgepole chipmunk (*Tamias speciosus*), mule deer (*Odocoileus hemionus*), montane vole (*Microtus montanus*), fisher (*Martes pennanti*), California vole (*Microtus californicus*), black bear (*Ursus americanus*), raccoon (*Procyon lotor*), mountain lion (*Felis concolor*), and western gray squirrel (*Sciurus griseus*).

Red Fir Forest

Vegetation

Red fir forest habitats comprise over 4,000 acres of the Plan area. These habitats within the Plan area are characterized by dense stands of red fir (*Abies magnifica*). Because the canopy associated with this habitat is extremely dense and relatively impermeable to sunlight, the understory supports sparse vegetation.

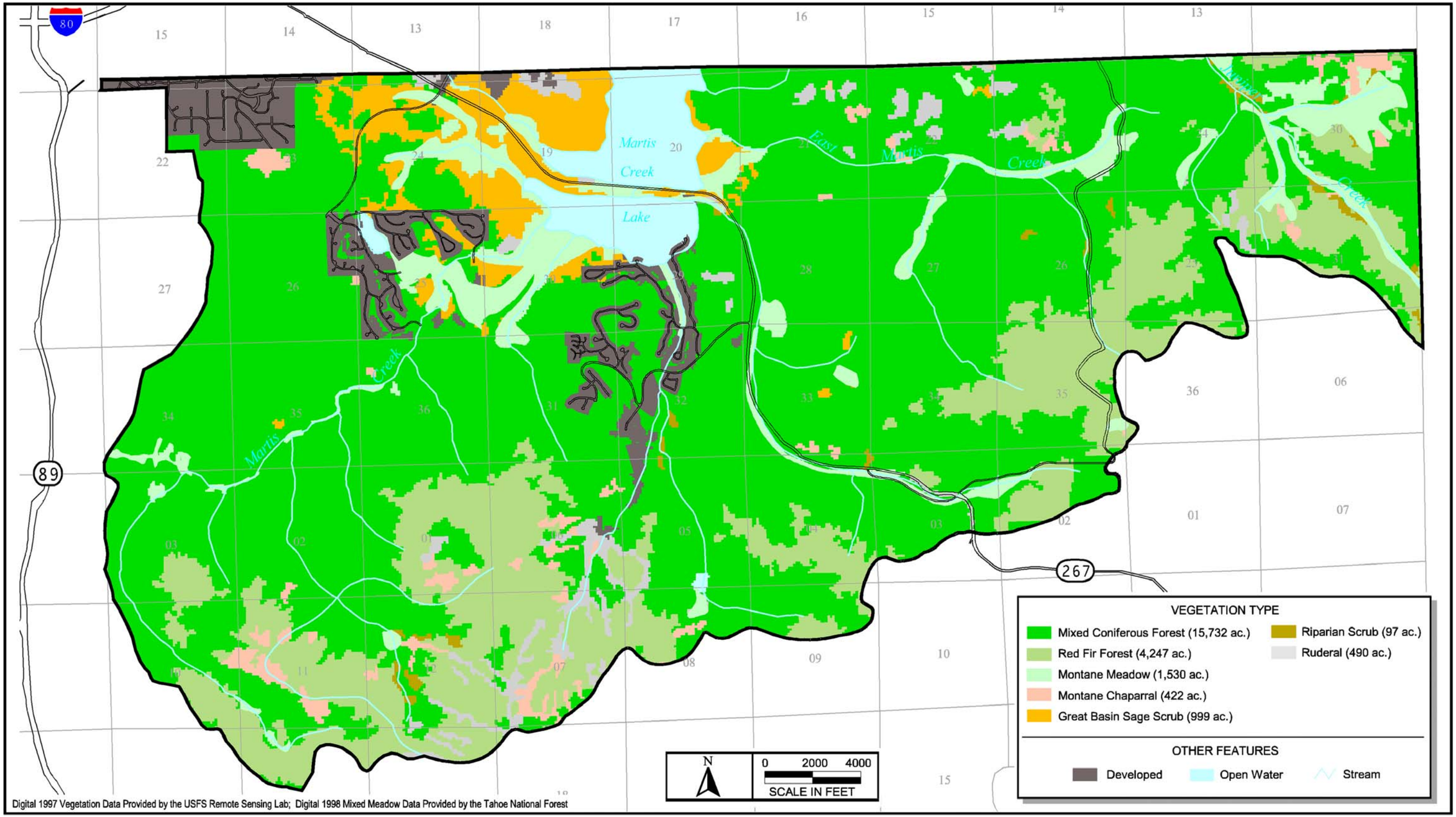
Wildlife

Red fir forests provide shelter, breeding, and foraging opportunities for numerous wildlife species. Species expected to occur within this habitat in the Plan area include species similar to those found in mixed coniferous forest habitats (see above discussion).

Great Basin Sage Scrub

Vegetation

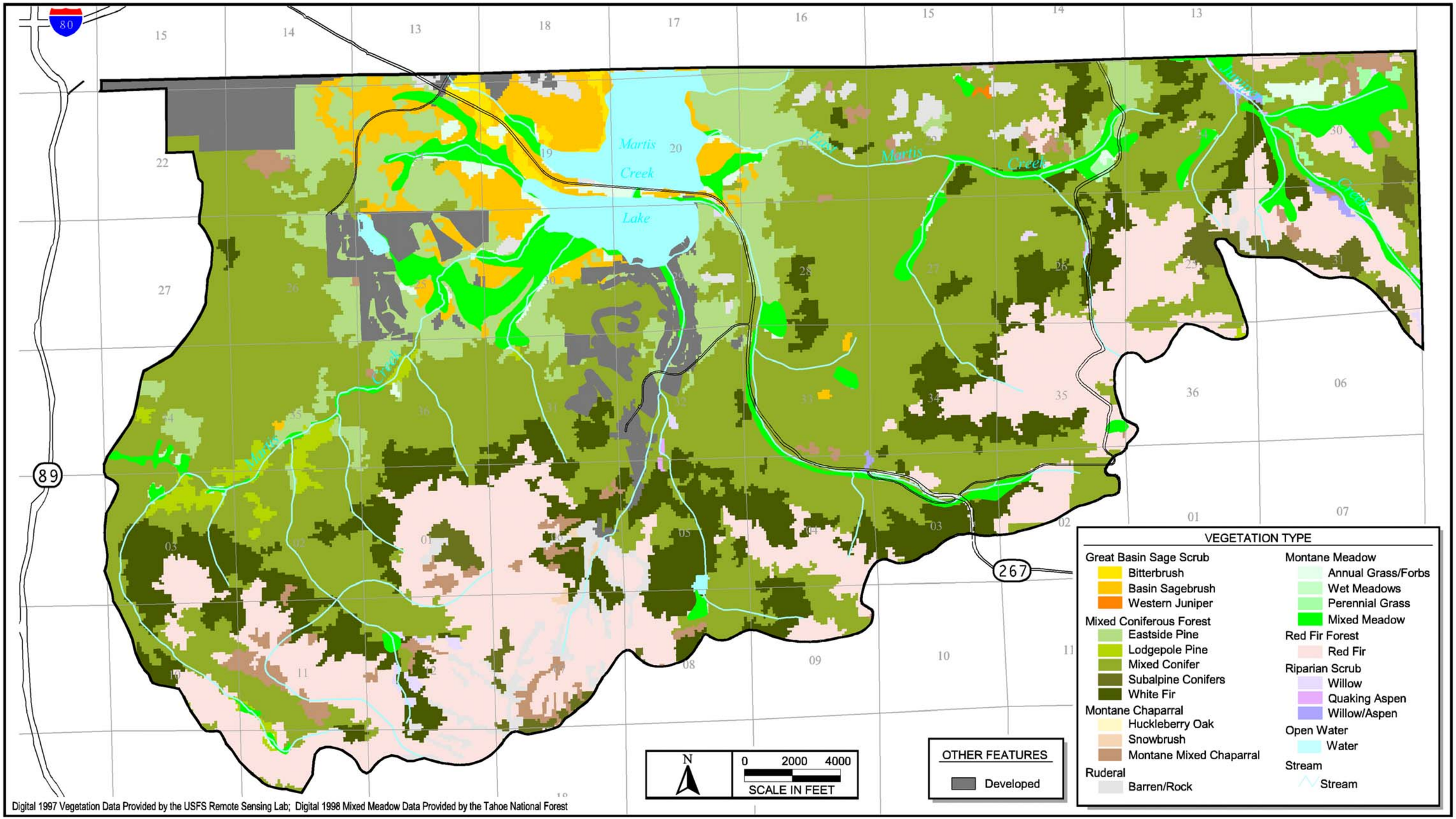
Three vegetation associations, bitterbrush, basin sagebrush, and western juniper, are found within the Great Basin sage scrub habitats in the Plan area. Great Basin sage scrub habitat occurs within approximately 1,000 acres of the Plan area. This habitat is dominated by



PMC

SOURCE: FOOTHILL ASSOCIATES, 2001

FIGURE 4.9-1
BIOLOGICAL COMMUNITIES



PMC

SOURCE: FOOTHILL ASSOCIATES, 2001

FIGURE 4.9-2
VEGETATION ASSOCIATIONS

sagebrush (*Artemisia tridentata*), however rabbitbrush (*Chrysothamnus nauseosus*), western juniper (*Juniperus occidentalis* var. *occidentalis*), squirrel tail (*Sitanion hystrix*), and bitterbrush (*Purshia tridentata*) are also associated with this habitat in the planning area. Scattered trees, such as Jeffery pine and ponderosa pine, are found interspersed throughout this habitat.

Wildlife

In addition to providing shelter, Great Basin sage scrub habitat provides excellent foraging opportunities for wildlife species. Additionally, several species of birds and small mammals utilize this habitat for nesting. Avian species commonly associated with Great Basin sage scrub habitats include violet green swallow (*Tachycineta thalassina*), turkey vulture (*Cathartes aura*), American robin (*Turdus migratorius*), mountain chickadee, mourning dove (*Zenaida* macroura), northern flicker, chipping sparrow, vesper sparrow (*Pooecetes gramineus*), and Oregon junco. This habitat also provides forage for mule deer migrating through the Plan area.

Montane Chaparral

Vegetation

Three vegetation associations, montane mixed chaparral, huckleberry oak, and snowbrush, are found in the montane chaparral habitats within the planning area. This habitat spans over 400 acres of the Plan area. Montane chaparral habitat is characterized predominantly by shrubs such as manzanita (*Arctostaphylos patula*), huckleberry oak (*Quercus vaccinifolia*), tobacco brush (*Ceanothus velutinus*), snowbrush (*Ceanothus cordulatus*), and bitterbrush, however herbaceous species including wild onions (*Allium* spp.) and mules ears (*Wyethia* spp.) also occur here.

Wildlife

Wildlife species found utilizing this habitat include species similar to those associated with the Great Basin sage scrub habitat within the Plan area (see above discussion).

Montane Meadow

Vegetation

Four vegetation associations, annual grass/forbs, wet meadow, perennial grass, and mixed meadow, are found in the ± 1,530 acres of montane meadow habitats within the Plan area. Montane meadow habitats are characterized predominantly by grasses and forbs, however shrubs, such as various willows (*Salix* spp.), are also found here. In some cases, plant species associated with montane meadows have adapted to the saturated soil conditions present within these habitats. Species typically associated with these areas include meadow barley (*Hordeum brachyantherum*), common monkeyflower (*Mimulus guttatus*), clover (*Trifolium* spp.), Indian paintbrush, mint (*Mentha* sp.), shooting star (*Dodecatheon jeffreyi*), and yarrow (*Achillea millefolium*) (Placer County & Nevada County, 1974). Additional herbaceous species associated with this habitat include fireweed (*Epilobium angustifolium*.), cinquefoil (*Potentilla* sp.), and primrose (*Primula* sp.).

Wildlife

Montane meadow habitats support numerous resident and migratory wildlife species. Such species include American robin, mountain chickadee, cliff swallow (*Petrochelidon pyrrhonota*), killdeer (*Charadrius vociferus*), mourning dove, northern flicker, California mule deer, western bluebird (*Sialia mexicana*), and green-tailed towhee (*Pipilo chlorurus*).

Ruderal

Vegetation

Approximately 490 acres of the Plan area is comprised of ruderal habitats. These areas primarily consist of gravel substrate and are nearly devoid of vegetation. This habitat is highly disturbed and provides marginal plant habitat. Sparse vegetation, dominated by invasive non-native species, occurs in some areas within this habitat.

Wildlife

Ruderal habitat provides marginal foraging habitat for wildlife species and, compared to the other vegetation communities within the planning area, this habitat provides the lowest value to wildlife species. Species expected to occur within this habitat include American robin, mourning dove, turkey vulture, and killdeer.

Riparian Scrub

Vegetation

Riparian scrub habitats total approximately 97 acres of the Plan area and are comprised of 3 vegetation associations: willow, quaking aspen, and willow-aspen. Riparian scrub habitat is found adjacent to streams within the planning area and is dominated by plant species that have adapted to the wet soil conditions found along stream margins. Species typical of riparian habitats in the Sierra Nevada include willow (*Salix* sp.), alder (*Alnus tenuifolia*), cottonwood (*Populus* sp.), and quaking aspen (*Populus tremuloides*) (Placer County & Nevada County, 1974).

Wildlife

Numerous wildlife species utilize riparian scrub habitats. Such species include raccoon, western gray squirrel, California mule deer, northern flicker, mountain chickadee, and lodgepole chipmunk.

Stream

Vegetation

Martis Creek, Juniper Creek, Monte Carlo Creek, and the tributaries associated with these drainages are stream habitats, typically supporting minimal vegetation within the banks. However, the vegetation growing adjacent to these streams includes hydrophytic species such as carex (*Carex* spp.), juncus (*Juncus* sp.) and barley (*Hordeum brachyantherum*). In some locations within the planning area, these habitats occur adjacent to riparian scrub and montane meadow habitats.

Wildlife

Wildlife utilizing stream habitats include mostly aquatic species such as bullfrog (*Rana catesbeiana*), Pacific chorus frog (*Pseudacris regilla*), and various fresh-water fish species. Numerous wildlife species also forage within stream habitats such as raccoon and belted kingfisher (*Ceryle alcyon*).

Open Water

Vegetation

Martis Creek Lake, which occupies approximately 814 acres of the Plan area at full capacity, is an open water feature used primarily for flood control, recreational purposes, and wildlife habitat. Gooseneck Lake, an intermittent water feature, also exists within the planning area and provides habitat for wildlife and limited recreational use. Vegetation within these habitats is relatively sparse and consists predominantly of willow scrub associations around the lake margins.

Wildlife

Numerous aquatic species utilize open water habitats including fish species, bullfrog, and Pacific chorus frog. Mammals and avian species also utilize these habitats for foraging including belted kingfisher, black bear, raccoon, mule deer, and American white pelican (*Pelecanus erythrorhynchos*).

4.9.2. REGULATORY FRAMEWORK

The following describes federal, state, and local environmental laws and policies that are relevant to the CEQA review process. The CEQA significance criteria are also included in this section.

FEDERAL ENDANGERED SPECIES ACT

The United States Congress passed the federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

The FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3). Actions that result in take can result in civil or criminal penalties.

The FESA and EPA Section 404 guidelines prohibit the issuance of wetland permits for projects that would jeopardize the existence of threatened or endangered wildlife or plant species. The U.S. Army Corps of Engineers must consult with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) when threatened or endangered species may be affected by a proposed project to determine whether issuance of a Section 404 permit would jeopardize the species. In the context of the study site, the federal ESA would be triggered if development resulted in take of a threatened or endangered species (e.g., California red-legged frog, Coho salmon) or if issuance of a Section 404 permit or other federal agency action could adversely affect or jeopardize a threatened or endangered species.

CALIFORNIA ENDANGERED SPECIES ACT

The State of California enacted the California Endangered Species Act (CESA) in 1984. The CESA is similar to the FESA but pertains to state-listed endangered and threatened species. It requires state agencies to consult with the California Department of Fish and Game (CDFG) when preparing California Environmental Quality Act (CEQA) documents to ensure that the state lead agency actions do not jeopardize the existence of listed species. It directs agencies

to consult with CDFG on projects or actions that could affect listed species, directs CDFG to determine whether jeopardy would occur, and allows CDFG to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that there are "overriding considerations"; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

The state ESA prohibits the taking of state-listed endangered or threatened plant and wildlife species. CDFG exercises authority over mitigation projects involving state-listed species, including those resulting from CEQA mitigation requirements. CDFG may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFG requires preparation of mitigation plans in accordance with published guidelines.

OTHER STATUTES, CODES, AND POLICIES AFFORDING LIMITED SPECIES PROTECTION

CDFG Species of Special Concern

In addition to formal listing under FESA and CESA, plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern," developed by the CDFG. It tracks species in California whose numbers, reproductive success, or habitat may be threatened.

California Native Plant Society – Native Plant Species List

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and Pavlik, 1994). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

List 1A: Plants believed extinct.

List 1B: Plants rare, threatened, or endangered in California and elsewhere.

List 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere.

List 3: Plants about which we need more information - a review list.

List 4: Plants of limited distribution - a watch list.

Migratory Bird Regulations

Raptors (birds of prey) and migratory birds are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

WATERS OF THE U.S.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including

intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. The U.S. Army Corps of Engineers (Corps) regulates discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act (CWA). "Discharges of fill material" is defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeway or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)].

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

The CDFG has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code over fish and wildlife resources of the state. Under Section 1603, a private party must notify the CDFG if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds…except when the department has been notified pursuant to Section 1601." If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFG may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the party, they may enter into an agreement with the CDFG identifying the approved activities and associated mitigation measures.

PLACER COUNTY GENERAL PLAN

The following is a list of policies within the Natural Resources Section of the Placer County General Plan that provide protection to the biological resources within Placer County.

Water Resources

Policy 6.A.1 The County shall require the provisions of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species (see discussion of sensitive habitat buffers in Part I of this Policy Document). Based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. The County may, however, allow exceptions, such as in the following cases:

a. Reasonable use of the property would otherwise be denied;

b. The location is necessary to avoid or mitigate hazards to the public;

c. The location is necessary for the repair of roads, bridges, trails, or similar infrastructure; or

d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.

Policy 6.A.2 The County shall require all development in the 100-year floodplain to comply with the provisions of the Placer County Flood Damage Prevention Ordinance.

Policy 6.A.3 The County shall require development projects proposing to encroach into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:

a. Avoid the disturbance of riparian vegetation;

b. Replace riparian vegetation (on-site, in-kind);

c. Restore another section of creek (in-kind); and/or

d. Pay a mitigation fee for restoration elsewhere (e.g., wetland mitigation banking program).

Policy 6.A.4 Where creek protection is required or proposed, the County should require public and private development to:

a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) shall be located to optimize resource protection. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;

b. Designate such easement or dedication areas (as described in a. above) as open space;

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

d. Provide recreation and public access near creeks consistent with other General Plan policies;

e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: 1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas; and/or are stabilized with permanent vegetation that will prevent the transport of sediment off site; and 2) temporary vegetation sufficient to stabilize disturbed areas.

f. Provide for long-term creek corridor maintenance by providing a guaranteed financial commitment to the County which accounts for all anticipated maintenance activities.

Policy 6.A.5 The County shall continue to require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for agricultural activities.

Policy 6.A.6 The County shall require that natural watercourses are integrated into new development in such a way that they are accessible to the public and provide a positive visual element.

Policy 6.A.7 The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.

Policy 6.A.8 Where the stream environment zone has previously been modified by channelization, fill, or other human activity, the County shall require project proponents to restore such areas by means of landscaping, revegetation, or similar stabilization techniques as a part of development activities.

Policy 6.A.9 The County shall require that newly-created parcels include adequate space outside of watercourses' setback areas to ensure that property owners will not place improvements (e.g., pools, patios, and appurtenant structures), within area that require protection.

Policy 6.A.11 Open space located in watersheds, which serve reservoirs, is important to the adequate performance of those reservoirs for their intended purposes and should be preserved and protected.

Policy 6.A.12 The County shall encourage the protection of floodplain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.

Wetland and Riparian Areas

Policy 6.B.1 The County shall support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.

Policy 6.B.2 The County shall require new development to mitigate wetland loss in both regulated and non-regulated wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability: (1) avoidance of riparian habitat; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation banking program that provides the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.

Policy 6.B.3 The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.

Policy 6.B.4 The County shall strive to identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and nesting of wetland and riparian species.

Policy 6.B.5 The County shall require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, (a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; (b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plan; and (c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alteration to a wetland is considered a less-than-significant impact under CEQA.

Fish and Wildlife Habitat

Policy 6.C.1 The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:

a. Wetland areas including vernal pools.

b. Stream environment zones.

c. Any habitat for rare, threatened or endangered animals or plants.

d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

g. Important spawning areas for anadramous fish.

Policy 6.C.2 The County shall require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the reasonable value of the habitat for wildlife is maintained.

Policy 6.C.3 The County shall encourage the control of residual pesticides to prevent potential damage to water quality, vegetation, and wildlife.

Policy 6.C.4 The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.

Policy 6.C.5 The County shall require mitigation for development projects where isolated segments of stream habitat are unavoidably altered. Such impacts should be mitigated on-site with in-kind habitat replacement or elsewhere in the stream system through stream or riparian habitat restoration work.

Policy 6.C.6 The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.

Policy 6.C.7 The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.

Policy 6.C.8 The County shall support the preservation or reestablishment of fisheries in the rivers and streams within the county, whenever possible.

Policy 6.C.9 The County shall require new private or public developments to preserve and enhance existing native riparian habitat unless public safety concerns require removal of habitat for flood control or other public purposes. In cases where new private or public development results in modification or destruction of riparian habitat for purposes of flood control, the developers shall be responsible for acquiring, restoring, and enhancing at least an equivalent amount of like habitat within or near the project area.

Policy 6.C.10 The County will use the California Wildlife Habitat Relationships (WHR) system as a standard descriptive tool and guide for environmental assessment in the absence of a more detailed site-specific system.

Policy 6.C.11 Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites by a wildlife biologist, the evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts or indicate why mitigation is not feasible. In approving any such discretionary development permit. The decision making body shall determine the feasibility of the identified mitigation measures.

Significant ecological resource areas shall, at a minimum, include the following:

a. Wetland areas including vernal pools.

b. Stream environment zones.

c. Any habitat for rare, threatened or endangered animals or plants.

d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the anadramous fish.

g. Important spawning areas for anadramous fish.

Policy 6.C.12 The County shall cooperate with, encourage, and support the plans of other public agencies to acquire fee title or conservation easements to privately-owned lands in order to preserve important wildlife corridors and to provide habitat protection of California Species of Concern and state or federally listed rare, threatened, or endangered plant and animal species.

Policy 6.C.13 The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats, wetland habitats, wildlife migration corridors, and locally-important species/communities.

Policy 6.C.14 The County shall support the management efforts of the California Department of Fish and Game to maintain and enhance the productivity of important fish and game species (such as the Blue Canyon and Loyalton Truckee deer herds) by protecting identified critical habitat for these species from incompatible suburban, rural residential, or recreational development.

Vegetation

Policy 6.D.1 The County shall encourage landowners and developers to preserve the integrity of existing terrain and natural vegetation in visually-sensitive areas such as hillsides, ridges and along important transportation corridors.

Policy 6.D.2 The County shall require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in fulfilling landscaping requirements imposed as conditions of discretionary permits or for project mitigation.

Policy 6.D.3 The County shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands, riparian areas, and vernal pools.

Policy 6.D.4 The County shall ensure that landmark trees and major groves of native trees are preserved and protected. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.

Policy 6.D.5 The County shall establish procedures for identifying and preserving rare, threatened, and endangered plant species that may be adversely affected by public or private development projects.

Policy 6.D.6 The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.

Policy 6.D.7 The County shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, nutrient catchment, and wildlife habitats. Such communities shall be restored or expanded, where possible.

Policy 6.D.8 The County shall require that new development preserve natural woodlands to the maximum extent possible.

Policy 6.D.9 The County shall require that development on hillsides be limited to maintain valuable natural vegetation, especially forests and open grasslands, and to control erosion.

Policy 6.D.10 The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

Policy 6.D.11 The County shall support the continued use of prescribed burning to mimic the effects of natural fires to reduce fuel volumes and associated fire hazard to human residents and to enhance the health of biotic communities.

Policy 6.D.12 The County shall support the retention of heavily vegetated corridors along circulation corridors to preserve their rural character.

Policy 6.D.13 The County shall support the preservation of native trees and the use of native, drought-tolerant plant materials in all revegetation/landscaping projects.

Policy 6.D.14 The County shall require that new development avoid, as much as possible, ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas should be protected through public acquisition of fee title or conservation easements to ensure protection.

Open Space for the Preservation of Natural Resources

Policy 6.E.1 The County shall support the preservation and enhancement of natural land forms, natural vegetation, and natural resources as open space to the maximum extent feasible. The County shall permanently protect, as open space, areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains.

Policy 6.E.2 The County shall require that new development be designed and constructed to preserve the following types of areas and features as open space to the maximum extent feasible:

a. High erosion hazard areas;

b. Scenic and trail corridors;

c. Streams, streamside vegetation;

d. Wetlands;

e. Other significant stands of vegetation;

f. Wildlife corridors; and

g. Any areas of special ecological significance.

Policy 6.E.3 The County shall support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

Policy 6.E.4 The County shall encourage either private and public ownership and maintenance of open space.

Policy 6.E.5 The County shall coordinate with local, state, and federal agencies and private organizations to establish visual and physical links among open space areas to form a system that, where appropriate, includes trails. Dedication of easements shall be encouraged, and in many cases, required as lands are developed and built.

Policy 7.E.1 The County shall encourage the sustained productive use of forest land as a means of providing open space and conserving other natural resources.

MARTIS VALLEY GENERAL PLAN

The following policies were established in the Martis Valley General Plan (1975) to give additional protection, above that offered in federal, state, and county regulations, to natural resources in the Martis Valley.

Environmental Resource Policies

Policy 1 Timber croplands, watershed lands, and urban forest lands must be managed and harvested on a coordinated basis and according to the recommendations of professional foresters.

Policy 2 Riparian vegetation areas and timberlands must be spared from urban encroachment.

Policy 3 Outstanding sport fisheries, especially the Truckee River, must be protected from the detrimental effects of man's activities.

Policy 4 Martis Creek and Truckee River should be protected by retention of natural areas along the channels (stream environment zones) either by acquisition or zoning protection. Roads, bridges or any type of man-made improvements in these zones should be kept at an absolute minimum. Only those necessary to serve development and designed to provide maximum protection of the streams and riparian vegetation may be built. Truckee River and its tributary water sources should be-retained at or near present flows and not used for domestic water supplies in order to protect the ecology of the stream and its environment.

Policy 7 A determination must be made of high intensity uses on the underground water level of Martis Valley, including usage and water quality, before any extensive development which may effect the groundwater occurs. The effects of usage upon the riparian vegetation and meadows must be determined in the same study. If the results of the study indicate that usage of the groundwater seriously impacts the riparian areas, the preservation of meadows and riparian areas must take precedent.

Policy 12 Retention of high quality open space and visual resources is of utmost importance to the future quality of life in Martis Valley.

SPECIAL-STATUS SPECIES

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

Special-Status species are defined as plants and animals that are:

- Legally protected under the California and Federal Endangered Species Acts or under other regulations;
- Considered sufficiently rare by the scientific community to qualify for such listing; or
- Considered sensitive because they are unique, declining regionally or locally, or at the extent of their natural range.

Specifically, special-status plant species are:

- Plants listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.12 for listed plants and various notices in the Federal Register for proposed species).
- Plants that are candidates for possible future listing as threatened or endangered under the FESA (64 FR 205, October 25, 1999; 57533-57547).
- Plants that meet the definitions of rare or endangered species under the California Environmental Quality Act (CEQA) (CEQA Guidelines, Section 15380).
- Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered" in California (Lists 1B and 2 in Skinner and Pavlik [1994]).
- Plants listed or proposed for listing by the State of California as threatened or endangered under the California ESA (14 CCR 670.5).
- Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 et seq.).
- Plants considered sensitive by other federal agencies (i.e., U.S. Forest Service, Bureau of Land Management) or state and local agencies or jurisdictions.
- Plants considered sensitive or unique by the scientific community or occurring at the limits of its natural range (CEQA Guidelines, Appendix G).

Specifically, special-status animal species are:

- Animals listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (50 CFR 17.11 for listed animals and various notices in the Federal Register for proposed species).
- Animals that are candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (54 CFR 554).
- Animals that meet the definitions of rare or endangered species under the CEQA (CEQA Guidelines, Section 15380).
- Animals listed or proposed for listing by the State of California as threatened and endangered under the California ESA (14 CCR 670.5).
- Animal species of special concern to the California Department of Fish and Game (Remsen [1978] for birds; Williams [1986] for mammals).
- Animal species that are fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

SPECIAL-STATUS SPECIES PRESENCE IN THE PLAN AREA

Table 4.9-1 identifies the species listed in the USFWS species list for the Truckee, Martis Peak, Tahoe City, and Kings Beach 7.5-minute USGS quadrangles. The species identified in the list are known to occur in the vicinity of the planning area or may be affected by projects within the planning area. Additionally, species records listed in the CNDDB occurring within ten miles of the planning are included in **Table 4.9-1** and shown on **Figure 4.9-3**.

Species listed as having no potential for occurrence are species either a) not expected to occur within the planning area based on the known range of the species or b) not expected to occur due to lack of suitable habitat within the planning area. Species that potentially occur within the planning area are listed in **Table 4.9-1** and are addressed further in the following pages.

TABLE 4.9-1
LISTED AND SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING WITHIN THE PLANNING AREA OR IN THE VICINITY

Common Name/ Scientific Name	Regulatory Status (Federal; State; CNPS; Forest Service)	Habitat Requirements	Potential for Occurrence
PLANTS			
Tahoe yellow-cress *Rorippa subumbellata*	FSC; CE; 1B; --	Shorelines supporting decomposed granitic soils; known only from the Lake Tahoe shoreline	NO (suitable habitat for this species is not present within the planning area)
Donner Pass buckwheat *Eriogonum umbellatum* var. *torreyanum48*	FSC; --; 1B; --	Volcanic soils in rocky meadows and upper montane coniferous forests	YES
Plumas ivesia *Ivesia sericoleuca*	FSC; --; 1B; --	Occurs in vernally mesic conditions within Great Basin sage scrub, lower	YES

Common Name/ Scientific Name	Regulatory Status (Federal; State; CNPS; Forest Service)	Habitat Requirements	Potential for Occurrence
		coniferous forest, meadow, seep, and vernal pool habitats	
Carson Range rock cress *Arabis rigidissima* var. *demota*	FSC; --; 1B; --	Broadleaved upland forest and upper montane coniferous forest within rocky well drained soil conditions	YES
Long-petaled lewisia *Lewisia longipetala*	FSC; --; 1B; --	Mesic, rocky sub-alpine coniferous forests and alpine boulder and rock fields	YES
American manna grass *Glyceria grandis*	--; --; 2; --	Wet meadows, ditches, streams, and ponds	YES
Munroe's desert mallow *Sphaeralcea munroana*	--; --; 2; --	Dry, open habitats	YES
WILDLIFE			
INVERTEBRATES			
Lake Tahoe benthic stonefly *Capnia lacustra*	FSC; --; --; --	Endemic to Lake Tahoe; found at depths of 95-400 feet	NO (planning area is outside the known range for this species)
AMPHIBIANS			
Mount Lyell salamander *Hydromantes platycephalus*	FSC; CSC (protected); --; --	Rock outcrops within mixed conifer, lodgepole pine, red fir, and subalpine habitats; distributed from El Dorado County south to Tulare County	NO (planning area is outside the known range for this species)
Mountain yellow-legged frog *Rana muscosa*	FSC; CSC (protected); --; FS:sensitive	Lakes, streams, and ponds in elevations ranging from 1,200 to 7,500 feet	YES
FISH			
Lahontan cutthroat trout *Oncorhynchus clarki henshawi*	FT; --; --; --	Freshwater lakes and streams in eastern California	YES
BIRDS			
Northern goshawk *Accipiter gentillis*	FSC (MNBMC); CSC; (sensitive); --; FS: sensitive	Middle to high elevation mixed coniferous forest habitats	YES
American peregrine falcon	FD (MNBMC); CE (sensitive,	Nests in a wide variety of habitats including	YES

Common Name/ Scientific Name	Regulatory Status (Federal; State; CNPS; Forest Service)	Habitat Requirements	Potential for Occurrence
Falco peregrinus anatum	fully protected); --; --	woodlands, dense coniferous forests, and coastal habitats	
California spotted owl *Strix occidentalis occidentalis*	FSC (MNBMC); CSC; --; FS: sensitive	Old growth forests with multiple layered canopies; associated with mixed coniferous, redwood, and Douglas fir forest habitats	YES
Bald eagle *Haliaeetus leucocephalus*	FT; CE (sensitive, fully protected); --; --	Nests in the northernmost counties of California within dense conifer stands and woodlands	YES
Yellow warbler *Dendroica petechia brewsteri*	--; CSC; --; --	Open canopy coniferous forests up to 8,000 feet (in Sierra Nevada)	YES
Little willow flycatcher *Empidonax traillii brewsteri*	--; CE; --; --	Open wet meadows and riparian habitat; nests in dense willow thickets	YES
Tricolored blackbird *Agelaius tricolor*	SC (MNBMC); CSC; --; --	Nests in emergent wetlands in dense cattails, blackberry, and willows throughout the Central Valley and California coast	NO (planning area is outside the known range for this species)
MAMMALS			
Spotted bat *Euderma maculatum*	FSC; CSC; --; --	Occurs in wide variety of habitats including arid deserts, grasslands, mixed coniferous forests; roosts in rock crevices, cliffs, and caves	YES
Sierra Nevada snowshoe hare *Lepus americanus tahoensis*	FSC; CSC; --; --	Found only in the Sierra Nevada in mixed conifer, subalpine conifer, red fir, Jeffrey pine, lodgepole pine, and aspen forests	YES
Small-footed myotis bat *Myotis ciliolabrum*	FSC; --; --; --	Occurs in a wide variety of habitats; roosts in caves, crevices, and buildings	NO (planning area is outside the known range for this species)
Long-eared myotis bat *Myotis evotis*	FSC; --; --; --	Woodland and forest habitats; known to roost in rock crevices, under bark, and tree snags	YES
Fringed myotis bat *Myotis thysanodes*	FSC; --; --; --	Known to roost in caves, mines, and rock crevices within a variety of habitats	YES

Common Name/ Scientific Name	Regulatory Status (Federal; State; CNPS; Forest Service)	Habitat Requirements	Potential for Occurrence
Long-legged myotis bat *Myotis volans*	FSC; --; --; --	Occurs in woodlands and forest habitats generally over 4,000 feet; roosts in rock crevices, under bark, in tree snags, and cliffs	YES
Yuma myotis bat *Myotis yumanensis*	FSC; CSC; --; --	Occurs in a wide variety of habitats; roosts in caves and rock crevices	YES
Sierra Nevada red fox *Vulpes vulpes necator*	FSC; CT; --; FS: sensitive	Lodgepole pine, mixed conifer, montane riparian, and ponderosa pine forests within the Sierra Nevada	YES
Pacific fisher *Martes pennanti pacifica*	FSC; CSC (full species); --; FS: sensitive	Dense, closed canopy coniferous forests and riparian habitats in the Sierra Nevada, Cascades, and Klamath Mountains	YES
Pale Townsend's big-eared bat *Corynorhinus townsendii pallescens*	FSC (full species); CSC (full species); FS: sensitive (full species)	Occurs in a wide variety of habitats, with the exception of alpine and sub-alpine habitats; known to roost in caves, buildings, and tunnels	YES
California wolverine *Gulo gulo luteus*	FSC; CT (fully protected); --; FS: sensitive	Mixed conifer, red fir, and lodgepole forests	YES
Sierra Nevada mountain beaver *Aplodontia rufa californica*	FSC; CSC; --; --	Dense growth forests within the Sierra Nevada mountain range	YES
Pine marten *Martes americana*	--; --; --; FS: sensitive	Various habitats along the north coast and within the Sierra Nevada, Klamath, and Cascades mountain ranges	YES

FE = federal endangered FT = federal threatened FSC = federal species of concern D = delisted

CE = state endangered CT = state threatened CR = state rare CSC = California species of special concern 1B = CNPS list plants rare, threatened, or endangered in California or elsewhere 2 = CNPS lists plants rare, threatened, or endangered in California, but more numerous elsewhere

FS = US Forest Service Sensitive MNBMC = Migratory Nongame Birds of Management Concern

Source: Foothill Associates

Listed and special-status species that are known to occur, or may potentially occur within the Plan area are discussed below. These species were considered for this analysis based on field surveys and review of the CNDDB database, USFWS species lists for the Martis Valley vicinity, CNPS literature, and existing documentation for the Martis Valley vicinity. Additionally, the Tahoe National Forest (TNF) was contacted to identify recent species observations within the Martis Valley (Kris Boatner, Pers. Com.).

Listed and Special-Status Plants

The CNDDB lists 7 special-status plant species as occurring within ten miles of the planning area. Based on literature review, soil analysis, and species range information, suitable habitat for 6 of these species [Donner Pass buckwheat (*Eriogonum umbellatum* var. *torreyanum*), Plumas ivesia (*Ivesia sericoleuca*), Carson Range rock cress (*Arabis rigidissima* var. *demota*), long-petaled lewisia (*Lewisia longipetala*), American manna grass (*Glyceria grandis*), and Munroe's desert mallow (*Sphaeralcea munroana*)] occurs within the planning area. Additionally, Truckee barberry (*Berberis sonnei*) is listed in the USFWS species list and this species is discussed below.

Donner Pass Buckwheat (Eriogonum umbellatum var. torreyanum)

Donner Pass buckwheat is a federal species of concern and is also listed as a CNPS 1B species. This species occurs in volcanic soils within rocky meadows and upper montane coniferous forests. Donner Pass buckwheat typically occurs in sparsely vegetated habitats in elevations ranging between 6,041-8,602 feet above MSL (Skinner & Pavlik, 1994). Five records of this species are listed with the CNDDB within ten miles of the Plan area. Although this species is currently known from fewer than ten occurrences, potential habitat is present in the Martis Valley and, consequently, this species could occur within the Plan area.

Plumas Ivesia (Ivesia sericoleuca)

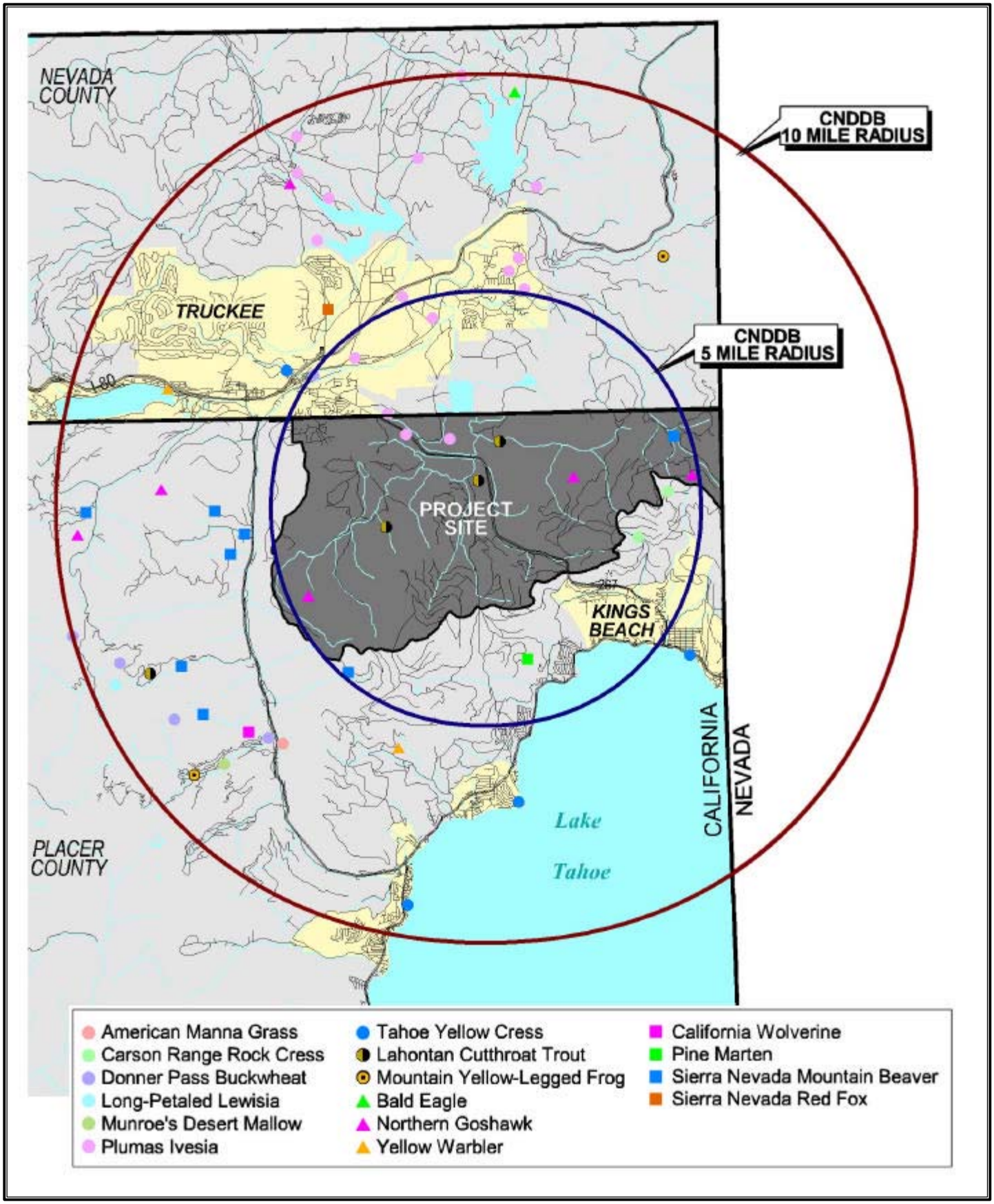
Plumas ivesia is listed with the CNPS as a 1B species. This plant occurs in vernally mesic conditions within Great Basin sage scrub, lower coniferous forest, meadow, seep, and vernal pool habitats (Skinner & Pavlik, 1994). Fourteen records of this species are listed with the CNDDB outside of the Plan area and two populations consisting of approximately 300 and 1,000 individuals were listed in 1986 with the CNDDB within the Plan area (CNDDB, 2001). These populations were identified along SR 267 within the Plan area and populations have been identified on the proposed Hopkins Ranch site. Additional areas supporting suitable habitat for this species are present within the Plan area and this species may occur in these locations.

Carson Range Rock Cress (Arabis rigidissima var. demota)

Carson Range rock cress is a federal species of concern and is a CNPS 1B species. This species occurs in broadleaved upland forests and upper montane coniferous forests within rocky well-drained soil conditions (Skinner & Pavlik, 1994). Carson Range rock cress grows at elevations ranging between 7,403 and 8,405 feet above MSL (CNDDB, 2001). This species is known from two locations within California approximately one mile from the southeastern Plan area boundary (CNDDB, 2001). Suitable habitat for this species occurs in the Plan area and, consequently, this species could occur here.

Long-petaled Lewisia (Lewisia longipetala)

Long-petaled lewisia is a federal species of concern and is CNPS listed with a 1B status. This species occurs in mesic, rocky sub-alpine coniferous forests and alpine boulder and rock fields. Sub-alpine forests occur in elevations ranging from 7,880 to 10,015 feet above MSL and are present in several areas within the planning area (Skinner & Pavlik, 1994). Long-petaled lewisia is



PMC

SOURCE: FOOTHILL ASSOCIATES, 2001

FIGURE 4.9-3
CNDDB SEARCH

known from fewer than twenty occurrences, however one record of this species is listed with the CNDDB approximately ten miles from the Plan area (CNDDB, 2001). As a result, this species could occur in suitable habitats within the Plan area.

American Manna Grass (Glyceria grandis)

American manna grass is a CNPS list 2 species typically found in wet meadows, ditches, streams, and ponds. This species occurs at lower elevations ranging from 50-6,500 feet above MSL (CNDDB, 2001). One occurrence of this species is listed in the CNDDB within ten miles of the Plan area vicinity. This observance was recorded in 1934 however this population is presumed extant (CNDDB, 2001). Suitable habitat for this species exists within the Plan area and this species could occur here.

*Munroe's desert mallow (*Sphaeralcea munroana*)*

Munroe's desert mallow is a CNPS list 2 species. This species occurs in dry open habitats and is listed in the CNDDB as occurring within 10 miles of the Plan area. This record is from 1922 and has not been recently verified (CNDDB, 2001). The Great Basin sage brush, montane chaparral, and ruderal habitats within the Plan area may provide suitable habitat conditions for this species and this species could occur in these locations.

Listed and Special-Status Animals

Discussed below are the special-status wildlife species that have the potential to occur within the planning area. The CNDDB lists 9 special-status wildlife species as occurring within ten miles of the Plan area. Potential habitat for all 9 species, Lahontan cutthroat trout (*Oncorhynchus clarki*), mountain yellow-legged frog (*Rana muscosa*), bald eagle (*Haliaeetus leucocephalus*), northern goshawk (*Accipiter gentillis*), yellow warbler (*Dendroica petechia brewsteri*), California wolverine (*Gulo gulo luteus*), Sierra Nevada red fox (*Vulpes vulpes necator*), pine marten (*Martes americana*), and Sierra Nevada mountain beaver (*Aplodontia rufa californica*), exists within the planning area. Four additional special-status species recorded in the USFWS species lists for the Truckee, Martis Peak, Tahoe City, and Kings Beach quadrangles have the potential to occur within the planning area. These species include American peregrine falcon (*Falco peregrinus anatum*), California spotted owl (*Strix occidentalis occidentalis*), Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*), and Pacific fisher (*Martes pennanti pacifica*). Little willow flycatcher (*Empidonax trailli brewsteri*) is known from the Lake Tahoe basin and is listed in the USFWS species list for this region. These species, in addition to raptors and other migratory birds, are protected by state and/or federal resource agencies and are discussed below. Additionally, numerous species of bats listed in the USFWS species list, including spotted bat (*Euderma maculatum*), long-eared myotis (*Myotis evotis*), fringed myotis (*Myotis thysanodes*), long-legged myotis (*Myotis volans*), Yuma myotis (*Myotis yumanensis*), and Pale Townsend's big-eared bat (*Corynorhinus townsendii pallescens*), are known from the vicinity of the Plan area and are discussed below.

*Lahontan Cutthroat Trout (*Oncorhynchus clarki*)*

Lahontan cutthroat trout, a federally-listed threatened species, occurs in freshwater lakes and streams in eastern California. Historically, this species' range spanned Nevada, Placer, El Dorado, Alpine, and Mono Counties. Extant populations of this species in the Martis Valley area occur Pole Creek, Independence Creek, Independence Lake and in the Truckee River and related tributaries (USFWS, 1995). Truckee River populations have been historically monitored and stocked by the USFWS and CDFG (John Hiscox, Pers. Com.). This species tolerates varying stream conditions, however it does not typically occur in streams utilized by other salmonids (CNDDB, 2001). U.S. Fish and Wildlife Service is currently preparing a new recovery plan for the

Lahontan Cutthroat trout. Martis Creek, Monte Carlo Creek, Juniper Creek, and the other unnamed streams within the Martis Valley area are tributaries to the Truckee River and support potential spawning habitat conditions for the Lahontan cutthroat trout. The Lahontan cutthroat trout typically spawn from April to July. In the project vicinity, 3 records of this species are listed in the CNDDB from Martis Creek (two records) and Pole Creek (one record). However, the CNDDB identifies all these occurrences as being extirpated. There are historic accounts of cutthroat trout within the Martis Creek drainage, and suitable habitat is present within the tributaries of Martis Creek (DFG 2000). However, these waterways are intermittent and there are various potential fish barriers (e.g., fallen logs, downcuts) between the project area and lower stream reaches as well as other competition with other trout species and interbreeding with other trout species. Therefore this species is considered to have a low potential to occur within waters in the Plan area.

*Bald Eagle (*Haliaeetus leucocephalus*)*

The bald eagle is federally-listed as threatened and state listed as endangered. However, this species is currently proposed for federal delisting. This species nests in the northernmost counties of California within dense conifer stands and woodlands. Additionally, scattered small populations are found near reservoirs in the central portion of the state. Nest locations are restricted to areas within close proximity to permanent water sources (Zeiner *et. al.*, 1990a). Historically, this species was known from the Martis Valley (USFWS, 2001) and one record for this species is recorded near Boca Reservoir (CNDDB, 2001). Suitable bald eagle nesting and wintering habitat exists within the Martis Valley and this species may utilize suitable habitats within the Plan area. However, given the Plan area's distance from large water bodies, the potential for this species to occur is considered low.

*Northern Goshawk (*Accipiter gentillis*)*

Northern goshawks are a species of concern to federal and state resource agencies and are a USFS sensitive animal. This species frequents middle to high elevation mixed coniferous forest habitats although it prefers dense stands of lodgepole pines on north-facing slopes near water for nesting (Zeiner *et. al.*, 1990a). Northern goshawks forage in mixed coniferous forests, habitats widespread throughout the Sierra Nevada. Six records of this species are listed with the CNDDB within a ten-mile radius of the Martis Valley vicinity, 3 of which are located within the Plan area (CNDDB, 2001). TNF records indicate that two additional northern goshawk nest sites are located within ten miles of the Plan area. Biological surveys performed for the Siller Ranch site observed adult birds near Martis Creek in September 1999, but active nests were identified (Jones & Stokes, 2001). Suitable nesting, foraging, and wintering habitat for this species occurs within the Plan area and this species is known to utilize this habitat.

*Yellow Warbler (*Dendroica petechia brewsteri*)*

Yellow warblers are a species of special concern to the CDFG. This migratory species arrives in California in April and typically leaves the northern California region by October. In the Sierra Nevada, this species occurs in open canopy coniferous forests up to 8,000 feet above MSL. Shrubs or saplings provide suitable nesting habitat for this species (Zeiner *et. al.*, 1990a). Two yellow warbler records (CNDDB, 2001) are listed within ten miles of the Plan area and suitable habitat for this species exists here; consequently, this species may occupy this region.

*California Wolverine (*Gulo gulo luteus*)*

California wolverine is a species of concern to federal resource agencies and is listed in California as threatened. This species is also on the "sensitive" species USFS list. In the northern Sierra Nevada, wolverines occur in mixed conifer, red fir, and lodgepole forests ranging from

4,300-7,300 feet above mean sea level (MSL) (CNDDB, 2001). This species is listed in the USFWS species list for Martis Valley and the CNDDB lists this species within ten miles of the Plan area vicinity, however, this occurrence is from 1953 (CNDDB, 2001). This species is extremely rare in California and are not expected to be observed in areas near large human populations, however, habitat for this species exists in the Plan area and this species may utilize these habitats.

*Pine Martin (*Martes americana*)*

Pine martins are a "sensitive" species with the USFS. This species occurs in various habitats along the north coast and within the Sierra Nevada, Klamath, and Cascades mountain ranges. This species prefers habitats exhibiting >40% canopy closure and is associated with red fir, lodgepole pine, subalpine conifer, mixed conifer, Jeffrey pine, and eastside pine habitats. This species dens in log, tree, or stump cavities and sometimes burrows under snow adjacent to logs or stumps. Pine martins are sensitive to human disturbance and require habitat with limited human interaction (Zeiner *et. al.*, 1990a). This species is listed in the USFWS species list as historically occurring within the Martis Valley and one sighting of a pine martin is recorded within 5 miles of the Plan area (CNDDB, 2001). Suitable habitat for this species is present within the Plan area.

*Sierra Nevada Mountain Beaver (*Aplodontia rufa californica*)*

The Sierra Nevada mountain beaver is a species of concern to state and federal resource agencies. This species occupies dense growth forests within the Sierra Nevada mountain range and burrows into wet friable soils, requiring an abundant water source. This species is historically known from the Martis Valley (USFWS, 2001) and 8 records of Sierra Nevada mountain beavers are listed with the CNDDB in the Plan area vicinity, one of which is located within the Plan area. Consequently, this species may utilize suitable habitats within the Plan area.

*Mountain Yellow-Legged Frog (*Rana muscosa*)*

Mountain yellow-legged frogs are a species of concern to federal and state resource agencies and are considered a USFS sensitive species. This species is found associated with lakes, streams, and ponds in elevations ranging from 1,200 feet to 7,500 feet above mean sea level (MSL) (Zeiner *et. al.*, 1988). Historically, this species' range spanned the Sierra Nevada and portions of Los Angeles and San Bernadino Counties, however, currently the southern populations of this species are limited to the San Jacinto and San Gabriel Mountains (Jennings *et. al.*, 1994). In northern California this species is currently found throughout the Sierra Nevada from Plumas County southward to Tulare County (Zeiner *et. al.*, 1988). The USFWS lists this species as once occurring in the vicinity of Martis Valley and two records of mountain yellow-legged frog are recorded with the TNF and the CNDDB within ten miles of the Plan area (CNDDB, 2001). However, the presence of eastern brook trout introduced into Martis Creek are effective predators of the frog and have likely reduced the potential of this species occurring in Martis Creek (Jones & Stokes, 2001). Given this species current distribution, habitat requirements, and known occurrences in the Martis Valley mountain yellow-legged frog may utilize the streams (with the exception of Martis Creek) and/or lakes within the Plan area.

*American Peregrine Falcon (*Falco peregrinus anatum*)*

American peregrine falcon is currently state-listed as endangered and was recently removed from the federal endangered species list. This species nests in a wide variety of habitats including woodlands, dense coniferous forests, and coastal habitats. Nests are typically located in close proximity to a water source on cliffs, banks, or dunes. California populations of the peregrine falcon declined in the 1970's due to DDE contamination, however numbers are increasing statewide (Zeiner *et. al.*, 1990a). This species is recorded in the USFWS species list as

having once occurred in the Martis Valley, however the CNDDB lists no recent records of this species within the Plan area. Suitable nesting, foraging, and wintering habitat for this species is present within the Martis Valley and, as a result, this species could occur here.

*California Spotted Owl (*Strix occidentalis occidentalis*)*

California spotted owl is a species of concern to state and federal resource agencies and is a USFS "sensitive" species. This species occurs in old growth forests with multi-layered canopies and is associated with mixed coniferous, redwood, and Douglas fir forest habitats. This species range spans habitats up to 7,600 feet above MSL. While suitable nesting habitat primarily includes cavities in trees or snags, this species is also known to nest in abandoned raptor nests, mistletoe clusters, caves, and cliffs. California spotted owls are a year-round resident of California; however, in mountainous regions, such as the Sierra Nevada, this species may move to lower elevations during winter months (Zeiner *et. al.*, 1990a). According to the USFWS species list, historically this species is known from the Martis Valley vicinity (USFWS, 2001). One record of this species is listed with the TNF within the Plan area (Kris Boatner, Pers. Com.). Suitable foraging and nesting habitat for California spotted owl occurs within the planning area and this species may occupy these habitats.

*Sierra Nevada Snowshoe Hare (*Lepus americanus tahoensis*)*

Sierra Nevada snowshoe hares are a species of concern to state and federal resource agencies. This species, a subspecies of *Lepus americanus*, is restricted to the Sierra Nevada mountain range and population numbers are thought to be low (Zeiner *et. al.*, 1990b). Sierra Nevada snowshoe hares occupy young growth mixed conifer, subalpine conifer, red fir, Jeffrey pine, lodgepole pine, and aspen forests and often utilize habitats characterized with dense understory growth located along forest edges in close proximity to meadows (Zeiner *et. al.*, 1990b). The USWFS species list records this species historically in the Martis Valley vicinity and records from Placer County indicate that this species utilized habitats within the Martis Valley vicinity in the past (USFWS, 2001; Placer County, 1960). Although no recent records of the Sierra Nevada snowshoe hare are listed with the CNDDB, suitable habitat for this species is present within the Plan area and this species may occur here.

*Sierra Nevada Red Fox (*Vulpes vulpes necator*)*

The Sierra Nevada red fox is a federal species of concern and is listed in California as threatened. This species is also a USFS "sensitive" species. This species is typically found in higher elevations (>7,000 feet above MSL) but is known to occur in elevations as low as 3,900 feet above MSL. Sierra Nevada red fox occurs in a variety of habitats, including lodgepole pine, mixed conifer, montane riparian, and ponderosa pine forests within the Sierra Nevada mountain range. This species requires dense vegetation for cover and prefers habitats adjacent to meadows for hunting. The Sierra Nevada red fox dens in rock outcrops and hollow logs and is known to burrow in friable soils. Population numbers of this species are declining and this species is rare throughout its range (Zeiner *et. al.*, 1990b). Historically, this species occurred throughout the Martis Valley (USFWS, 2001). One observance of the Sierra Nevada red fox is listed with the CNDDB directly north of the Plan area vicinity (CNDDB, 2001). Consequently, this species may occupy undisturbed habitats within the Plan area, but are not expected to be observed in areas near large human populations.

*Pacific Fisher (*Martes pennanti pacifica*)*

Pacific fishers are a species of concern to state and federal resource agencies. This species is also listed "sensitive" with the USFS. This species is found in dense, closed canopy coniferous forests and riparian habitats in the Sierra Nevada, Cascades, and Klamath Mountains. This

species dens in hollow logs, trees, and snags within dense closed canopy forests (Zeiner *et. al.*, 1990b). No records of this species are listed with the CNDDB (CNDDB, 2001) in the vicinity of the Plan area; however, this species was identified in the USFWS species list as having once occurred in the Martis Valley (USFWS, 2001). Suitable habitat for this species exists in the Plan area and this species may occur here. However, the fisher has been identified as being extirpated from the central Sierra Nevada (Jones & Stokes, 2001).

*Little Willow Flycatcher (*Empidonax traillii brewsteri*)*

Little willow flycatchers are a state-listed endangered species. This species breeds in the Sierra Nevada from May to September in elevations ranging from 2,000-8,000 feet above MSL. Little willow flycatchers occupy open wet meadows and riparian habitats. Suitable nesting habitat consists of dense willow thickets (Zeiner *et. al.*, 1990a). According to the USFWS species list (USFWS, 2001), this species once occurred in the Lake Tahoe basin and may still occupy suitable habitat within this vicinity. Four records of this species are listed with the TNF within ten miles of the planning area. Because this species is known from the Martis Valley region and suitable habitat exists within the Martis Valley, little willow flycatcher may utilize appropriate habitats in the Plan area.

Raptors

Numerous raptor species, including red-tailed hawk (*Buteo jamaicensis*), Northern goshawk, Coopers hawk (*Accipiter cooperii*), and sharp-shinned hawk (*Accipiter striatus*), forage and nest in the Sierra Nevada. Raptor nests are protected under the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code. The montane riparian, red fir, and mixed coniferous forest habitats within the planning area support potential nesting habitat for numerous raptor species. Sharp-shinned hawk and Cooper's hawks were observed on the Siller Ranch site in 1999 and 2000 (Jones & Stokes, 2001). Consequently, raptor species likely forage and nest within the Plan area.

Other Migratory Birds

Migratory birds forage and nest in multiple habitats such as oak woodlands, grasslands, riparian woodlands, and coniferous forests. The nests of all migratory birds are protected under the MBTA, which makes it illegal to destroy any active migratory bird nest. Numerous migratory bird species have the potential to nest within the planning area.

Bats

Several bat species, including spotted bat, long-eared myotis, fringed myotis, long-legged myotis, Yuma myotis, and Pale Townsend's big-eared bat, are species of special concern to state and federal resource agencies. Habitat ranges for these species are widespread throughout California however many of these species are rare within these habitats (Zeiner *et. al.*, 1990b). Habitat for bat species consists of foraging habitat, night roosting cover, maternity roost sites, and winter hibernacula. These bat species may forage within montane riparian scrub, montane meadow, mixed coniferous forest, and red fir forest habitats within the Plan area. Suitable roosting sites within these habitats include caves, rock crevices, cliffs, buildings, and snags. Because potentially suitable day, night, maternity, and winter roosting habitat exists in the montane riparian scrub, mixed coniferous, and red fir forest habitats within the planning area, some or all of these bat species may utilize these habitats.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. Additionally, sensitive habitats are protected under the specific local objectives and policies listed in the Placer County and Martis Valley General Plans. Sensitive habitats within the Plan area include jurisdictional waters of the U.S., which include streams, montane meadows, and Martis Creek Lake; wildlife movement corridors; and riparian habitats. These habitats are discussed below.

Jurisdictional Waters of the U.S.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit 3 wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the "normal circumstances" for the site.

- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the Corps as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

Potential jurisdictional waters of the U.S. within the Plan area include Martis Creek and associated tributaries, Monte Carlo Creek, Juniper Creek and associated tributaries, Martis Creek Lake, Gooseneck Lake, and montane meadows. **Figure 4.9-4** identifies potential jurisdictional waters of the U.S. within the Plan area. Additional water features considered jurisdictional by the Corps, such as wetlands, ponds, or intermittent drainages, occur within the Plan area. An official Corps delineation of the Plan area would result in the identification of such features.

Wildlife Movement Corridors

Wildlife movement corridors are established migration routes frequently utilized by wildlife that provide shelter and sufficient food supplies to support wildlife species during migration. Movement corridors generally consist of meadow, riverine, woodland, or forested habitats that span contiguous acres of undisturbed habitat. Additionally, movement corridors provide habitat for resident wildlife, enabling these species to move within areas of undisturbed habitats. Wildlife movement corridors are an important element of resident species home ranges, including black bear, mountain lion, and coyote, as well as migratory species populations, such as mule deer. As a result, wildlife movement corridors are considered a sensitive resource with the CDFG and Placer County.

Historically, resident and migratory wildlife movement in the Martis Valley was not restricted, as a majority of the valley was undeveloped. However, as development rates increased within Martis

Valley and the surrounding vicinity (e.g., Town of Truckee), the continuity of large areas of undisturbed land has decreased resulting in limited movement corridors in the Martis Valley. According to the existing development conditions within Martis Valley, 3 major undeveloped open space corridors remain in the Plan area (see **Figure 4.9-5**). These open space corridors are critical to the movement of local and migratory wildlife species (Jeff Finn, Pers. Com.).

In addition to providing dispersal habitat for resident wildlife, the open space corridors within Martis Valley function as migration corridors for the Verdi subunit of the Loyalton-Truckee deer herd (*Odocoileus hemionus hemionus*). This herd migrates annually from Nevada along the Truckee River and disperses into the Martis Valley in the spring. Known fawning habitat for this herd occurs near Dry Lake and near Lookout Mountain, in the southwest planning area vicinity (Placer County, 1999; Pencovic and Brown, 1990). The herd leaves the fawning area in the fall, returning to Nevada (see **Figure 4.9-5**).

A recent study conducted by Jones and Stokes utilized existing Caltrans deer kill data to identify 3 primary deer crossings along SR 267 (Jones & Stokes, 2001). These crossings are located at (1) Nevada County post mile 2.5-2.7; (2) Placer County post mile 1.0; and (3) Placer County post mile 1.5 (Jones and Stokes, 2001) (see **Figure 4.9-5**). Between 1979 and 1999, Caltrans recorded 37 deer fatalities along SR 267 in the Plan area during migration. Existing residential and commercial development along SR 267 appear to restrict deer movement along SR 267. The open valley portion of the Plan area is not expected to be a major corridor because the vegetation does not provide adequate cover for deer. Deer kill data along this portion of SR 267 supports this conclusion. Based on deer kill data, the major deer crossing of SR 267 is along the northern edge of the Truckee-Tahoe Airport in Nevada County at milepost 2.5 to 2.7. There are also a substantial number of deer crossings at Placer County milepost 1.0 and 1.5.

On the south side of SR 267, spring and fall movement of the herd appears to be confined to the 3 major corridors in the Plan area (see **Figure 4.9-5**). These corridors generally correspond with existing Caltrans and CDFG deer migration data for Loyalton-Truckee deer herd (Pencovic and Brown, 1990; CDFG, 1984) as well as the results of on-site deer surveys for Siller Ranch (Jones & Stokes, 2001). Deer migration corridors generally follow major topographic features such as drainages (Martis Creek), ridgelines, and the bases of major slopes or prominent hills. The location of corridors on these major topographic features can be influenced by vegetation and the seasonal cover and forage requirements of the migratory deer (Jones & Stokes, 2001). Based on surveys conducted on the Siller Ranch site, deer movement within the 3 identified corridors is correlated to browse species preferred by deer (e.g., antelope bitterbrush, service berry and snow berry) as well as cover and water (Martis Creek) (Jones & Stokes, 2001).

Riparian Habitat

Riparian habitats support a diverse assemblage of plant species and provide shelter, foraging, and breeding habitat, for numerous species of wildlife. Riparian habitats are not afforded special protection under federal law, however these habitats are considered special resources in Placer County and are protected under the Placer County General Plan (see relevant sections within the general plan below). Additionally, the continued decline of riparian habitats is of concern to the CDFG.

4.9.3 PROJECT IMPACTS AND MITIGATION MEASURES

METHODOLOGY

Document Review

Available information pertaining to the natural resources of the Plan area was reviewed. These documents include: Martis Valley General Plan (Placer County, 1974); Martis Valley Community Plan: Technical Supplement and Environmental Impact Report (Placer County, 1974); Placer County General Plan (Placer County, 1994); the California Natural Diversity Data Base (CNDDB: Truckee, Martis Peak, Tahoe City, and Kings Beach quadrangles, April, 2001); the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik, 1994); a list of special-status plant and wildlife species from the U.S. Fish and Wildlife Service (USFWS) for the Truckee, Martis Peak, Tahoe City, and Kings Beach quadrangles (USFWS, August 2001); the Jepson Manual: Higher Plants of California (Hickman, 1993); Biological Resources Assessment for the 480-acre Eaglewood Project (Glazner Environmental Consulting, 1999); Evaluation of Key Biological Resources on Hopkins Ranch (Jones & Stokes, 2001); and the Evaluation of Biological Resources on Siller Ranch (Jones & Stokes, 2001). Additionally, data was analyzed from the USFS Remote Sensing Lab, the TNF and previously prepared EIRs for projects in Martis Valley.

Field Reconnaissance

Key locations within the Plan area were surveyed intermittently from May 2000, during the preparation of the background report, to July 2001. Field investigations included general plant and wildlife surveys focusing on areas within the planning area with the potential to support special-status species and sensitive habitats. Recent color aerial photography of the planning area was also examined to identify biological resources and map vegetation types.

STANDARDS OF SIGNIFICANCE

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. A biological resource impact is considered significant if implementation of the project would result in any of the following:

1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as an endangered, threatened, or rare species or their habitats (including, but not limited to, plants, fish, insects, animals, and birds);

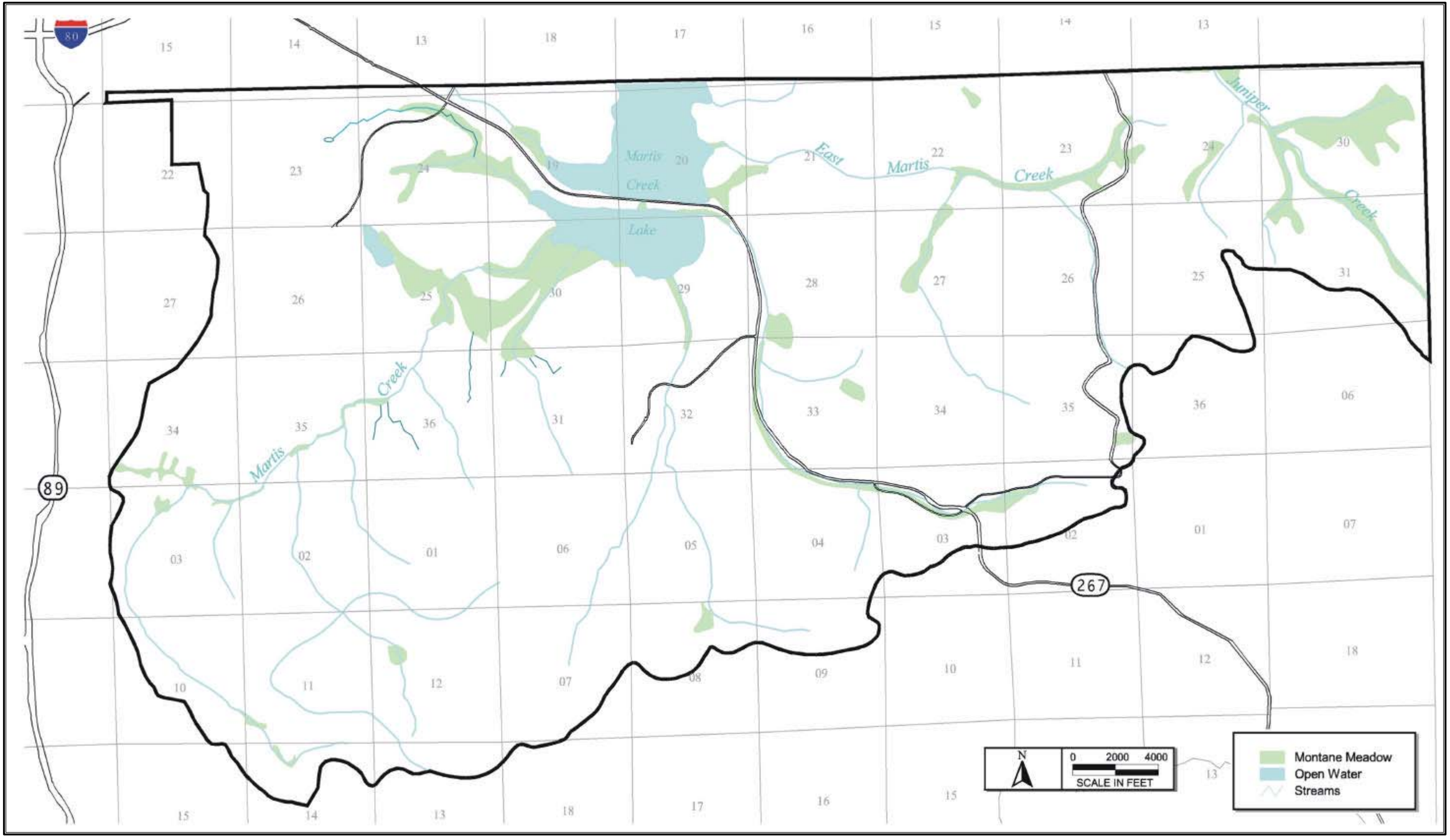
2) Have a substantial adverse effect on locally occurring natural communities (e.g., oak woodlands, mixed conifer, annual grasslands, etc.); or

3) Have a substantial adverse effect on significant ecological resources including:

   a) Wetland areas;

   b) Stream environment zones;

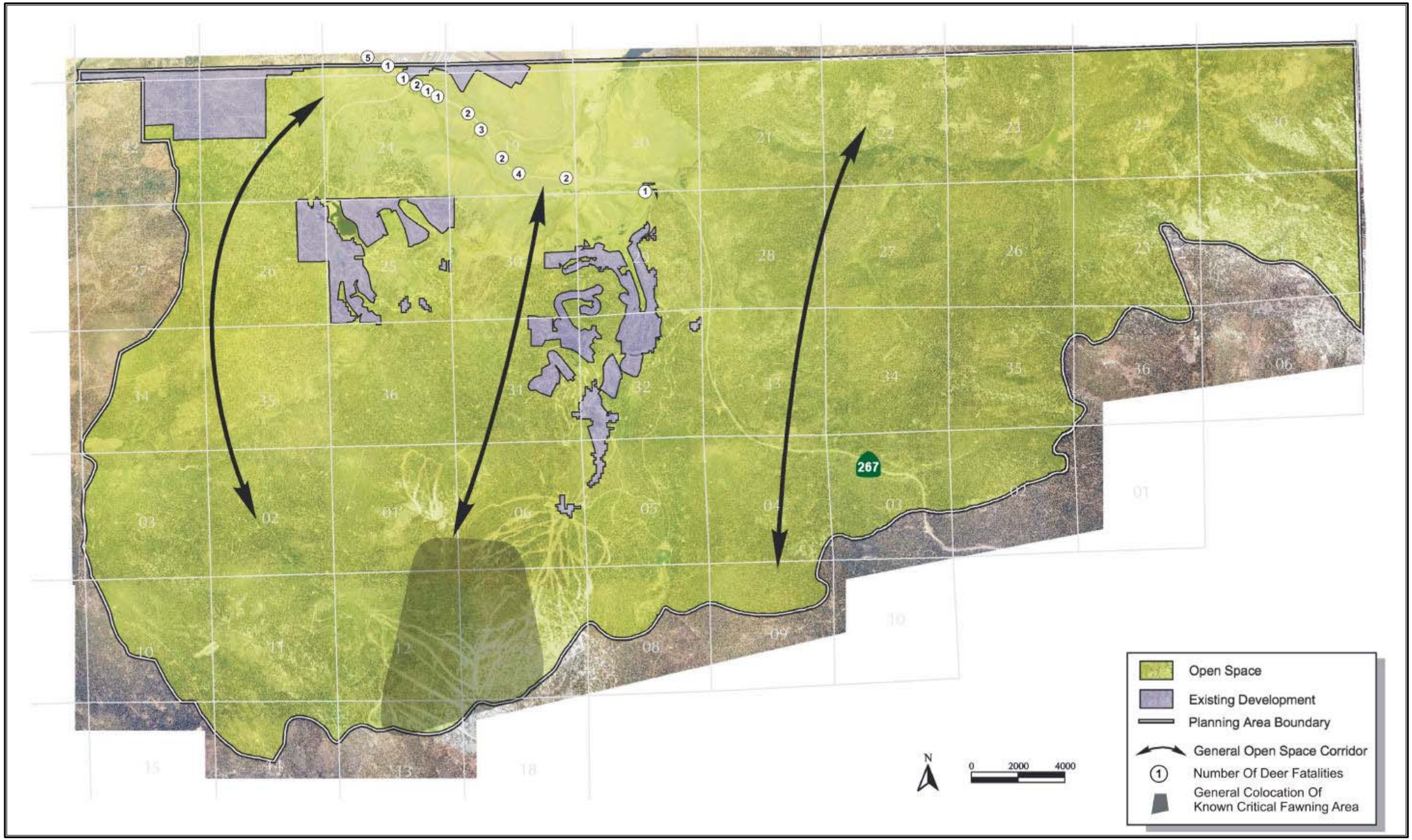
   c) Critical deer migratory routes, and fawning habitat;



PMC

SOURCE: FOOTHILL ASSOCIATES, 2001

FIGURE 4.9-4
JURISDICTIONAL WATERS OF THE U.S.



PMC

SOURCE: FOOTHILL ASSOCIATES, 2001; JONES & STOKES, 2001

FIGURE 4.9-5
OPEN SPACE CORRIDORS

d) Large areas of non-fragmented natural habitat that provides habitat to endangered, threatened, or rare species, or is considered critical habitat by federal, state and/or local governmental agencies; or

e) Identifiable wildlife movement zones.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important, but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

APPROACH TO BIOLOGICAL RESOURCE IMPACT ANALYSIS

The following analysis of impacts is based on the implementation of the proposed Martis Valley Community Plan policy document and the Proposed Land Use Diagram (PP) and three land use map Alternatives (AA, AB, and AC). For the purposes of this discussion, full build out of proposed land use designations is assumed to calculate maximum direct impact to biological resources. To a much lesser extent, forest land uses would experience some human disturbance; however, the parcels within forest land are anticipated to be selectively logged and much of this habitat will likely remain largely undisturbed. In addition, a majority of this are is zoned "Timber Production", which restricts residential, commercial and recreational development. Consequently, forest parcels are considered separate impacts from those caused by implementation of the Martis Valley Community Plan.

Under current Placer County policy, open space areas within the Plan area are permitted to be utilized for recreational uses, such as golf courses, trails and parks. These uses result in direct disturbance of natural vegetation as well as indirect impacts from increased human presence in these areas. The impact analysis takes into account proposed and conceptual plans for future golf courses, trail extensions and other recreational uses.

Calculations for vegetation communities are based on the data received from the USFS remote sensing lab and the TNF, aerial photography, and field reconnaissance. Acreage calculations provided for each land use map option are associated with direct impacts from substantial development as reflected in each land use map. These calculations are approximate and do not take into account conceptual future ski terrain expansions under consideration by Northstar-at-Tahoe, or indirect impacts associated with roadway and trail expansions. These calculations are also only appropriate for community planning only. When specific project boundaries are defined within each parcel, site specific reconnaissance should be conducted to determine if additional communities are present within the site.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.9.1 Disturbance to Common Plant Communities

PP Subsequent development under the Proposed Land Use Diagram would result in the loss of vegetation types common in the region. This would be a **less than significant** impact.

AA Subsequent development under the Existing Martis Valley General Plan Land Use Map would result in the loss of vegetation types common in the region. This would be a **less than significant** impact.

AB Subsequent development under the Alternative 1 Land Use Map would result in the loss of vegetation types common in the region. This would be a **less than significant** impact.

AC Subsequent development under the Alternative 2 Land Use Map would result in the loss of vegetation types common in the region. This would be a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Common plant communities, including mixed conifer forest, red fir forest, Great Basin sage scrub, montane chaparral, and ruderal habitats, occur throughout the Plan area. **Figures 4.9-6** through **4.9-9** identify the estimated impacts to vegetation communities associated with the Proposed Land Use Diagram and Alternatives AA, AB, and AC. As previously identified, it is acknowledged that approximately 512 acres of land designated as open space under the Proposed Land Use Diagram and Alternative 2 would likely include the development of golf courses on approximately 512 acres associated with the Hopkins Ranch, Eaglewood, Siller Ranch and Waddle Ranch properties. Additional losses of these habitat types would also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, potential expansion of ski terrain at Northstar-at-Tahoe.

Mixed conifer forest, red fir forest, Great Basin sage scrub, montane chaparral, and ruderal habitats are widespread throughout the Sierra Nevada and currently receive no protection from federal, state, or local resource agencies. Therefore, this impact is considered less than significant for the Proposed Land Use Diagram and Alternatives AA, AB and AC.

<u>Policies and Implementation Programs</u>

It should be noted that the proposed Community Plan includes the following policies that would ensure common habitat loss is minimized.

Policy 9.E.1 *The County shall encourage landowners and developers to manage the integrity of existing terrain and native vegetation in visually-sensitive areas such as mountainsides, ridges, and along important transportation corridors consistent with fire safety standards. (Note: See also fire safe standards, Goal 5.H., and related Policies.)*

Policy 9.E.3 *The County shall support the conservation of a healthy forest including outstanding areas of native vegetation, including, but not limited to, open meadows, riparian areas, Great Basin Sage Scrub, Mixed Coniferous Forest, Montane Chaparral, Montane Meadow, and Red Fir Forest.*

Policy 9.E.4 *The County shall encourage the preservation of landmark trees and major groves of native trees, which have special characteristics or serve an important function such as historical interest, visual screening, shading of creeks or slope stability. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.*

Policy 9.E.5 *The County shall seek to preserve areas where rare, threatened, and endangered plant species identified as potentially occurring that may be adversely affected by public or private development projects.*

Policy 9.E.6 *The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.*

Policy 9.E.7 *The County shall encourage the planting of native trees, shrubs, and herbaceous species and in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.*

Policy 9.E.8 *The County shall support the continued use of prescribed burning and other methods of brush suppression to mimic the effects of natural fires to reduce fuel volumes and associated fire hazard to human residents and to enhance the health of biotic communities*

Policy 9.E.9 *The County shall support the preservation of native trees and the use of native seed sources and seedlings and drought-tolerant plant materials in all revegetation/landscaping projects.*

Policy 9.E.10 *The County shall require that new development avoid ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas and heritage trees should be protected through public acquisition of fee title or conservation easements to ensure protection.*

Policy 9.E.11 *The County shall encourage the continued use of commercially viable timberlands for timber production and other multiple use functions. Conversion of such lands to other uses is discouraged.*

Mitigation Measure

None required.

Impact 4.9.2 Disturbance to Common Wildlife

PP Subsequent development under the Proposed Land Use Diagram would result in the disturbance and potential loss of wildlife species common in the region. This would be a **less than significant** impact.

AA Subsequent development under the Existing Martis Valley General Plan Land Use Map would result in the disturbance and potential loss of wildlife species common in the region. This would be a **less than significant** impact.

AB Subsequent development under the Alternative 1 Land Use Map would result in the disturbance and potential loss of wildlife species common in the region. This would be a **less than significant** impact.

AC Subsequent development under the Alternative 2 Land Use Map would result in the disturbance and potential loss of wildlife species common in the region. This would be a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

As described in Section 4.9.1, numerous resident and migratory wildlife species utilize habitats within the Martis Valley for foraging, shelter, and breeding. Development under the Proposed

Land Use Diagram and Alternatives AA, AB and AC would result of the loss of habitat for these species. This disturbance to common wildlife could be further increased from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe. While some resident wildlife species would adapt to and live within developed conditions, several species would be displaced and would have to complete with existing resident populations in adjoining areas for resources. However, these species currently receive no protection from federal, state, or local resource agencies and are considered abundant. Therefore, this impact is considered **less than significant** for AA, AB and AC.

Policies and Implementation Programs

It should be noted that the proposed Community Plan includes the following policies that would ensure that impacts to common wildlife species is minimized.

Policy 9.G.1 *The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:*

a. Wetland areas.

b. Stream environment zones.

c. Identified habitat of rare, threatened or endangered animals or plants.

d. Critical deer winter ranges, migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including all habitat types in the Martis Valley Plan area.

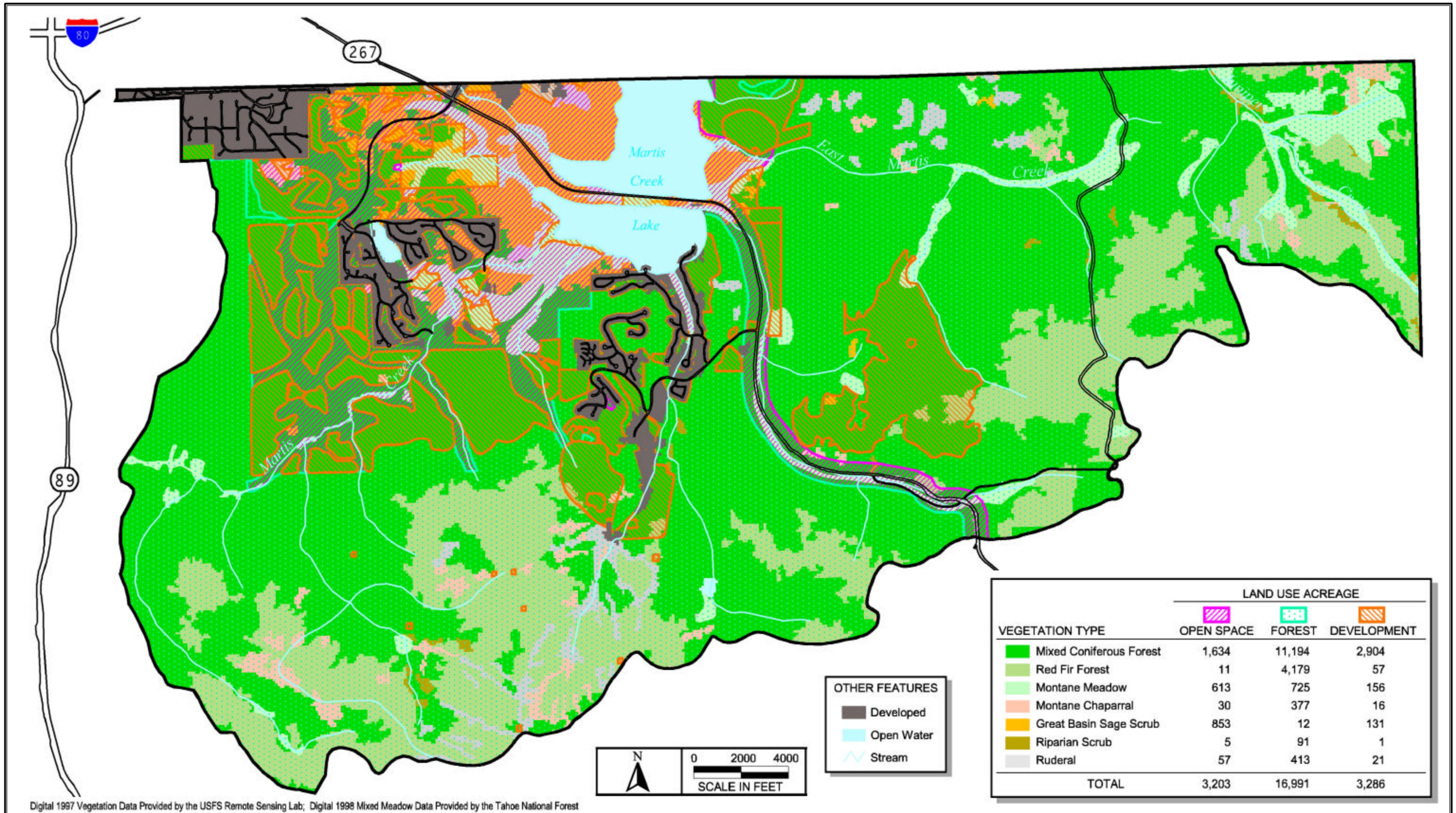
f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

g. Martis Lake and its tributaries.

Policy 9.G.2 *The County shall require the control of residual pesticides, herbicides, and related chemicals such as those used on golf courses, to prevent potential damage to water quality, vegetation, and wildlife.*

Policy 9.G.3 *The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.*

Policy 9.G.5 *The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.*

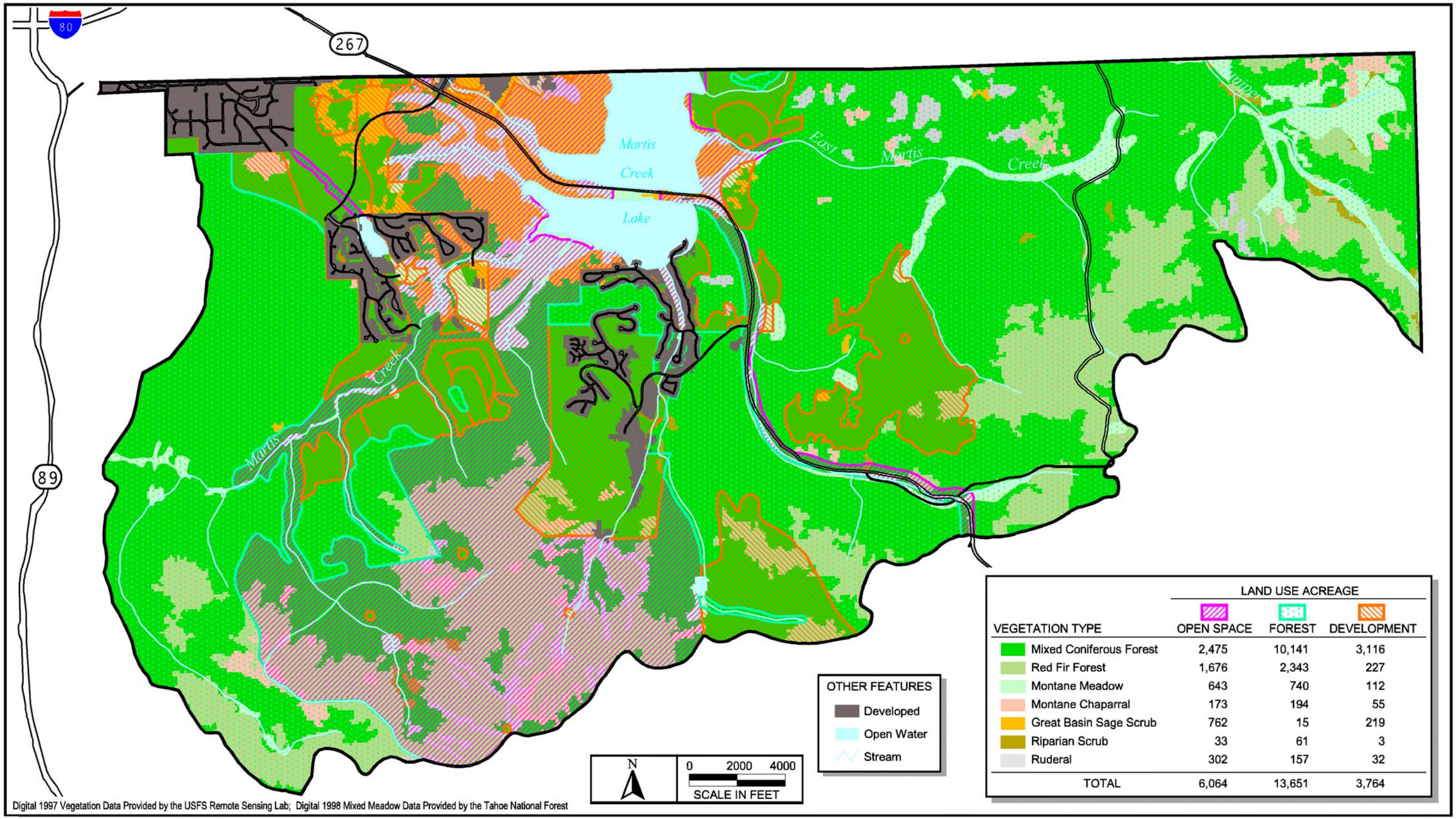


VEGETATION TYPE	LAND USE ACREAGE: OPEN SPACE	FOREST	DEVELOPMENT
Mixed Coniferous Forest	1,634	11,194	2,904
Red Fir Forest	11	4,179	57
Montane Meadow	613	725	156
Montane Chaparral	30	377	16
Great Basin Sage Scrub	853	12	131
Riparian Scrub	5	91	1
Ruderal	57	413	21
TOTAL	3,203	16,991	3,286

PMC

SOURCE: FOOTHILL ASSOCIATES, 2002

FIGURE 4.9-6
VEGETATION IMPACTS OF THE PROPOSED LAND USE DIAGRAM

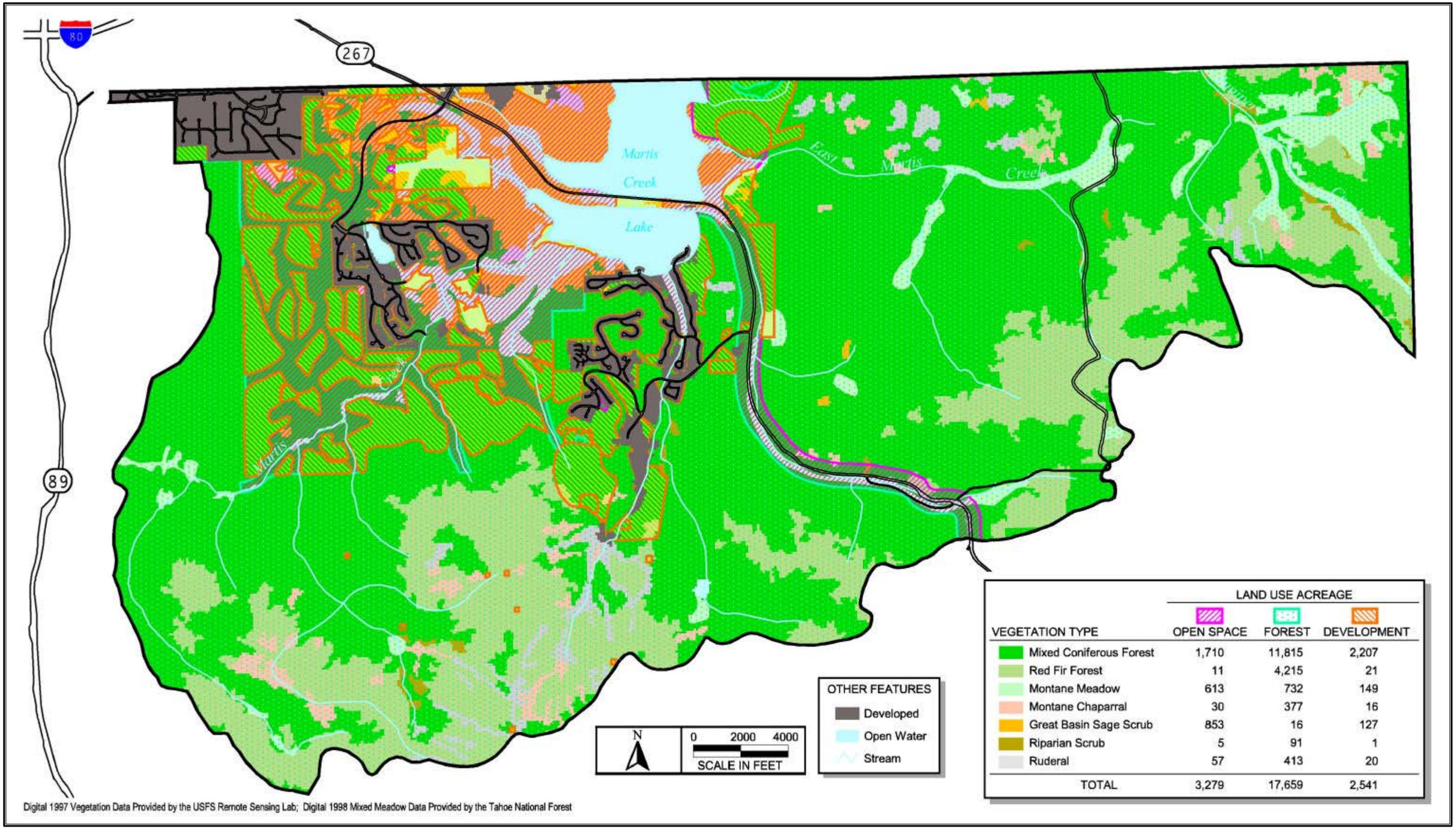


VEGETATION TYPE	LAND USE ACREAGE: OPEN SPACE	FOREST	DEVELOPMENT
Mixed Coniferous Forest	2,475	10,141	3,116
Red Fir Forest	1,676	2,343	227
Montane Meadow	643	740	112
Montane Chaparral	173	194	55
Great Basin Sage Scrub	762	15	219
Riparian Scrub	33	61	3
Ruderal	302	157	32
TOTAL	6,064	13,651	3,764

PMC
PACIFIC MUNICIPAL CONSULTANTS

SOURCE: FOOTHILL ASSOCIATES, 2001

FIGURE 4.9-7
VEGETATION IMPACTS OF EXISTING MARTIS VALLEY GENERAL PLAN LAND USE MAP

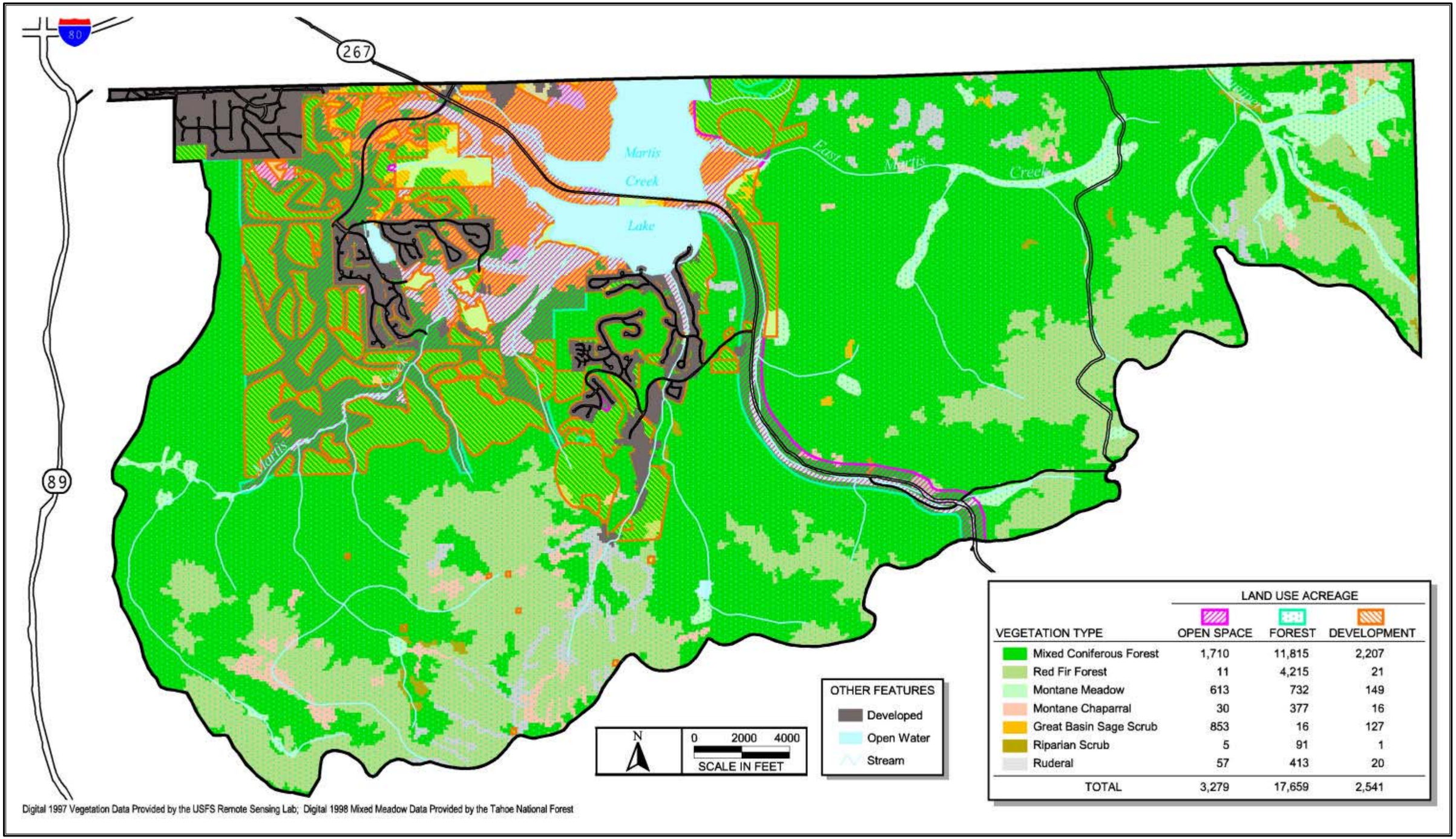


VEGETATION TYPE	LAND USE ACREAGE: OPEN SPACE	FOREST	DEVELOPMENT
Mixed Coniferous Forest	1,710	11,815	2,207
Red Fir Forest	11	4,215	21
Montane Meadow	613	732	149
Montane Chaparral	30	377	16
Great Basin Sage Scrub	853	16	127
Riparian Scrub	5	91	1
Ruderal	57	413	20
TOTAL	3,279	17,659	2,541

PMC

SOURCE: FOOTHILL ASSOCIATES, 2002

FIGURE 4.9-8
VEGETATION IMPACTS OF THE ALTERNATE 1 LAND USE MAP



VEGETATION TYPE	LAND USE ACREAGE: OPEN SPACE	FOREST	DEVELOPMENT
Mixed Coniferous Forest	1,710	11,815	2,207
Red Fir Forest	11	4,215	21
Montane Meadow	613	732	149
Montane Chaparral	30	377	16
Great Basin Sage Scrub	853	16	127
Riparian Scrub	5	91	1
Ruderal	57	413	20
TOTAL	3,279	17,659	2,541

PMC

SOURCE: FOOTHILL ASSOCIATES, 2002

FIGURE 4.9-9
VEGETATION IMPACTS OF THE ALTERNATIVE 2 LAND USE MAP

Policy 9.G.6 *The County shall support the preservation and or reestablishment of fisheries in the rivers and streams within Martis Valley. . This shall include the protection of Martis Lake as a high quality wild-trout sport-fishery and the protection of the lakes tributary streams as wild-trout habitat.*

Policy 9.G.9 *The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats; species and their habitats that have recreational value; wetland lacustrine and riverine habitats; wildlife migration corridors; and locally-important species/communities, such as wild trout.*

Mitigation Measure

None required.

Impact 4.9.3 Potential Disturbance to Special-Status Plant Species

PP Subsequent development under the Proposed Land Use Diagram may impact habitat for special-status plant species. This would be a **potentially significant** impact.

AA Subsequent development under the Existing Martis Valley General Plan Land Use Map may impact habitat for special-status plant species. This would be a **potentially significant** impact.

AB Subsequent development under the Alternative 1 Land Use Map may impact habitat for special-status plant species. This would be a **potentially significant** impact.

AC Subsequent development under the Alternative 2 Land Use Map may impact habitat for special-status plant species. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

Suitable habitat for special-status plant species, including Donner Pass buckwheat, plumas ivesia, Carson Range rock cress, long-petaled lewisia, Munroe's desert mallow, and American manna grass, occurs within the Plan area. These species occupy various habitats including Great Basin sage scrub, ruderal, riparian scrub, montane meadow, montane chaparral, and mixed coniferous forest. Populations of plumas ivesia are known to occur in the Plan area adjacent to SR 267. These species are considered sensitive to CNPS and U.S. Fish and Wildlife Service as well as Placer County (Placer County General Plan Policies 6.D.5 and 6.C.1.c).

As identified in **Figure 4.9-6**, direct development impacts associated with the Proposed Land Use Diagram may remove mixed coniferous forest habitat, red fir forest, montane meadow, montane chaparral, Great Basin sage scrub, riparian scrub, and ruderal habitats, all of which support potential habitat for special-status plant species. Forest land use activities may disturb potential special-status plant species habitat. In addition, vegetation removal in areas designated for open space use (e.g., proposed golf courses) may result in impact to special-status plant species.

In addition to direct development impacts to special-status plant species, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from

proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result similar direct and indirect impacts to special-status plant species as the Proposed Land Use Diagram. Habitat losses associated with this alternative are shown in **Figure 4.9-7**.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result similar (though reduced) direct and indirect impacts to special-status plant species as the Proposed Land Use Diagram. Habitat losses associated with this alternative are shown in **Figure 4.9-8**.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would result similar (though reduced) direct and indirect impacts to special-status plant species as the Proposed Land Use Diagram. Habitat losses associated with this alternative are shown in **Figure 4.9-9**.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would provide some mitigation to special-status plant species impacts.

Policy 9.E.5 *The County shall seek to preserve areas where rare, threatened, and endangered plant species identified as potentially occurring that may be adversely affected by public or private development projects.*

Policy 9.E.10 *The County shall require that new development avoid ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas and heritage trees should be protected through public acquisition of fee title or conservation easements to ensure protection.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific fieldwork.*

Policy 9.F.4 *The County shall require new development to mitigate wetland and riparian loss in both federal jurisdictional and non-jurisdictional wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability; (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation and conservation banking program that provides the opportunity to mitigate impacts to special status, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.*

Non-jurisdictional wetlands may include riparian areas that are not federal "waters of the United States" as defined by the Clean Water Act.

Policy 9.G.10 *Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites, prepared by a wildlife biologist or other qualified professional. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year, (if necessary) to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts.*

Implementation Program

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Natural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors
   Time Frame: On-going
   Funding: Application Fees

Mitigation Measure

The following mitigation measure would be added to the Community Plan as an implementation program under Section 9.0 (Natural Resources) associated with the policies for "Vegetation" and would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

MM 4.9.3 The County shall require that biotic resources evaluation for subsequent projects required under Policy 9.G.10 to include a focused plant survey for the following special-status plant species: Donner Pass buckwheat, plumas ivesia, Carson Range rock cress, long-petaled lewisia, Munroe's desert mallow, and American manna grass. The survey shall determine the presence/absence of these species on the site. The surveys shall be conducted by a qualified botanist during the blooming season for each species (in general, from May-August). Plant species listed after the adoption of the Martis Valley Community Plan shall also be included in the survey.

If biotic surveys identify the presence of special-status plant species, the subsequent project will be designed to avoid the plant population including the provision of adequate buffers. If avoidance is deemed infeasible, other mitigation options shall be considered by the project. These may include, but not limited to, on- or off-site preservation of existing populations, seed and soil collection or plant transplant that ensures that the plant population is maintained. Subsequent projects shall submit a mitigation program for impacted special-status plant species that has been prepared by a qualified biologist approved by the County and shall include consultation with the appropriate governmental agencies (e.g., U.S. Fish and Wildlife Service, California Department of Fish and Game, Lahontan Regional Water Quality Control Board) as part of plan implementation.

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: Permit Fees

Implementation of the above proposed Community Plan policies and implementation program and the above mitigation measure would mitigate Plan impacts for the Proposed Land Use Diagram and Alternatives AA, AB and AC to **less than significant**.

Impact 4.9.4 Potential Disturbance to Mountain Yellow-Legged Frog

PP Subsequent development under the Proposed Land Use Diagram may impact suitable habitat for mountain yellow-legged frog. This would be a **potentially significant** impact.

AA Subsequent development under the Existing Martis Valley General Plan Land Use Map may impact suitable habitat for mountain yellow-legged frog. This would be a **potentially significant** impact.

AB Subsequent development under the Alternative 1 Land Use Map may impact suitable habitat for mountain yellow-legged frog. This would be a **potentially significant** impact.

AC Subsequent development under the Alternative 2 Land Use Map may impact suitable habitat for mountain yellow-legged frog. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

Suitable habitat for mountain yellow-legged frog may occur in the streams and open water habitats located throughout the Plan area. In addition, this species may overwinter in adjacent upland habitats associated with streams or open water. The USFWS lists this species as once occurring in the vicinity of Martis Valley and two records of mountain yellow-legged frog are recorded with the TNF and the CNDDB within ten miles of the Plan area (CNDDB, 2001). However, the presence of eastern brook trout introduced into Martis Creek are effective predators of the frog and have likely reduced the potential of this species occurring in Martis Creek (Jones & Stokes, 2001). This species is a federal and state species of concern and is protected under Policy 6.C.6 of the Placer County General Plan.

Subsequent development under the Proposed Land Use Diagram would result in the construction of roads, bridges, or other structures over and adjacent to streams throughout the Plan area. Additionally, open water habitats may also be impacted through the development of the Plan area. Disturbance to adjacent upland habitat, potential changes in surface water quality, placement of structures in stream habitats, construction activity, and other various project-related activities may impact or remove habitat for this species. The reader is referred to Section 4.7 (Hydrology and Water Quality) regarding anticipated surface water quality impacts.

In addition to direct development impacts to the yellow-legged frog and its habitat, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result similar direct and indirect impacts to the mountain yellow-legged frog as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result similar direct and indirect impacts to the mountain yellow-legged frog as the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would result similar direct and indirect impacts to the mountain yellow-legged frog as the Proposed Land Use Diagram.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would provide some mitigation to mountain yellow-legged frog impacts.

Policy 9.E.10 *The County shall require that new development avoid ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas and heritage trees should be protected through public acquisition of fee title or conservation easements to ensure protection.*

Policy 9.F.1 *The County shall encourage the preservation and enhancement of natural open space within the riparian areas of the watercourses and drainageways found in the Martis Valley as one means of minimizing the adverse effects of land development upon the chemical and physical quality of waters therein.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific fieldwork.*

Policy 9.F.3 *The County shall support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.*

Policy 9.F.4 *The County shall require new development to mitigate wetland and riparian loss in both federal jurisdictional and non-jurisdictional wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability; (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation and conservation banking program that provides the opportunity to mitigate impacts to special status, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas. Non-jurisdictional wetlands may include riparian areas that are not federal "waters of the United States" as defined by the Clean Air Act.*

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.*

Policy 9.F.6 *The County shall identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and reproduction of wetland and riparian species.*

Policy 9.F.7 *The County shall require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plans; and c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alteration to a wetland is considered a less-than-significant impact under CEQA.*

Policy 9.G.1 *The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:*

a. Wetland areas.

b. Stream environment zones.

c. Identified habitat of rare, threatened or endangered animals or plants.

d. Critical deer winter ranges, migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including all habitat types in the Martis Valley Plan area.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

g. Martis Lake and its tributaries.

Policy 9.G.2 *The County shall require the control of residual pesticides, herbicides, and related chemicals such as those used on golf courses, to prevent potential damage to water quality, vegetation, and wildlife.*

Policy 9.G.3 *The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.*

Policy 9.G.4 *The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.*

Policy 9.G.8 *The County shall cooperate with, encourage, and support the plans of other public agencies to acquire fee title or conservation easements to privately-owned lands in order to preserve important wildlife corridors and to provide habitat protection of California Species of Concern and state or federally listed rare, threatened, or endangered plant and animal species*

Policy 9.G.9 *The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats; species and their habitats that have recreational value; wetland lacustrine and riverine habitats; wildlife migration corridors; and locally-important species/communities, such as wild trout.*

Policy 9.G.10 *Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites, prepared by a wildlife biologist or other qualified professional. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year, (if necessary) to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts.*

Implementation Program

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Natural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors
   Time Frame: On-going
   Funding: Application Fees

<u>Mitigation Measures</u>

The following mitigation measures would be added to the Community Plan as implementation program under Section 9.0 (Natural Resources) associated with the policies for "Fish and Wildlife Habitat" and would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

MM 4.9.4 The County shall require that biotic resources evaluation for subsequent projects include a mountain yellow-legged frog habitat suitability assessment be conducted on each parcel proposing a crossing over or development within stream or open water habitat area. The assessment shall include a detailed analysis of the habitat conditions present onsite and shall survey stream conditions 500 feet upstream and downstream from the proposed stream crossing. If the results of the habitat suitability survey indicate that potential habitat for this species is not present within 500 feet up or down stream of the crossing, no further study is required.

However, if potential habitat for this species is identified during the assessment, County shall condition projects involving disturbance of a waterway channel to perform the following:

- Conduct pre-construction surveys for the mountain yellow-legged frog during the breeding season by a qualified biologist. If frogs are identified in the construction area, the biologist shall contact CDFG and/or USFWS regarding the proper methods of moving the species an appropriate off-site location prior to the onset of construction activities at the waterways.
- Monitoring of construction activities within waterways until construction activities in the waterways is complete.
- Conduct training session for all construction personnel regarding the mountain yellow-legged frog, including a description of the species and its habitat and materials on species in order to assist in identifying species in the field.
- Revegetation and recontouring of channel conditions generally consistent with pre-construction conditions.

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: Permit Fees

Implementation of the proposed Community Plan policies, implementation programs (including water quality provisions identified in Section 4.7 [Hydrology and Water Quality]) and mitigation measures MM 4.9.4 as well as MM 4.7.1a through c and MM 4.7.2a through e would mitigate Plan impacts for the Proposed Land Use Diagram and Alternatives AA, AB and AC to **less than significant**.

Impact 4.9.5 Potential Disturbance to Lahontan Cutthroat Trout

PP The implementation of the Proposed Land Use Diagram may disturb habitat for Lahontan cutthroat trout and impact current recovery efforts by the U.S. Fish and Wildlife Service. This would be a **potentially significant** impact.

AA The implementation of the Existing Martis Valley General Plan Land Use Map may disturb habitat for Lahontan cutthroat trout and impact current recovery efforts by the U.S. Fish and Wildlife Service. This would be a **potentially significant** impact.

AB The implementation of the Alternative 1 Land Use Map may disturb habitat for Lahontan cutthroat trout and impact current recovery efforts by the U.S. Fish and Wildlife Service. This would be a **potentially significant** impact.

AC The implementation of the Alternative 2 Land Use Map may disturb habitat for Lahontan cutthroat trout and impact current recovery efforts by the U.S. Fish and Wildlife Service. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

The Lahontan cutthroat trout occurs in the Truckee River and could potentially spawn in associated tributaries throughout the Plan area (William Cowen, Pers. Com.). Martis Creek, Monte Carlo Creek, Juniper Creek, and the other unnamed streams within the Martis Valley area are tributaries to the Truckee River and support potential spawning habitat conditions for the Lahontan cutthroat trout. The Lahontan cutthroat trout typically spawn from April to July. In the project vicinity, 3 records of this species are listed in the CNDDB from Martis Creek (2 records) and Pole Creek (1 record). However, the CNDDB identifies all these occurrences as being extirpated. There are historic accounts of cutthroat trout within the Martis Creek drainage, and suitable habitat is present within the tributaries of Martis Creek (DFG 2000). However, some of these waterways are intermittent and there are various potential fish barriers (e.g., fallen logs, downcuts) as well as other competition with other trout species and interbreeding with other trout species. Therefore this species is considered to have a low potential to occur within waters in the Plan area. This species is listed threatened federally and is afforded additional protection under Placer County Policy 6.C.6 and 6.C.8.

Disturbance to adjacent upland habitat, potential changes in surface water quality, placement of structures in stream habitats, construction activity, and other various development activities may impact or remove habitat for this species. The reader is referred to Section 4.7 (Hydrology and Water Quality) regarding anticipated surface water quality impacts. In addition, construction activities may result in the removal of spawning habitat and entrapment of the species. This may conflict with current recovery efforts by the U.S. Fish and Wildlife Service.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result similar direct and indirect impacts to the Lahontan cutthroat trout as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result similar direct and indirect impacts to the Lahontan cutthroat trout as the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result similar direct and indirect impacts to the Lahontan cutthroat trout as the Proposed Land Use Diagram.

<u>Policies and Implementation Programs</u>

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would provide some mitigation to Lahontan cutthroat trout impacts.

Policy 9.F.1 *The County shall encourage the preservation and enhancement of natural open space within the riparian areas of the watercourses and drainageways found in the Martis Valley as one means of minimizing*

the adverse effects of land development upon the chemical and physical quality of waters therein.

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific fieldwork.*

Policy 9.F.3 *The County shall support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.*

Policy 9.F.4 *The County shall require new development to mitigate wetland and riparian loss in both federal jurisdictional and non-jurisdictional wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability; (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation and conservation banking program that provides the opportunity to mitigate impacts to special status, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas. Non-jurisdictional wetlands may include riparian areas that are not federal "waters of the United States" as defined by the Clean Air Act.*

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.*

Policy 9.F.7 *The County shall require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plans; and c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alteration to a wetland is considered a less-than-significant impact under CEQA.*

Policy 9.G.1 *The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and*

sustaining wildlife populations. Significant ecological resource areas include the following:

a. Wetland areas.

b. Stream environment zones.

c. Identified habitat of rare, threatened or endangered animals or plants.

d. Critical deer winter ranges, migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including all habitat types in the Martis Valley Plan area.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

g. Martis Lake and its tributaries.

Policy 9.G.2 *The County shall require the control of residual pesticides, herbicides, and related chemicals such as those used on golf courses, to prevent potential damage to water quality, vegetation, and wildlife.*

Policy 9.G.3 *The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.*

Policy 9.G.4 *The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.*

Policy 9.G.6 *The County shall support the preservation and or reestablishment of fisheries in the rivers and streams within Martis Valley. . This shall include the protection of Martis Lake as a high quality wild-trout sport-fishery and the protection of the lakes tributary streams as wild-trout habitat.*

Policy 9.G.8 *The County shall cooperate with, encourage, and support the plans of other public agencies to acquire fee title or conservation easements to privately-owned lands in order to preserve important wildlife corridors and to provide habitat protection of California Species of Concern and state or federally listed rare, threatened, or endangered plant and animal species.*

Policy 9.G.9 *The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their*

habitats; species and their habitats that have recreational value; wetland lacustrine and riverine habitats; wildlife migration corridors; and locally-important species/communities, such as wild trout.

Policy 9.G.10 *Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites, prepared by a wildlife biologist or other qualified professional. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year, (if necessary) to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts.*

Implementation Programs

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Natural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors
   Time Frame: On-going
   Funding: Application Fees

Mitigation Measures

The following mitigation measures would be added to the Community Plan as policies under Goal 9.G under Section 9.0 (Natural Resources) and would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

MM 4.9.5a The County shall require that construction activities within the channels of waterways identified to be potential spawning habitat of the Lahontan cutthroat trout shall not occur during the spawning season (April through July).

MM 4.9.5b No structures shall be permitted in streams or watercourses within the Plan area that would result in the blockage of water flow creating a barrier to fish movement.

Implementation of the above mitigation measures, proposed Community Plan policies, implementation programs (including water quality provisions identified in Section 4.7 [Hydrology and Water Quality]), and mitigation measures MM 4.7.1a through c, and MM 4.7.2a through e would mitigate impacts for the Proposed Land Use Diagram and Alternatives AA, AB and AC to **less than significant**.

Impact 4.9.6 Potential Disturbance to Nesting Raptors and Other Migratory Birds

PP Implementation of the Proposed Land Use Diagram could result in the direct and temporary impacts on nesting special-status bird species, raptors, and other migratory birds. This would be a **potentially significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map could result in the direct and temporary impacts on nesting special-status bird species, raptors, and other migratory birds. This would be a **potentially significant** impact.

AB Implementation of the Alternative 1 Land Use Map could result in the direct and temporary impacts on nesting special-status bird species, raptors, and other migratory birds. This would be a **potentially significant** impact.

AC Implementation of the Alternative 2 Land Use Map could result in the direct and temporary impacts on nesting special-status bird species, raptors, and other migratory birds. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

Raptors, including northern goshawk, American peregrine falcon (federal and state listed species), California spotted owl, bald eagle (federal and state listed species), Cooper's hawk, and red-tailed hawk, as well as other migratory birds, including yellow warbler and little willow flycatcher (state listed species), may utilize habitats within the Plan area for nesting. These species are considered special-status species by federal and/or state resource agencies. In addition, raptors and raptor nests are protected under Section 3503.5 of the California Fish and Game Code and all migratory birds are protected under the MBTA.

As shown in **Figure 4.9-6**, development allowed under the Proposed Land Use Diagram may result in the loss of habitat that is being utilized for nesting activities for raptors and other migratory birds. Forest and open space land uses may also result in nesting impacts. Removal of this habitat would be considered a direct and significant impact if sensitive bird species were taken or deterred from breeding and nesting locations. Construction could also result in noise, dust, and other indirect disturbances to nesting bird species in the vicinity, resulting in potential nest abandonment and mortality to eggs and chicks.

In addition to direct development impacts to raptors and other migratory birds and their habitat, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result similar direct and indirect impacts to nesting special-status bird species, raptors, and other migratory birds as the Proposed Land Use Diagram (see **Figure 4.9-7**).

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result similar direct and indirect impacts to nesting special-status bird species, raptors, and other migratory birds as the Proposed Land Use Diagram (see **Figure 4.9-8**).

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would result similar direct and indirect impacts to nesting special-status bird species, raptors, and other migratory birds as the Proposed Land Use Diagram (see **Figure 4.9-9**).

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would provide some mitigation to impacts on nesting special-status bird species, raptors, and other migratory birds.

Policy 9.E.3 *The County shall support the conservation of a healthy forest including outstanding areas of native vegetation, including, but not limited to, open meadows, riparian areas, Great Basin Sage Scrub, Mixed Coniferous Forest, Montane Chaparral, Montane Meadow, and Red Fir Forest.*

Policy 9.E.4 *The County shall encourage the preservation of landmark trees and major groves of native trees, which have special characteristics or serve an important function such as historical interest, visual screening, shading of creeks or slope stability. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.*

Policy 9.E.5 *The County shall seek to preserve areas where rare, threatened, and endangered plant species identified as potentially occurring that may be adversely affected by public or private development projects.*

Policy 9.E.6 *The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.*

Policy 9.E.7 *The County shall encourage the planting of native trees, shrubs, and herbaceous species and in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.*

Policy 9.E.9 *The County shall support the preservation of native trees and the use of native seed sources and seedlings and drought-tolerant plant materials in all revegetation/landscaping projects.*

Policy 9.E.10 *The County shall require that new development avoid ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas and heritage trees should be protected through public acquisition of fee title or conservation easements to ensure protection.*

Policy 9.E.12 *The County shall support the on-going implementation of the Forest Practices Act at the State level to ensure that timber harvest operations are conducted in an environmentally sensitive manner.*

Policy 9.F.1 *The County shall encourage the preservation and enhancement of natural open space within the riparian areas of the watercourses and drainageways found in the Martis Valley as one means of minimizing the adverse effects of land development upon the chemical and physical quality of waters therein.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific fieldwork.*

Policy 9.F.4 *The County shall require new development to mitigate wetland and riparian loss in both federal jurisdictional and non-jurisdictional wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability; (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation and conservation banking program that provides the opportunity to mitigate impacts to special status, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas. Non-jurisdictional wetlands may include riparian areas that are not federal "waters of the United States" as defined by the Clean Air Act.*

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.*

Policy 9.F.6 *The County shall identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and reproduction of wetland and riparian species*

Policy 9.G.1 *The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:*

a. Wetland areas.

b. Stream environment zones.

c. Identified habitat of rare, threatened or endangered animals or plants.

d. Critical deer winter ranges, migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including all habitat types in the Martis Valley Plan area.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

g. Martis Lake and its tributaries.

Policy 9.G.2 *The County shall require the control of residual pesticides, herbicides, and related chemicals such as those used on golf courses, to prevent potential damage to water quality, vegetation, and wildlife.*

Policy 9.G.3 *The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.*

Policy 9.G.4 *The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.*

Policy 9.G.5 *The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.*

Policy 9.G.8 *The County shall cooperate with, encourage, and support the plans of other public agencies to acquire fee title or conservation easements to privately-owned lands in order to preserve important wildlife corridors and to provide habitat protection of California Species of Concern and state or federally listed rare, threatened, or endangered plant and animal species.*

Policy 9.G.9 *The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats; species and their habitats that have recreational value; wetland lacustrine and riverine habitats; wildlife migration corridors; and locally-important species/communities, such as wild trout.*

Policy 9.G.10 *Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites, prepared by a wildlife biologist or other qualified professional. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year, (if necessary) to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts.*

Implementation Program

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Natural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors

Time Frame: On-going
Funding: Application Fees

Mitigation Measure

The following mitigation measure would be added to the Community Plan as an implementation program under Section 9.0 (Natural Resources) associated with the policies for "Fish and Wildlife Habitat" and would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

MM 4.9.6 If active nests are found during surveys associated with implementation of Policy 9.G.10, the County shall require mapping identifying the locations of identified nests. The subsequent project will be required to conduct focused nest surveys 30 days prior to the beginning of construction activities by a qualified biologist in order to determine if active nests are still present. If active nests are found, the County shall be notified on the status of the nests and no construction activities shall take place within 500 feet of the nest to avoid disturbance until the birds leave the nest, or a time deemed acceptable (e.g., when the juveniles have fledged) by the biologist. Monitoring reports summarizing nest activities shall be submitted to the County until the nest is determined to be inactive. Trees containing nest sites that must be removed shall be removed during the non-breeding season.

If active nests that are identified involve federal and/or state listed species (under the Federal Endangered Species Act and the California Endangered Species Act) within or adjacent to the area of planned disturbance, additional setbacks, restrictions and/or mitigation may be required from California Department of Fish and Game and U.S. Fish and Wildlife Service as part of agency permitting to ensure no take of the species. Nest sites of federal and/or state listed species shall not be taken, unless approved by California Department of Fish and Game and U.S. Fish and Wildlife Service.

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: Permit Fees

Implementation of the above Community Plan policies and mitigation measure would reduce impacts to nesting special-status bird species, raptors, and other migratory birds to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.9.7 Potential Disturbance to Special-Status Bat Species

PP The implementation of the Proposed Land Use Diagram may remove potential roosting habitats for special-status bat species. This would be a **potentially significant** impact.

AA The implementation of the Existing Martis Valley General Plan Land Use Map may remove potential roosting habitats for special-status bat species. This would be a **potentially significant** impact.

AB The implementation of the Alternative 1 Land Use Map may remove potential roosting habitats for special-status bat species. This would be a **potentially significant** impact.

AC The implementation of the Alternative 2 Land Use Map may remove potential roosting habitats for special-status bat species. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

Several species of special-status bats, including spotted bat, long-eared myotis, fringed myotis, long-legged myotis, Yuma myotis, and Pale Townsend's big-eared bat, have the potential to roost within the Plan area. The mixed coniferous forest, red fir forest, montane meadow, and riparian scrub habitats within the Plan area support suitable habitat for these species. Bats roost in a variety of locations such as rock crevices, under bark, trees, in buildings, under bridges, and in culverts. Depending on the species, bats may utilize separate day and night roosts. In addition, winter hibernacula and maternity roosting sites are also occupied at different times of the year. These special-status bat species are considered species of concern to the CDFG and/or the USFWS.

As shown in **Figure 4.9-6**, implementation of the Proposed Land Use Diagram would result in disturbance to mixed coniferous forest, red fir forest, ruderal, and riparian scrub habitats, all of which may provide roosting habitat for special-status bat species. Additionally, forest and open space land uses may result in further impacts.

In addition to direct development impacts to special-status bat species roosting habitat, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result similar direct and indirect impacts to special-status bat species roosting habitat as the Proposed Land Use Diagram (see **Figure 4.9-7**).

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result similar direct and indirect impacts to special-status bat species roosting habitat as the Proposed Land Use Diagram (see **Figure 4.9-8**).

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would result similar direct and indirect impacts to special-status bat species roosting habitat as the Proposed Land Use Diagram (see **Figure 4.9-9**).

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would provide some mitigation to impacts on special-status bat species roosting habitat.

Policy 9.E.3 *The County shall support the conservation of a healthy forest including outstanding areas of native vegetation, including, but not limited to, open meadows, riparian areas, Great Basin Sage Scrub, Mixed Coniferous Forest, Montane Chaparral, Montane Meadow, and Red Fir Forest.*

Policy 9.E.4 *The County shall encourage the preservation of landmark trees and major groves of native trees, which have special characteristics or serve an important function such as historical interest, visual screening, shading of creeks or slope stability. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.*

Policy 9.E.5 *The County shall seek to preserve areas where rare, threatened, and endangered plant species identified as potentially occurring that may be adversely affected by public or private development projects.*

Policy 9.E.6 *The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.*

Policy 9.E.7 *The County shall encourage the planting of native trees, shrubs, and herbaceous species and in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.*

Policy 9.E.9 *The County shall support the preservation of native trees and the use of native seed sources and seedlings and drought-tolerant plant materials in all revegetation/landscaping projects.*

Policy 9.E.10 *The County shall require that new development avoid ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas and heritage trees should be protected through public acquisition of fee title or conservation easements to ensure protection.*

Policy 9.E.12 *The County shall support the on-going implementation of the Forest Practices Act at the State level to ensure that timber harvest operations are conducted in an environmentally sensitive manner.*

Policy 9.F.1 *The County shall encourage the preservation and enhancement of natural open space within the riparian areas of the watercourses and drainageways found in the Martis Valley as one means of minimizing the adverse effects of land development upon the chemical and physical quality of waters therein.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific fieldwork.*

Policy 9.F.4 *The County shall require new development to mitigate wetland and riparian loss in both federal jurisdictional and non-jurisdictional wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability; (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation and conservation*

banking program that provides the opportunity to mitigate impacts to special status, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas. Non-jurisdictional wetlands may include riparian areas that are not federal "waters of the United States" as defined by the Clean Air Act.

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.*

Policy 9.F.6 *The County shall identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and reproduction of wetland and riparian species*

Policy 9.G.1 *The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:*

a. Wetland areas.

b. Stream environment zones.

c. Identified habitat of rare, threatened or endangered animals or plants.

d. Critical deer winter ranges, migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including all habitat types in the Martis Valley Plan area.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

g. Martis Lake and its tributaries.

Policy 9.G.2 *The County shall require the control of residual pesticides, herbicides, and related chemicals such as those used on golf courses, to prevent potential damage to water quality, vegetation, and wildlife.*

Policy 9.G.3 *The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.*

Policy 9.G.4 *The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.*

Policy 9.G.5 *The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.*

Policy 9.G.8 *The County shall cooperate with, encourage, and support the plans of other public agencies to acquire fee title or conservation easements to privately-owned lands in order to preserve important wildlife corridors and to provide habitat protection of California Species of Concern and state or federally listed rare, threatened, or endangered plant and animal species.*

Policy 9.G.9 *The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats; species and their habitats that have recreational value; wetland lacustrine and riverine habitats; wildlife migration corridors; and locally-important species/communities, such as wild trout.*

Policy 9.G.10 *Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites, prepared by a wildlife biologist or other qualified professional. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year, (if necessary) to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts.*

Implementation Programs

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Natural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors
   Time Frame: On-going
   Funding: Application Fees

<u>Mitigation Measures</u>

The following mitigation measure would be added to the Community Plan as an implementation program under Section 9.0 (Natural Resources) associated with the policies for "Fish and Wildlife Habitat" and would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

MM 4.9.7 If bat roosts are identified on site as a result of surveys required by Policy 9.G.10, the County shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed prior to May of each construction phase (maternity roots are generally occupied from May to August) prior to the onset of construction activities. The removal of the roosting sites shall occur during the time of day when the roost is unoccupied.

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: Permit Fees

Implementation of the above Community Plan policies and mitigation measure would reduce impacts to special-status bat species roosting habitat to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.9.8 Potential Disturbance to Sierra Nevada Red Fox, California Wolverine, Sierra Nevada Snowshoe Hare, Pacific Fisher, Sierra Nevada Mountain Beaver, and Pine Marten

PP The implementation of the Proposed Land Use Diagram may remove potential habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten. This would be a **potentially significant** impact.

AA The implementation of the Existing Martis Valley General Plan Land Use Map may remove potential habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten. This would be a **potentially significant** impact.

AB The implementation of the Alternative 1 Land Use Map may remove habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten. This would be a **potentially significant** impact.

AC The implementation of the Alternative 2 Land Use Map may remove habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

The mixed coniferous forest, red fir forest, montane meadow, and riparian scrub habitats within the Plan area provide potential habitat for Sierra Nevada red fox (state listed species), California wolverine (state listed species), Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten. Some or all of these species may utilize the Plan area as part of their home range. In addition, these species could den or nest within suitable habitats on site. However, no den or borrow sites for any of these species have been identified in the Plan area. The Sierra Nevada red fox, pine marten and California wolverine are not expected to be observed in areas near large human populations and potential for these to occur in the Plan area is low. These species are considered sensitive by federal and/or state resource agencies as well as the PCGP (Policy 6.C.6).

As shown in **Figure 4.9-6**, implementation of the development and forest uses designated under the Proposed Land Use Diagram will disturb mixed coniferous forest, red fir forest, montane meadow, and riparian scrub habitats. These communities support potential habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten. Recreational uses associated with open space elements may remove additional habitat.

In addition to direct development impacts to the Sierra Nevada Red Fox, California Wolverine, Sierra Nevada Snowshoe Hare, Pacific Fisher, Sierra Nevada Mountain Beaver, and Pine Marten

and their habitat, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result similar direct and indirect impacts to habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten as the Proposed Land Use Diagram (see **Figure 4.9-7**).

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result similar direct and indirect impacts to habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten as the Proposed Land Use Diagram (see **Figure 4.9-8**).

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would result similar direct and indirect impacts to habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten as the Proposed Land Use Diagram (see **Figure 4.9-9**).

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would provide some mitigation to impacts on habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten.

Policy 9.E.3 *The County shall support the conservation of a healthy forest including outstanding areas of native vegetation, including, but not limited to, open meadows, riparian areas, Great Basin Sage Scrub, Mixed Coniferous Forest, Montane Chaparral, Montane Meadow, and Red Fir Forest.*

Policy 9.E.4 *The County shall encourage the preservation of landmark trees and major groves of native trees, which have special characteristics or serve an important function such as historical interest, visual screening, shading of creeks or slope stability. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.*

Policy 9.E.5 *The County shall seek to preserve areas where rare, threatened, and endangered plant species identified as potentially occurring that may be adversely affected by public or private development projects.*

Policy 9.E.6 *The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.*

Policy 9.F.1 *The County shall encourage the preservation and enhancement of natural open space within the riparian areas of the watercourses and drainageways found in the Martis Valley as one means of minimizing the adverse effects of land development upon the chemical and physical quality of waters therein.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific fieldwork.*

Policy 9.G.1 *The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:*

a. Wetland areas.

b. Stream environment zones.

c. Identified habitat of rare, threatened or endangered animals or plants.

d. Critical deer winter ranges, migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including all habitat types in the Martis Valley Plan area.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

g. Martis Lake and its tributaries.

Policy 9.G.2 *The County shall require the control of residual pesticides, herbicides, and related chemicals such as those used on golf courses, to prevent potential damage to water quality, vegetation, and wildlife.*

Policy 9.G.3 *The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.*

Policy 9.G.4 *The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.*

Policy 9.G.5 *The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.*

Policy 9.G.6 *The County shall support the preservation and or reestablishment of fisheries in the rivers and streams within Martis Valley. . This shall include the protection of Martis Lake as a high quality wild-trout sport-fishery and the protection of the lakes tributary streams as wild-trout habitat.*

Policy 9.G.7 *The County will use the California Wildlife Habitat Relationships (WHR) system as a standard descriptive tool and guide for environmental assessment in the absence of a more detailed site-specific analysis.*

Policy 9.G.8 *The County shall cooperate with, encourage, and support the plans of other public agencies to acquire fee title or conservation easements to privately-owned lands in order to preserve important wildlife corridors and to provide habitat protection of California Species of Concern and state or federally listed rare, threatened, or endangered plant and animal species.*

Policy 9.G.9 *The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats; species and their habitats that have recreational value; wetland lacustrine and riverine habitats; wildlife migration corridors; and locally-important species/communities, such as wild trout.*

Policy 9.G.10 *Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites, prepared by a wildlife biologist or other qualified professional. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year, (if necessary) to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts.*

Implementation Programs

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Natural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors
   Time Frame: On-going
   Funding: Application Fees

Mitigation Measure

The following mitigation measure would be added to the Community Plan as an implementation program under Section 9.0 (Natural Resources) associated with the policies for "Fish and Wildlife Habitat" and would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

MM 4.9.8 The County shall require focused surveys for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten as part of surveys required by Policy 9.G.10. If active den/burrow sites for the Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and/or pine marten dens/nests are identified, the mitigation plan shall be developed in consultation with the California Department of Fish and Game and/or U.S. Fish and Wildlife Service to ensure no animals are killed and that den/burrow sites are properly addressed. Measures may include, but not limited to, redesign of the project (Placer County General Plan Policy 6.C.6) to provide adequately sized open space areas and corridors around den/burrow sites, capture and relocation of the species. Subsequent projects shall submit the mitigation plan that has been reviewed and approved the appropriate governmental agencies (e.g., U.S. Fish and Wildlife Service, California Department of Fish and Game) and the necessary regulatory permits have obtained for the Sierra Nevada red fox and California wolverine (California Endangered Species Act) to the County prior to development activities.

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: Permit Fees

Implementation of the above Community Plan policies and mitigation measure would reduce impacts on habitat for Sierra Nevada red fox, California wolverine, Sierra Nevada snowshoe hare, pacific fisher, Sierra Nevada mountain beaver, and pine marten to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.9.9 Disturbance to Riparian Habitat

PP The implementation of the Proposed Land Use Diagram may remove riparian scrub habitat. However, implementation of proposed Community Plan policies would ensure no net loss of riparian areas. This would be a **less than significant** impact.

AA The implementation of the Existing Martis Valley General Plan Land Use Map may remove riparian scrub habitat. However, implementation of proposed Community Plan policies would ensure no net loss of riparian areas. This would be a **less than significant** impact.

AB The implementation of the Alternative 1 Land Use Map may remove riparian scrub habitat. However, implementation of proposed Community Plan policies would ensure no net loss of riparian areas. This would be a **less than significant** impact.

AC The implementation of the Alternative 2 Land Use Map may remove riparian scrub habitat. However, implementation of proposed Community Plan policies would ensure no net loss of riparian areas. This would be a **less than significant** impact.

PP Proposed Land Use Diagram

The riparian scrub habitat within the Plan area supports a wide diversity of plant species and provides habitat to numerous wildlife species. Riparian habitats are considered sensitive to the CDFG and Placer County (PCGP Policy 6.A.1). These habitats are also protected in the existing Martis Valley General Plan (MVGP Policy 2).

As shown in **Figure 4.9-6**, implementation of the Proposed Land Use Diagram may result in the loss of riparian scrub habitat due to development of the designated land uses. Forest use activity may impact riparian scrub habitat. Recreational uses associated with open space areas may disturb riparian habitat. In addition to direct development impacts to riparian scrub habitat, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

However, as described below, the proposed Community Plan includes several policies that would minimize direct and indirect impacts to riparian areas as well as ensure no net loss of riparian habitat.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result in similar direct and indirect impacts to riparian habitat as the Proposed Land Use Diagram (see **Figure 4.9-7**). However, as described below, the proposed Community Plan includes several policies that would minimize direct and indirect impacts to riparian areas as well as ensure no net loss of riparian habitat.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result in similar direct and indirect impacts to riparian habitat as the Proposed Land Use Diagram (see **Figure 4.9-8**). However, as described below, the proposed Community Plan includes several policies that would minimize direct and indirect impacts to riparian areas as well as ensure no net loss of riparian habitat.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would result in similar direct and indirect impacts to riparian habitat as the Proposed Land Use Diagram (see **Figure 4.9-9**). However, as described below, the proposed Community Plan includes several policies that would minimize direct and indirect impacts to riparian areas as well as ensure no net loss of riparian habitat.

<u>Policies and Implementation Programs</u>

New developmental projects in the Plan area would be required to comply with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation program would fully mitigate impacts on riparian habitat for the Proposed Land Use Diagram and Alternatives AA, AB and AC.

Policy 9.E.3 *The County shall support the conservation of a healthy forest including outstanding areas of native vegetation, including, but not limited to, open meadows, riparian areas, Great Basin Sage Scrub, Mixed*

Coniferous Forest, Montane Chaparral, Montane Meadow, and Red Fir Forest.

Policy 9.E.10 *The County shall require that new development avoid ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas and heritage trees should be protected through public acquisition of fee title or conservation easements to ensure protection.*

Policy 9.F.1 *The County shall encourage the preservation and enhancement of natural open space within the riparian areas of the watercourses and drainageways found in the Martis Valley as one means of minimizing the adverse effects of land development upon the chemical and physical quality of waters therein.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific fieldwork.*

Policy 9.F.4 *The County shall require new development to mitigate wetland and riparian loss in both federal jurisdictional and non-jurisdictional wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability; (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation and conservation banking program that provides the opportunity to mitigate impacts to special status, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas. Non-jurisdictional wetlands may include riparian areas that are not federal "waters of the United States" as defined by the Clean Air Act.*

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.*

Policy 9.F.6 *The County shall identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and reproduction of wetland and riparian species*

Implementation Program

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Natural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors

   Time Frame: On-going

Funding: Application Fees

Mitigation Measures

None required.

Impact 4.9.10 Loss of Wetland Areas

PP The implementation of the Proposed Land Use Diagram may disturb wetland areas. However, implementation of proposed Community Plan policies would ensure no net loss of wetland resources. This would be a **less than significant** impact.

AA The implementation of the Existing Martis Valley General Plan may disturb wetland areas. However, implementation of proposed Community Plan policies would ensure no net loss of wetland resources. This would be a **less than significant** impact.

AB The implementation of the Alternative 1 Land Use Map may disturb wetland areas. However, implementation of proposed Community Plan policies would ensure no net loss of wetland resources. This would be a **less than significant** impact.

AC The implementation of the Alternative 2 Land Use Map may disturb wetland areas. However, implementation of proposed Community Plan policies would ensure no net loss of wetland resources. This would be a **less than significant** impact.

PP Proposed Land Use Diagram

Martis Creek, Juniper Creek, Monte Carlo Creek, associated tributaries, wet meadow habitats, Martis Creek Lake, and Gooseneck Lake consist of wetland areas, some of which are considered jurisdictional waters of the U.S. and are regulated under Section 401 and 404 of the CWA. These water features are afforded additional protection in the Placer County General Plan (Policy 6.B.5).

Implementation of the Proposed Land Use Diagram may result in the fill and disturbance of wetland areas. In addition to development impacts to wetland areas, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

However, as described below, the proposed Community Plan includes several policies that would minimize direct and indirect impacts to wetland areas as well as ensure no net loss of wetland resources.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result in similar direct and indirect impacts to wetland areas as the Proposed Land Use Diagram. However, as described below, the proposed Community Plan includes several policies that would minimize direct and indirect impacts to wetland areas as well as ensure no net loss of wetland resources.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result in similar direct and indirect impacts to wetland areas as the Proposed Land Use Diagram. However, as

described below, the proposed Community Plan includes several policies that would minimize direct and indirect impacts to wetland areas as well as ensure no net loss of wetland resources.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would result in similar direct and indirect impacts to wetland areas as the Proposed Land Use Diagram. However, as described below, the proposed Community Plan includes several policies that would minimize direct and indirect impacts to wetland areas as well as ensure no net loss of wetland resources.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation program (including water quality provisions identified in Section 4.7 [Hydrology and Water Quality]), and mitigation measures 4.7.1a through c, and MM 4.7.2a through e, as well as would fully mitigate impacts on wetland resources for the Proposed Land Use Diagram and Alternatives AA, AB and AC.

Policy 9.F.1 *The County shall encourage the preservation and enhancement of natural open space within the riparian areas of the watercourses and drainageways found in the Martis Valley as one means of minimizing the adverse effects of land development upon the chemical and physical quality of waters therein.*

Policy 9.F.2 *The County shall require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of runoff waters flowing into these waterways. The buffers shall meet the standards contained in the PCGP unless a larger buffer is warranted based on site-specific field work.*

Policy 9.F.3 *The County shall support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.*

Policy 9.F.4 *The County shall require new development to mitigate wetland and riparian loss in both federal jurisdictional and non-jurisdictional wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability; (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation and conservation banking program that provides the opportunity to mitigate impacts to special status, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas. Non-jurisdictional wetlands may include riparian areas that are not federal "waters of the United States" as defined by the Clean Air Act.*

Policy 9.F.5 *The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and*

siltation will not significantly adversely affect the value or function of wetlands.

Policy 9.F.6 *The County shall identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and reproduction of wetland and riparian species*

Policy 9.F.7 *The County shall require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plans; and c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alteration to a wetland is considered a less-than-significant impact under CEQA.*

Implementation Program

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Natural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors
   Time Frame: On-going
   Funding: Application Fees

Mitigation Measures

None required.

Impact 4.9.11 Disturbance to Wildlife Movement

PP The implementation of the Proposed Land Use Diagram may block local wildlife movement as well as established deer migration movement corridors. This would be a **potentially significant** impact.

AA The implementation of the Existing Martis Valley General Plan Land Use Map may block local wildlife movement as well as established deer migration movement corridors. This would be a **potentially significant** impact.

AB The implementation of the Alternative 1 Land Use Map may block local wildlife movement as well as established deer migration movement corridors. This would be a **potentially significant** impact.

AC The implementation of the Alternative 2 Land Use Map may block local wildlife movement as well as established deer migration movement corridors. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

The Verdi subunit of the Loyalton-Truckee deer herd migrates every spring from wintering habitat in Nevada into Martis Valley. The herd generally follows the Truckee River west and then disperses to two fawning locations: (1) near Dry Lake, north of the Plan area, and (2) south of Lookout Mountain, located in the southern region of the Plan area. In the late fall, the herd begins migration back to their wintering habitat in Nevada. The exact composition of this herd and its movements is not known; no comprehensive studies have been conducted of this herd. As previously described, existing CDFG and Caltrans data and deer surveys conducted in the Plan area indicate that the deer move along the 3 corridors in the Plan area (see **Figure 4.9-5**). Deer migration routes are protected by the CDFG and are afforded additional protection in the Placer County General Plan (Policy 6.C.1.f and 6.E.2.f). In addition to deer movement, resident wildlife species occurring in the Plan area include black bear, coyote, raccoon, and numerous other mammal species utilize these corridor areas for movement.

Implementation of the Proposed Land Use Diagram may result in development patterns associated with residential, commercial and recreation use development that obstruct these corridors. Specifically, development in the northwestern portion of the Plan area could block movement of deer and resident wildlife species that are currently utilizing the western-most corridor identified in **Figure 4.9-5**, depending on the ultimate density and form of development. While there are open space corridors provided in the northwestern portion of the Plan area on various properties (e.g., Hopkins Ranch, Eaglewood, Siller Ranch), there is no direct linkage between these areas to provide for wildlife movement. Residential and recreational development in the general Northstar-at-Tahoe area may result in alteration of the use of the southern-most movement and result in constricting movement along the central corridor generally along the Martis Creek corridor, which would be designated as open space.

In addition to direct development impacts to deer migration movement corridors, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

AA Existing Martis Valley General Plan Land Use Map

Implementation of the Existing Martis Valley General Plan Land Use Map may result in development patterns that obstruct these corridors associated with residential, commercial and recreation use development. Specifically, development in the northwestern portion of the Plan area could block movement of deer and resident wildlife species that are currently utilizing the western-most corridor identified in **Figure 4.9-5**, depending on the ultimate density and form of development. While the Siller Ranch density would likely provide adequate spacing for wildlife movement, there are open space corridors connections to the northeast (e.g., Hopkins Ranch and Eaglewood). Residential and recreational development in the general Northstar-at-Tahoe area may result in alteration of the use of the southern-most movement and result in constricting movement along the central corridor generally along the Martis Creek corridor, which would be designated as open space.

In addition to direct development impacts to deer migration movement corridors, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

AB Alternative 1 Land Use Map

Implementation of the Alternative 1 Land Use Map may result in development patterns that obstruct these corridors associated with residential, commercial and recreation use development. Specifically, development in the northwestern portion of the Plan area could block movement of deer and resident wildlife species that are currently utilizing the western-most corridor identified in **Figure 4.9-5**, depending on the ultimate density and form of development. While the Siller Ranch density would likely provide adequate spacing for wildlife movement, there are open space corridors connections to the northeast (e.g., Hopkins Ranch and Eaglewood). Residential and recreational development in the general Northstar-at-Tahoe area may result in alteration of the use of the southern-most movement and result in constricting movement along the central corridor generally along the Martis Creek corridor, which would be designated as open space.

In addition to direct development impacts to deer migration movement corridors, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

AC Alternative 2 Land Use Map

Implementation of the Alternative 2 Land Use Map may result in development patterns that obstruct these corridors associated with residential, commercial and recreation use development. Specifically, development in the northwestern portion of the Plan area could block movement of deer and resident wildlife species that are currently utilizing the western-most corridor identified in **Figure 4.9-5**, depending on the ultimate density and form of development. While there are open space corridors provided in the northwestern portion of the Plan area on various properties (e.g., Hopkins Ranch, Eaglewood, Siller Ranch), there is no direct linkage between these areas to provide for wildlife movement. Residential and recreational development in the general Northstar area may result in alteration of the use of the southern-most movement and result in constricting movement along the central corridor generally along the Martis Creek corridor, which would be designated as open space.

In addition to direct development impacts to deer migration movement corridors, additional impacts may also occur from direct (removal and loss) and indirect (human intrusion) impacts from proposed trail extensions, potential widening of SR 267 to 4 lanes, and potential expansion of ski terrain at Northstar-at-Tahoe.

<u>Policies and Implementation Programs</u>

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are listed below. Compliance with these Plan policies and implementation programs would provide some mitigation to wildlife movement corridor impacts.

Policy 9.D.1 *The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species (see discussion of sensitive habitat buffers in Part 1 of the PCGP).*

In some cases, buffers shall be required which are substantially larger than noted above. Conversely, based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. In addition, the County may allow exceptions, such as in the following cases:

a. Reasonable use of the property would otherwise be denied;

b. The location is necessary to avoid or mitigate hazards to the public.

c. The location is necessary for the repair of roads, bridges, trails or similar infrastructure; or

d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement

Policy 9.D.4 *The County shall require public and private development to address creeks and riparian corridors as follows:*

a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) shall be located to optimize resource protection. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;

b. Designate such easement or dedication areas (as described in a. above) as open space;

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

d. Provide recreation and public access near creeks consistent with other General Plan policies;

e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control

practices such as: 1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment off site; and/or 2) temporary vegetation is established sufficient to stabilize disturbed areas, and;

f. Provide for long-term creek corridor maintenance.

Policy 9.D.9 *The County shall encourage the preservation and protection of open space located in watersheds, which serve reservoirs due to its importance in the adequate performance of those reservoirs for their intended purposes.*

The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and within 5,000 feet of the reservoir shall be considered as having an immediate effect. For Martis Valley, this includes Martis Creek Lake.

Policy 9.D.10 *The County shall encourage the protection of flood plain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.*

Policy 9.E.3 *The County shall support the conservation of a healthy forest including outstanding areas of native vegetation, including, but not limited to, open meadows, riparian areas, Great Basin Sage Scrub, Mixed Coniferous Forest, Montane Chaparral, Montane Meadow, and Red Fir Forest.*

Policy 9.E.4 *The County shall encourage the preservation of landmark trees and major groves of native trees, which have special characteristics or serve an important function such as historical interest, visual screening, shading of creeks or slope stability. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.*

Policy 9.E.6 *The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.*

Policy 9.G.1 *The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:*

a. Wetland areas.

b. Stream environment zones.

c. Identified habitat of rare, threatened or endangered animals or plants.

d. Critical deer winter ranges, migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including all habitat types in the Martis Valley Plan area.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

g. Martis Lake and its tributaries.

Policy 9.G.2 *The County shall require the control of residual pesticides, herbicides, and related chemicals such as those used on golf courses, to prevent potential damage to water quality, vegetation, and wildlife.*

Policy 9.G.3 *The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.*

Policy 9.G.5 *The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.*

Policy 9.G.8 *The County shall cooperate with, encourage, and support the plans of other public agencies to acquire fee title or conservation easements to privately-owned lands in order to preserve important wildlife corridors and to provide habitat protection of California Species of Concern and state or federally listed rare, threatened, or endangered plant and animal species.*

Policy 9.G.9 *The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats; species and their habitats that have recreational value; wetland lacustrine and riverine habitats; wildlife migration corridors; and locally-important species/communities, such as wild trout.*

Policy 9.G.10 *Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites, prepared by a wildlife biologist or other qualified professional. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year, (if necessary) to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts.*

Implementation Program

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Natural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Land Development Departments/Planning Commission/Board of Supervisors
   Time Frame: On-going
   Funding: Application Fees

Mitigation Measures

The following mitigation measures would be added to the Community Plan as implementation programs under Section IX (Natural Resources) associated with the policies for "Fish and Wildlife Habitat" and would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

MM 4.9.11a The County shall require deer migration surveys for projects located within or adjacent to the 3 corridors identified in Figure 4.9-5 of the Martis Valley Community Plan Update EIR, as part of surveys required by Policy 9.G.10. The surveys shall define the extent of deer movement across the subject property and will refine the extent of the deer corridor onsite. If a deer migration corridor is identified, the corridor shall be maintained as open space. The exact width, design and amount of allowed disturbance (e.g., trails, recreation facilities, golf courses) in the corridor shall be based on the results of the survey and shall take into account connections with adjacent open space areas, vegetation and the seasonal cover and forage requirements of the migratory deer. The open space corridor shall be mapped and its design clearly identified.

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: Permit Fees

MM 4.9.11b The County shall require that subsequent projects designate building envelopes as the allowed area of disturbance on an individual parcel basis to maximize the preservation of existing vegetation. Where possible, contiguous stands of trees within development areas shall be preserved and incorporated into the project design.

Fencing shall be limited to the building envelope of the parcel and not along parcel lines. If fencing is required along a parcel boundary, only post and cable, or other fencing methods easily cleared by wildlife, shall be installed.

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: Permit Fees

Implementation of the above Community Plan policies, implementation program and mitigation measures would reduce impacts on wildlife movement to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

4.9.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION

SETTING

The cumulative setting is defined based on the distribution of local resident and migratory wildlife movement in Martis Valley. The Martis Valley cumulative setting for biological resources generally includes the Truckee portion of the Truckee River watershed, which extends from the outflow of Lake Tahoe to the California/Nevada state line and includes Placer County, Town of Truckee, and Nevada County. This takes into account the special-status species and their habitat found within the Plan area, including mountain yellow-legged frog, Lahontan cutthroat trout, migratory deer herds, raptors and other migratory birds, Sierra Nevada Red Fox, California Wolverine, Sierra Nevada Snowshoe Hare, Pacific Fisher, Sierra Nevada Mountain Beaver, and Pine Marten, and special-status bat species.

Table 3.0-1 and **Figures 3.0-4, 4.0-1** and **4.0-2** illustrate proposed and conceptual development projects in the Martis Valley area that along with development allowed under the Placer County General Plan, Town of Truckee General Plan, and Nevada County General Plan would contribute to cumulative biological resource impacts.

IMPACTS AND MITIGATION MEASURES

Impact 4.9.12 Loss of Special-Status Species and their Habitat, Interference with Wildlife Movement, and Fragmentation of Habitat

PP Implementation of the Proposed Land Use Diagram would contribute to the loss of habitat and forage lands, habitat degradation due to encroaching urbanization, direct and indirect impacts to sensitive species, habitat fragmentation, obstruction of movement corridors, and conflicts between wildlife and human activity. This would be a **cumulative significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would contribute to the loss of habitat and forage lands, habitat degradation due to encroaching urbanization, direct and indirect impacts to sensitive species, habitat fragmentation, obstruction of movement corridors, and conflicts between wildlife and human activity. This would be a **cumulative significant** impact.

AB Implementation of the Alternative 1 Land Use Map would contribute to the loss of habitat and forage lands, habitat degradation due to encroaching urbanization, direct and indirect impacts to sensitive species, habitat fragmentation, obstruction of movement corridors, and conflicts between wildlife and human activity. This would be a **cumulative significant** impact.

AC Implementation of the Alternative 2 Land Use Map would contribute to the loss of habitat and forage lands, habitat degradation due to encroaching urbanization, direct and indirect impacts to sensitive species, habitat fragmentation, obstruction of movement corridors, and conflicts between wildlife and human activity. This would be a **cumulative significant** impact.

PP Proposed Land Use Diagram

As proposed, the development of the Plan area, in conjunction with other future developments in the Town of Truckee and throughout the Martis Valley, would contribute to the ongoing loss of natural, undisturbed open space in the region resulting in a decline of biological resources and species diversity. The encroachment of urban areas into natural, relatively undisturbed open

space would directly impact special-status plant and wildlife species in Martis Valley and increased human use results in the degradation of natural undisturbed habitats. Road construction, site grading, and the construction of residential and recreational uses directly removes native plant species, removes habitat for wildlife, and increases the fragmentation of open space in the region effecting wildlife dispersal.

Cumulative development conditions in Martis Valley (including the Proposed Land Use Diagram) would result in the restriction of wildlife movement. In addition, ski terrain expansions at Northstar-at-Tahoe, the widening of SR 267, and the extension of trail systems within Martis Valley would have both direct and indirect impacts on biological resources. Cumulatively, these developments will contribute to the continuing fragmentation of the Martis Valley.

AA Existing Martis Valley General Plan Land Use Map

The Existing Martis Valley General Plan Land Use Map would result in contribute to cumulative biological resource impacts in Martis Valley in a manner similar to the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

The Alternative 1 Land Use Map would result in contribute to cumulative biological resource impacts in Martis Valley in a manner similar to the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

The Alternative 1 Land Use Map would result in contribute to cumulative biological resource impacts in Martis Valley in a manner similar to the Proposed Land Use Diagram.

Policies and Implementation Programs

New developmental projects in the Plan area would be required to adhere with policies and implementation programs of the Martis Valley Community Plan that are identified in Impacts 4.9.1 through 4.9.11, which would minimize cumulative biological resource impacts of the Proposed Land Use Diagram and Alternatives AA through AC.

Mitigation Measures

While previously identified policies and implementation programs within the Martis Valley Community Plan along with mitigation measures MM 4.9.3, MM 4.9.4, MM 4.9.5a and b, MM 4.9.6, MM 4.9.7, MM 4.9.8 and MM 4.9.11a and b would reduce the impacts of the Proposed Land Use Diagram and Alternatives AA, AB, and AC, these cumulative impacts are considered **significant and are unavoidable** given the extent of fragmentation and loss of habitat anticipated under cumulative conditions**.**

REFERENCES

Barbour, M. and Major, J. 1988. *Terrestrial Vegetation of California*. California Native Plant Society. Davis, CA. Special Publication Number 9.

California Department of Fish and Game (CDFG). 1984. *Loyalton-Truckee Deer Herd Management Plan Summary*. Rancho Cordova, CA.

California Department of Fish and Game (CDFG). January, 2001. Special Animals. Natural Diversity Data Base, Sacramento, CA.

California Department of Fish and Game (CDFG). January, 2001. Special Plants. Natural Diversity Data Base, Sacramento, CA.

California Natural Diversity Data Base. August, 2001. Data Base Record Search for Special-Status Species: Truckee, Martis Peak, Tahoe City, and Kings Beach quadrangles, August, 2001. California Department of Fish and Game, Sacramento, CA.

Gibson & Skordal, 1999. *Jurisdictional Delineation, Siller*. July 1999.

Glazner Environmental Consulting, 1999. *Biological Resources Assessment for the 480 acre Eaglewood Project*. September 30, 1999.

Hickman, J., ed. 1993. *The Jepson manual: Higher Plants of California*. University of California Press, Berkeley, CA.

Jennings, M. R. and M. H. Hayes. 1994. *Amphibian and Reptile Species of Special Concern in California*. California Department of Fish and Game. Rancho Cordova, CA.

Jones and Stokes. 2001. *Evaluation of Key Biological Resources on Hopkins Ranch, Placer County, CA*. Sacramento, CA.

Jones and Stokes, 2001. *Evaluation of Biological Resources on Siller Ranch*. November, 2001.

Pencovic, T. and Brown, C. 1990. *Truckee Bypass Deer Study*. Caltrans, District 3.

Placer County. 1960. Data from Brian Williams (Placer County Consultant).

Placer County. 1994. *Countywide General Plan: Final Environmental Impact Report V1*.

Placer County. 1999. *Lahontan II Project Final Environmental Impact Report: Vegetation, Wildlife, Wetlands*. Placer County, CA.

Placer County and Nevada County. 1974. *Martis Valley General Plan*.

Placer County and Nevada County. 1974. *Martis Valley General Plan: Technical Supplement and Environmental Impact Report*.

Skinner, M. and B. Pavlik. 1994. *Inventory of Rare and Endangered Vascular Plants of California*: CNPS Special Publication No. 1. California Native Plant Society. Sacramento, CA. Fifth Edition.

Tahoe National Forest (TNF). 1998. Wet Meadow Data.

Tahoe National Forest (TNF). (no date available). Mountain Yellow-legged Frog Records from the TNF.

Tahoe National Forest (TNF). (no date available). Goshawk Records from the TNF.

Tahoe National Forest (TNF). (no date available). Willow Flycatcher and Great Gray Owl Records from the TNF.

U.S. Fish and Wildlife Service (USFWS). 2001. *Endangered and Threatened Species that May Occur in or be Affected by Projects in the Kings Beach, Tahoe City, Truckee, and Martis Peak Quads*. Sacramento, CA.

USFWS, 1995. U.S. Fish and Wildlife Service. *Recovery Plan for Lahontan Cutthroat Trout*. January, 1995.

U.S. Forest Service (USFS) Remote Sensing Lab. 1997. *Vegetation Data*.

U.S. Geological Survey (USGS). 2000. *Lake Tahoe Data Clearinghouse*. http://blt.wr.usgs.gov/tahoe/groups. 05/18/00.

Zeiner D. C., W. F., Laudenslayer Jr., K.E., Mayer, and M. White, eds. 1988. *California's Wildlife Vol. I: Amphibian and Reptiles*. State of California: The Resource Agency, Department of Fish and Game, Sacramento, CA.

Zeiner D. C., W. F., Laudenslayer Jr., K.E., Mayer, and M. White, eds. 1990a. *California's Wildlife Vol. II: Birds*. State of California: The Resource Agency, Department of Fish and Game, Sacramento, CA.

Zeiner D. C., W. F., Laudenslayer Jr., K.E., Mayer, and M. White, eds. 1990b. *California's Wildlife Vol. III: Mammals*. State of California: The Resource Agency, Department of Fish and Game, Sacramento, CA.

PERSONAL COMMUNICATIONS

Jeff Finn, Biologist, California Department of Fish and Game. May 16, 2000 and August 1, 2001.

John Hiscox, Fisheries Biologist, California Department of Fish and Game. July 31, 2001.

Kris Boatner, District Wildlife Biologist, U.S. Forest Service Tahoe-Truckee Ranger District. August 1, 2001.

William Cowen, Fisheries Biologist, U.S. Fish and Wildlife Service. September 2001.

SECTION 4.10
CULTURAL AND PALEONTOLOGICAL RESOURCES

This section describes the potential impacts of the project on cultural resources within the Placer County segment of the Martis Valley area. This section also includes an assessment of significance for identified cultural resources and an evaluation of potential impacts to cultural resources that could result from implementation of the proposed project. Analysis in this section is based upon a literature review conducted for prehistoric and historic resources within the vicinity of the Plan area, and information obtained from a record search performed by the North Central Information Center for California Historical Resources.

4.10.1 EXISTING SETTING

PREHISTORIC BACKGROUND

In the broadest terms, the archaeological signature of the Truckee Basin consists of a trend from hunting-based societies in earlier times to populations that were increasingly reliant upon diverse resources by the time of historic contact. The gradual shift in characteristics may be attributed to factors such as paleoclimate, a shifting subsistence base, and demographic changes.

Some of the oldest archaeological remains reported for the Tahoe Region have been found in the Truckee River Canyon near Squaw Valley. These Pre-Archaic remains suggest occupation about 9,000 years ago. Other Pre-Archaic to Early Archaic occupation was documented at Spooner Lake near Spooner Summit overlooking Lake Tahoe, dating from about 7,000 years ago. The most intensive period of occupation in the region may have occurred at varying intervals between 500 and 4,000 years ago. The protohistoric ancestors of the Washoe, also of Late Archaic times, may date roughly from 500 years ago to historic contact in the early 1800's.

ETHNOGRAPHIC BACKGROUND

The Martis Valley area falls within the center of historic Washoe territory, with primary use by the northern Washoe. Washoe settlements are known to have existed in the Community Plan area. The Town of Truckee is on the site of a large Washoe village called *K'ubuna detde'yi'*. Below Truckee, at Trout Creek, was the village site of *Pele ma'lam detde'yi'*.

The Washoe are part of an ancient Hokan-speaking residual population, which has been subsequently surrounded by Numic-speaking intruders, such as the Northern Paiute (Jacobsen 1966). While they were an informal and flexible political collectivity, Washoe ethnography hints at a level of technological specialization and social complexity that was uncharacteristic of their surrounding neighbors in the Great Basin. A semi-sedentary existence and higher population densities, concepts of private property, and communal labor and ownership are reported and may have developed in conjunction with their residential and subsistence resource stability.

The ethnographic record suggests that during the mild season, small groups traveled through high mountain valleys collecting edible and medicinal roots, seeds and marsh plants. In the higher elevations, men hunted large game and trapped smaller mammals. The Truckee River and its tributaries were important fisheries year-round. Suitable toolstone was quarried at various locales. The Washoe have a tradition of making long treks across the Sierran passes for the purpose of hunting, trading and gathering acorns. These aboriginal trek routes, patterned after game trails, were often the precursors of historic and modern road systems. Archaeological evidence of these ancient subsistence activities is found along the mountain flanks.

While some Washoe trekked to distant places for desired resources, most groups circulated in the vicinity of their traditional habitation sites. They appear to have been less compelled in their subsistence pursuit to cover large expanses of land than was the case for other groups in the Great Basin, due to the large variety of predictable resources close at hand (d'Azevedo l986:472). Their relatively rich environment afforded the Washoe a degree of isolation and independence from neighboring peoples and may account for their long tenure in their known area of historic occupation. Even into the 20th century, the Washoe were not completely displaced from their traditional lands.

The contemporary Washoe have developed a Comprehensive Land Use Plan. It includes goals of reestablishing a presence within the Tahoe Sierra and revitalizing Washoe heritage and cultural knowledge, including the harvest and care of traditional plant resources and the protection of traditional properties within the cultural landscape. The Washoe regard all "prehistoric" remains and sites within the Truckee Basin as being associated with their history.

HISTORICAL BACKGROUND

Early Settlement

The history of the Truckee community began with the arrival of Joseph Gray, who built a stage station near the present-day downtown in l863. Gray was soon joined by a blacksmith named S. S. Coburn, and the fledgling settlement of Gray's Toll Station was renamed Coburn's Station. This tiny way station grew from two structures into a thriving town that accommodated emigrants, stagecoach travelers and freight wagons en route westward to California's gold fields and eastward to the Comstock Lode in Nevada. In 1868, Coburn's Station burned and the name was changed to Truckee. The completion of the transcontinental railroad in l868 gave rise to other developments in transportation, lumber, ice, agriculture and tourism, which were to become the essential economic bases of Truckee.

Throughout most of the 19th century, Truckee thrived on the related fields of lumber, railroading and ice. By the 1920s, this industrial economy and society had largely disappeared, due to the relocation of the train-switching yard to Roseville, the depletion of local timber supplies and the development of mechanical refrigeration. In its place, the community began to develop a recreation-based economy, boosted by the completion of a good state highway over Donner Summit. The 1960 Winter Olympics at nearby Squaw Valley secured Truckee's position as a center point for year-round recreation. In 1993, Truckee was incorporated as a Town.

Virtually all the Town of Truckee is considered moderately to extremely sensitive with regard to the presence of cultural resources. The downtown is home to a high concentration of structures that have historical significance. The area consisting of Donner Pass Road, Jibboom Street, Bridge Street, Church Street, and East and West River Street comprise the commercial and early residential area of Truckee. The downtown area is formed around the Southern Pacific railroad line that runs through the heart of Truckee. The Truckee station was an integral part of the first transcontinental railroad and became an important hub of train service for the western United States.

Transportation

Some of the first Euro American visitors to the Truckee area were members of the Stephens-Murphy-Townsend Party, who ascended the Truckee River in mid-November of l844. Subsequent emigrant travelers followed an alternate route to avoid the rugged Truckee River Canyon, leaving Nevada in the vicinity of Dog Valley and then angling back down to the Truckee River east of the route of

present-day State Route 89. This route later became known as the Truckee Route of the Emigrant Trail.

The Emigrant Trail was a route that thousands of people followed in order to reach California or Oregon. Between the years 1841 and 1869, it is estimated that 300,000 to 500,000 individuals traveled 2,000 miles across the continent to California or Oregon in search of a new life or gold. A portion of the Emigrant trail follows a route through the Truckee Basin. The trail passes through the Town of Truckee and continues toward Donner Lake. This area is where the ill-fated Donner Party was stranded during a harsh Sierra winter from 1846 to 1847.

In 1864, the Dutch Flat and Donner Lake Wagon Road (DFDLWR) was opened over Donner Pass. The road followed basically the same route through Truckee that the earlier emigrants had followed, entering the northeast end of the Town along a present-day dirt road that runs between the Old Truckee Cemetery and the Old Catholic Cemetery. This freight and passenger wagon road was situated near the proposed alignment of the Central Pacific Railroad (CPRR), as it was designed to aid in transporting supplies to points along the line. It formed the final link in a continuous freight and passenger road from Dutch Flat to the Comstock mines near Virginia City. Used as a wagon haul road until 1909, the DFDLWR was rebuilt as an auto and truck road between 1909 and 1915. This new road was renamed the "Lincoln Highway" in 1915, forming the Verdi-Truckee link in the nation's pioneer transcontinental automobile highway. In the 1920s, the Lincoln Highway was redesignated the `Victory Highway,' which subsequently became U.S. Highway 40 in 1925. Travel along Highway 40 was short-lived, as later that year the route was moved into the Truckee River Canyon. Today, US Highway 80 provides a vital east-west route over the Sierra-Nevada mountain range.

Logging

Logging was first initiated in the Martis Valley area after the discovery of the Comstock Lode in 1859. The Martis Valley area soon became one of the major lumbering centers. Intensive cutting within the project area commenced in 1863. Lumber mills were prevalent throughout the area with lumber mills located at Hobart, Truckee, in Martis Valley, and the Squaw Valley area. Sawmills owned by George Schaffer were scattered throughout the Martis Valley. The Schaffer's Mill Chairlift at Northstar is located near the site of one of his mills. Railroad lines were constructed to connect Truckee with the Hobart lumber mill. A narrow gauge line was also constructed between Truckee and Tahoe City to haul freight, forest products and tourists. Logging continued to be a major industry in the area until the 1920's.

Charcoal Production

Charcoal production formed an important adjunct to the lumber industry. The organization of Sisson, Crocker and Company was created in l866 at Truckee exclusively for the purpose of importing Chinese labor for railroad construction. With the completion of the railroad, the Chinese immigrants were channeled to the lumber industry, among other occupations. Such engagement forced immigrant Chinese into direct competition with Euro Americans. Subsequent anti-Chinese sentiment resulted in the initial expulsion of Chinese from Truckee in l878 and the ultimate demise of Truckee's Chinese community in 1886. Between those dates, the project area and adjoining lands were apparently under the ownership of Sisson, Crocker and Company, who employed large numbers of Chinese in the production of charcoal to supply the railroad and the smelting works of Nevada and Utah.

Grazing

The Martis Valley Community Plan area has historically been used for cattle grazing. The meadows provided feed for cattle herds from the Sacramento Valley during the hot summer months. The historic Joerger Ranch is located between Schaffer Mill Road and State Route 267 north of the Lahontan development.

Ice Production

Truckee played an important role as an ice production area for the transcontinental railroad from the 1880's until the early 1900's. Truckee was a vital railroad switching yard and the cold climate of the Martis Valley allowed for perishable goods on board trains to be packed with ice before being shipped east across Nevada or west toward Sacramento. The ice industry came to an abrupt halt with the introduction of mechanized refrigeration.

Recreation

Skis, which were once the only available means of winter transportation, are now a major form of winter recreation. "Snowshoe" racing, on skis 14 feet long, first became a popular sport during the 1860's. The Truckee basin contains several winter recreational resorts. Squaw Valley, the oldest ski operation in the area, was started in 1947, and was the home of the 1960 Winter Olympic Games. The Martis Valley Community Plan area contains the Northstar-at-Tahoe resort that provides skiing as well as year round recreational opportunities.

KNOWN CULTURAL RESOURCES IN THE PLAN AREA

Prehistoric Resources

The Martis Valley area is generally considered rich in cultural resources. While several prehistoric sites and resources have been identified, there is a high probability that many significant cultural resources remain undiscovered within the project region. A comprehensive cultural resources inventory was completed by the Placer County Department of Museums. Phase III of the Placer County Cultural Resources Inventory focused on unincorporated areas of the County, including Martis Valley. While this survey did not indicate that prehistoric resources had been located in the planning area, it is a well-known fact that the Martis Valley Community Plan area was home to the Washoe people. Prehistoric campsites, lithic scatters, and bedrock milling stations are known to be throughout the planning area. Many sensitive resource sites are adjacent to waterways and meadow areas.

A cultural resources record search was requested of the North Central Information Center (NCIC) at California State University, Sacramento. Using the information from the NCIC record search along with previous environmental impact reports for projects within the Martis Valley Community Plan area, the following prehistoric cultural resources have been identified in the Plan area.

The Gooseneck Ranch (Lahontan) Final Environmental Impact Report indicated that ten potentially sensitive sites occur within the project area. Of these ten culturally sensitive sites, the following nine sites are prehistoric in nature:

- GN2 consists of a small scatter of basalt flakes and one rhyolite bifacial core.
- GN3 is a small sparce scatter of lithic tools, primarily basalt.
- GN4 contains small basalt debitage, worked flakes, a kneeled surface, and an obsidian projectile point fragment.
- GN5 a large prehistoric campsite with midden and lithic material
- GN6 a small prehistoric campsite containing basalt debitage and an obsidian projectile point fragment.
- GN7 a small lithic scatter containing basalt cores, edge modified flakes, and debitage.
- GN8 a small lithic scatter of basalt debitage.
- GN9 contains a small prehistoric camp containing a midden and obsidian and basalt debitage.
- GN10 a large prehistoric campsite along Martis Creek.

The Lahontan II Environmental Impact Report indicated that five sites of potential historical or archaeological significance were located. Of these five sites, the following three have prehistoric significance:

- LHT-01 is a small bedrock milling station and lithic scatter along the eastern bank of a shallow drainage, containing 2 bedrock morter loci with a total of 5 pits in low basalt rocks.
- LHT-02 a sparse lithic scatter over the surface of an open meadow area near a shallow drainage.
- LHT-04 consists of a sparse lithic scatter adjacent to a major spring on the western margin of a shallow drainage.

The Cultural Resources Baseline Data for Northstar-at-Tahoe (KEA, 2001) indicated eight prehistoric sites within the Northstar-at-Tahoe project area. Most of the prehistoric remains consist of isolated artifacts such as single projectile points or flakes. The sections where the prehistoric resources were discovered exhibit relatively level ground and close proximity to at least seasonal water sources. Both of these features are consistently present on most prehistoric archaeological sites. Most of the terrain on the Northstar property is steep, rocky slope that is not attractive for a living environment, and consequently, was most likely infrequently occupied or visited by prehistoric peoples. The following resources were found to be prehistoric in nature on the Northstar-at-Tahoe property:

- (NS-32) Sawmill Flat Site I
- (NS-35) Sawmill Flat Site II
- (NS-36) Sawmill Flat Site III
- (NS-29) Sawmill Flat Site IV
- (NS-16) Middle Martis Creek Site I
- (NS-18) Middle Martis Creek Site II
- (NS-20) Middle Martis Creek Site III
- (NS-21) Middle Martis Creek Site IV

Historic Resources

Properties of historical importance in California are currently designated as significant resources in three State registration programs: State Historical Landmarks, Points of Historical Interest, and the California Register of Historic Places. Below is a list of three State Historical Landmarks that are within the region.

- No. 134 Donner Monument (or) Pioneer Monument: Located at Donner Memorial State Park, Old Highway 40 at Interstate 80 and Truckee exit, Truckee, the memorial commemorates the ill-fated Donner Party of California-bound emigrants, who wintered here in 1846-1847. Many of the party died of exposure and starvation.

- No. 780-6 First Transcontinental Railroad, Truckee: While construction on Sierra tunnels delayed Central Pacific, advance forces at Truckee began building 40 miles of track east and west of Truckee, moving supplies by wagon and sled. The Summit Tunnel was opened in December 1867. The line reached Truckee April 3, 1868, and the Sierra was conquered. Rails reached Reno June 19, 1868 and construction advanced eastward toward meeting with Union Pacific at the rate of one mile daily. On May 10,1869, the rails met at Promontory (Utah) to complete the first transcontinental railroad. The railroad is located at Southern Pacific Depot, 70 Donner Pass Road, Truckee.

- No. 724 Pioneer Ski Area of America, Squaw Valley: The VIII Olympic Games of 1960 commemorated a century of sport skiing in California and took place at Squaw Valley Sports Center, northeast corner of Blyth Olympic Arena Building, Squaw Valley Road, Squaw Valley. By 1860, the Sierra Nevada, particularly at the mining towns of Whiskey Diggings, Poker Flat, Port Wine, Onion Valley, LaPorte, and Johnsville, some 60 miles north of Squaw Valley, saw the first organized ski clubs and competition in the western hemisphere.

Within the region, there is one National Historic Landmark. Donner Camp located at the Donner Memorial State Park, National Register Number 66000218. This site is a memorial to the Donner party. In the winter of 1846-1847, a group of 89 California-bound emigrants led by Jacob and George Donner was trapped by the heavy snows of the High Sierra. Bitter cold and dwindling food supplies reduced the wagon train to a group of desperate individuals unable to cooperate, driven to terror and degradation. Four relief expeditions eventually rescued 47 of the party.

The Northstar-at-Tahoe North Lookout Ski Pod Project Final Environmental Impact Report indicates that the project area's likelihood to contain historic resources is considered moderately high. Sawmills, logging roads, skidways, and wood camps associated with logging are the principle historical sites. The Cultural Resources Baseline Data for Northstar-at-Tahoe prepared by KEA Environmental (March 2001) identifies historic resources on the Northstar-at-Tahoe property. In general, these features are located in two main areas near the eastern extent on Northstar property. One group of resources is located near the Middle Martis Creek drainage which includes several sections of logging roads, a cabin site, and sections of the Richardson Brothers railroad grade, which would have been associated with the Richardson Brothers logging operations. The second cluster of sites is found on Sawmill Flat near the Sawmill Flat Reservoir. Present in this area is a large section of the Richardson Brothers log chute, associated supply depots and two structures that may have been related to the logging operation or served as hunting cabins in the early years of the 20th century. The following are the identified historic resources in the Northstar-at-Tahoe area:

- (NS-1) Richardson Brothers Log Chute
- (NS-1 contd.) Richardson Brothers log chute & Railroad Grade
- (NS-2) Beaver Pond Aspen Carvings
- (NS-7) Richardson Brothers Railroad Grade
- (NS-4, NS-9) Logging Road Sections
- (NS-11) Terry's Cabin
- (NS-12) Terry's Cabin Stone Wall
- (NS-13) Sawmill Flat Cabins
- (NS-29) Sawmill Flat Historic Scatter, Site IV
- (NS-50) Backside Mine
- (NS-27) Middle Martis Mining Feature
- (NS-8, 9) Middle Martis Logging Roads
- (NS-24) Old Brockway Road

The Historic Brockway Road Grade has partial pavement remaining. This runs parallel to the present day Rt. 267 for approximately one-half mile before disappearing in road fill from present route.

The Gooseneck Ranch Final Environmental Impact Report indicated that ten potentially sensitive sites occur within the project area. Of these ten sites, one site had the potential to be an historic resource.

- GN1 contains historic materials and consists of a trash dump from the turn of the century.

The Lahontan II Environmental Impact Report indicated that five sites of potential historical or archaeological significance were located. Of the five sites, only one was historic in nature and upon further investigation, did not prove to be significant.

- LHT-05 includes a historic trash deposit on the edge of a wet meadow from approximately the 1950's.

The Siller Ranch Archaeological Investigations report (Pacific Legacy, 2002) indicated that there are three archaeological sites located within the Siller Ranch project boundaries. Of the three sites, only the Schaffer Mill site has historic significance. The Schaffer Mill site is eligible for inclusion in the CRHR due to its associate with the life of a person important in the history of Truckee.

- P-31-001158 is a historic water ditch or flume.
- FS 05-17-57-449 is a historic trash scatter.
- P-31-001142 (Schaffer Mill) is a historic mill site.

A cultural resources record search by North Central Information Center (NCIC) at California State University, Sacramento identified the historic settlement of Elizabethtown, which was established in the early 1860s as result of the discovery of gold and silver north of Lake Tahoe. Based on historical accounts, Elizabethtown only consisted of two to three houses and was abandoned by 1864 (NCIC, 2000).

NATIVE AMERICAN RESOURCES

A sacred lands search and a list of Native American contacts was requested from the Native American Heritage Commission. The sacred lands search did not identify any Native American cultural resources either within or near the currently proposed project area.

PALEONTOLOGICAL RESOURCES

Paleontology is defined as a science dealing with the life of past geological periods as known from fossil remains. Paleontological resources include fossil remains, as well as fossil localities and formations, which have produced fossil material in other nearby areas. This resource can be an important educational resource for the reasons mentioned before, and are nonrenewable once destroyed. The California Environmental Quality Act offers protection for these sensitive resources and requires that they be addressed during the EIR process.

The Martis Valley area has been under study from universities and academics from all over the country. The area consists of mostly settled volcanic flows that have been carved out by glaciation. The glaciation that occurred in the area thousands of years ago provides academics with potential for paleontological finds within the area. These finds are of particular concern and of great value since they contain data about our geologic past.

Known Occurrences of Paleontological Resources in the Region

While there have been some paleontological finds in the region, there have been no finds to date within the Martis Valley Community Plan area. In 1993, there was a finding of a mastodon[1] just north of the Martis Valley Community Plan area near Boca Reservoir in Nevada County. The mastodon is hypothesized to have originated from a more northerly location and was relocated in a glacier that slowly moved into the region.

Within Placer County, there have been four findings of paleontological significance. They have been discovered in the western part of the County, where it is more urbanized. The urbanization and development of this area is the impetus to these finds. The occurrences of paleontological finds within the Martis Valley Community Plan area will most likely be predicated by the future development. To date, there are no active digs within Martis Valley Community Plan area.

An analysis for the potential presence of paleontological resources was performed as part of the environmental review of the Lahontan II project, which is located within the western portion of the Community Plan area. The analysis determined that the presence of paleontological resources on the Lahontan II project was unlikely, and that preserved fossil remains would more likely occur in Pleistocene Nonmarine Sedimentary Rocks, fluvial and lacustrine deposits of gravel, sand, silt and clay (Placer County, 1999).

The paleontologic resource assessments of the Hopkins Ranch Project (August 26, 2001) and the Eaglewood Project (March 20, 2001) addresses paleontology and geology and the effects on

[1] Like the modern elephant, the mastodon was very large, with thick, sturdy legs; a huge head; tusks; hairy almost wooly body; and a flexible, muscular trunk.

each in the northwest section of the Martis Valley. This report outlines three specific geologic units in the Plan area that generally encompass land areas planned for development.

- Bald Mountain Olivine Latite (Qlbm) - This is one of approximately 20 volcanic flows within the Truckee area. There are no fossil occurrences reported from these volcanics, and due to the nature of their origin it is unlikely that any fossils will occur in them.

- Pleistocene nonmarine sedimentary rocks – Prosser Creek Alluvium (Qc, Qos, Qlpc)- This is a sedimentary unit composed of multiple facies including sandstones, siltstones and mudstones and was deposited in river-stream and lake environments. A record search of the paleontologic collections of the Museum of Paleontology, University of California, Berkeley indicated that no fossils have been collected from deposits mapped as Prosser Creek Alluvium or Pleistocene nonmarine within the Plan area. However, two terrestrial fossil vertebrate localities are recorded within 8 miles of the Plan area to the north of the Truckee River.

- Quaternary alluvium - This consists of unconsolidated gravels, sands, silts and muds that have accumulated in Recent to Sub-Recent time. There have not been any fossils or localities discovered in these deposits in the area. When fossils are found in this sediment, it is considered to be significant as it pertains to information about a time in the not to distant past.

4.10.2 REGULATORY FRAMEWORK

FEDERAL

The National Historic Preservation Act (NHPA), enacted in 1966, was an attempt to preserve the historical and cultural foundations of the American people. The congress found that historic properties significant to the Nation's heritage were being lost or substantially altered, often inadvertently. The preservation of this irreplaceable heritage was in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, benefits would be maintained and enriched for future generations of Americans.

The Advisory Council on Historic Preservation's implementing regulations, "Protection of Historic Properties" can be found in 36 Code of Federal Regulations (CFR) Part 800. The goal of the Section 106 review process under NHPA is to offer a measure of protection to sites, which are determined eligible for listing on the National Register of Historic Places. The criteria for determining National Register eligibility are found in 36 CFR Part 60. Recent amendments to the Act (1986 and 1992) and subsequent revisions to the implementation regulations have strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations only come into play in the private sector if the project requires a federal permit or if it uses federal money.

STATE

The California Register of Historic Resources (CRHR) serves as the authoritative guide to resources that are considered historic under the California Environmental Quality Act (CEQA). However, simply because a resource is not currently listed in the CRHR does not mean that it is not a historical resource. State historic preservation regulations affecting the Martis Valley Community

Plan include statutes and guidelines contained in the CEQA: Public Resources Code Sections 21083.2 and 21084.1 and Section 15064.5 of the CEQA Guidelines. CEQA requires lead agencies to carefully consider the potential effects of a project on historical resources. A "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript, which is historically or archaeologically significant (Public Resources Code Section 5020.1). Section 15064.5 of the CEQA Guidelines specifies criteria for evaluating the importance of cultural resources. Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to, museums, historical commissions, associations and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains and associated grave goods regardless of 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 5097.94f).

Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) including the following:

a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

b. Is associated with the lives of persons important in our past;

c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

d. Has yielded, or may be likely to yield, information important in prehistory or history.

CEQA emphasizes avoidance of archaeological and historical resources as the preferred means of reducing potential significant effects. If avoidance is not feasible, an excavation program or some other form of mitigation must be developed to mitigate the impacts.

LOCAL

Placer County General Plan

The Placer County General Plan identifies the County as having a rich cultural resource heritage that includes archaeological, historical, and paleontological sites and resources. The following Placer County General Plan goal details the County's policy on archaeology and cultural resources:

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

The Placer County General Plan contains several policies encouraging the inventory, protection, and interpretation of significant archaeological and historical resources. The proposed Community Plan policy document incorporates and refines these policies of the General Plan.

Martis Valley General Plan

The Martis Valley General Plan identifies the area as having a rich cultural significance recommends that prior to approval or implementation of any major projects, archaeological surveys should be completed. Efforts should also be made to enhance, preserve, and in some cases reconstruct known historical sites.

The Martis Valley General Plan contains the following policy related to cultural resources:

Environmental Resource Policies

13. Protection of archaeologic sites and enhancement of historic sites must be consistent and diligent.

4.10.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Cultural Resources

CEQA establishes statutory requirements for establishing the significance of archaeological resources (prehistoric-era) in Section 21083.2 and historical resources (historic-era) in Section 21084.1. Section 21083.2 defines a "unique archaeological resource" 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 any of 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) It 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."

Section 21084.1 of CEQA defines historical resources as those listed on or eligible for listing on the California Register. The two sections operate independently to ensure that significant potential effects on archaeological and historical resources are considered as part of a project's environmental analysis.

The CRHR establishes a third set of criteria for determining the significance of historical resources that by definition includes prehistoric-era and historic-era resources (the California State Register Bill, PRC 5020 *et seq.*). The CRHR establishes 50 years as the period in which sufficient time has passed to allow a scholarly perspective in understanding the historic importance of a resource. A historical resource must be significant at the local, State, or national level under one or more of the following four criteria:

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.

All sets of criteria must be addressed when evaluating the significance of archaeological and historical resources under CEQA. Resources that are not deemed significant through formal evaluation need not be considered further in the CEQA process. In practice, however, ascertaining that a resource is not "unique," not "important," and does not meet CRHR criteria may involve more research, analysis, and testing than if the resource could be avoided or standard mitigation measures adopted for project impacts.

Paleontological Resources

Development of land areas within the Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units would be considered a potentially significant impact given the potential of these geologic units to contain paleontological resources.

METHODOLOGY

A document review for cultural resources was conducted for the parcel by the North Central Information Center of the California Historical Resources Information System on July 30, 2000. The records search indicated that somewhat less than 15 percent of the Plan area has been previously surveyed by professional archaeologists. This amounts to about five sections of land out of the over thirty-eight sections included in the Community Plan area. The review also mentioned another nine to ten sections had been inspected by foresters but their work was not those administered by the California Department of Forestry and Fire Protection. The majority of the study area either had no field survey or was surveyed by non-professionals (NCIC, 2000).

In addition to information provided by the North Central Information Center, existing documents prepared for the Plan area were reviewed and utilized. For paleontological resources, geologic mapping for the Plan area was reviewed for the potential presence of geologic units that have potential to bear paleontological resources.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.10.1 Impacts to Prehistoric and Historic Resources in the Plan Area

PP Implementation of the Proposed Land Use Diagram could result in the disturbance of known and undiscovered prehistoric and historic resources in the Plan area. This would be a **potentially significant** impact.

AA Implementation of the existing Martis Valley General Plan Land Use Map could result in the disturbance of known and undiscovered prehistoric and historic resources in the Plan area. This would be a **potentially significant** impact.

AB Implementation of the Alternative 1 Land Use Map could result in the disturbance of known and undiscovered prehistoric and historic resources in the Plan area. This would be a **potentially significant** impact.

AC Implementation of the Alternative 2 Land Use Map could result in the disturbance of known and undiscovered prehistoric and historic resources in the Plan area. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

Under the Proposed Land Use Diagram could conflict with existing known cultural resources as well as areas considered cultural sensitive in the Plan area. These areas/resources are generally described above in Section 4.10.1 (Existing Setting). In addition to these "known" resource areas, there is the potential that there are undiscovered prehistoric and historic resources that would be encountered by future development. As noted by NCIC, less than 15 percent of the Plan area has been previously surveyed by professional archaeologists.

In addition to planned development under the Proposed Land Use Diagram, conceptual ski resort and recreation facility expansions by Northstar-at-Tahoe would result in further land disturbance and potential cultural resource impacts beyond what is currently anticipated by the Proposed Land Use Diagram. Potential County roadway improvements (including potential widening of SR 267 to four lanes) and trail extensions could also further contribute to significant impacts to prehistoric and historic resources.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result in the similar impacts to known and undiscovered prehistoric and historic resources in the Plan area as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result in the similar impacts to known and undiscovered prehistoric and historic resources in the Plan area as the Proposed Land Use Diagram. However, this alternative would avoid major development east of the Northstar-at-Tahoe resort community on the Sierra Pacific property that is currently proposed under the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result in the similar impacts to known and undiscovered prehistoric and historic resources in the Plan area as the Proposed Land Use Diagram. However, this alternative would avoid major development east of the Northstar-at-Tahoe resort community on the Sierra Pacific property that is currently proposed under the Proposed Land Use Diagram.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs would reduce potential cultural resource impacts.

Policy 8.A.1 *The County shall assist the citizens of Martis Valley in becoming active guardians of their community's cultural resources.*

Policy 8.A.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.*

Policy 8.A.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.*

Policy 8.A.4 *The County shall use, where feasible, incentive programs to assist private property owners in preserving and enhancing cultural resources.*

Policy 8.A.5 *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 database, to be maintained by the Department of Museums.*

Policy 8.A.6 *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.*

Policy 8.A.7 *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.*

Policy 8.A.8 *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.

Policy 8.A.9 *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

1. *Review development projects for compliance with the goals, policies and specific discussions contained in the Cultural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Board of Supervisors, Planning Commission, Land Development Departments
   Time frame: Ongoing
   Funding: Application fees

2. *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.*

   Responsible Agency/Department: Board of Supervisors, Planning Department, and Department of Museums
   Time frame: Ongoing
   Funding: Mitigation fees, Permit fees

3. *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.*

   Responsible Agency/Department: Planning Department, Department of Museums, Assessor
   Time frame: Ongoing
   Funding: Grants, General Fund

4. *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.*

   Responsible Agency/Department: Department of Museums
   Time frame: Ongoing
   Funding: General Fund, Grants

5. *Because of the moderate to high sensitivity rating for most of the Plan area, it is believed prudent that all future projects which will involve potential ground disturbance be requested to provide a project specific record search as a part of environmental review. Based on the results of the record search, specific*

recommendations for archaeological or historical field survey, archival research, architectural evaluations, etc., could be made. In most cases, a field survey may be required.

Responsible Agency/Department: Department of Museums/Planning Department
Time frame: On-going
Funding: Permit fees/mitigation fees

6. *Require site-specific studies for archaeological or historical sites within the federal government's definition of "historical context" in all instances where land development has the potential to have a detrimental impact on these sites.*

   Responsible Agency/Department: Department of Museums/Planning Department
   Time frame: On-going
   Funding: Permit fees/mitigation fees

7. *If, as a result of an archaeological or historical field survey, sites of significance are discovered, the sites should be made known to the Placer County Department of Museums and Placer County Historical Advisory Board. The Board may recommend a listing of the site with the State of California as a National Register nomination, a State Landmark nomination, or a Point of Historical Interest. Furthermore, all known sites should be brought to the attention of the Department of Museums' office whose staff and volunteers are currently conducting a cultural resource inventory throughout Placer County.*

   Responsible Agency/Department: Department of Museums/Planning Department
   Time frame: On-going
   Funding: Permit fees/mitigation fees

8. *In the event that Native American remains and/or associated grave goods are discovered at any time during project review or construction, the project proponent shall stop work (if during construction or excavation) and contact the County Coroner and the Department of Museums.*

   Responsible Agency/Department: Department of Museums/Planning Department
   Time frame: On-going
   Funding: Permit fees/mitigation fees

9. *It is important that all historical sites are protected from destruction or demolition. Therefore, avoidance/protection is preferred over recordation and destruction. The few remaining significant structures in the area should be protected by the existing owners or purchased by the appropriate public agencies.*

   Responsible Agency/Department: Department of Museums/Planning Department
   Time frame: On-going
   Funding: Permit fees/mitigation fees

<u>Mitigation Measure</u>

The following mitigation measure shall be incorporated into the Martis Valley Community Plan as a policy under Goal 8.A of the Martis Valley Community Plan. The following mitigation measure applies to the Proposed Land Use Diagram and Alternatives AA, AB and AC.

MM 4.10.1 The County shall require all new development to suspend construction activities and contact the County when any cultural resources (e.g., structural features, unusual amounts of bone or shell, human remains, artifacts, human remains, architectural remains or significant paleontological resources) are discovered. In the event cultural resources or paleontological resources are discovered, the County shall retain a qualified cultural resource specialist or paleontologist to assess the finds and develop mitigation measures for the protection, recordation, or removal of the cultural resources or paleontological resources. These measures may also include consultation with local Native American communities and the Native American Commission on cultural resource finds. If human remains are discovered, all work must stop in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 7050.5 of California's 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.

Implementation of the above mitigation measure and the related Community Plan policies and implementation programs would reduce cultural resource impacts to **less than significant**.

Impact 4.10.2 Paleontological Resource Impacts

PP Implementation of the Proposed Land Use Diagram would result in the disturbance of Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units, which have potential to contain paleontological resources. This would be a **potentially significant** impact.

AA Implementation of the existing Martis Valley General Plan Land Use Map would result in the disturbance of Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units, which have potential to contain paleontological resources. This would be a **potentially significant** impact.

AB Implementation of the Alternative 1 Land Use Map would result in the disturbance of Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units, which have potential to contain paleontological resources. This would be a **potentially significant** impact.

AC Implementation of the Alternative 2 Land Use Map would result in the disturbance of Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units, which have potential to contain paleontological resources. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

As previously described above, the northern and central portions of the Plan area are located within the Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units. These geologic units are considered to have a high paleontological resource sensitivity, especially given the discovery of Pleistocene fossil vertebrate specimens approximately eight miles north of the Plan area (Wagner, 2001). As shown in **Figure 3.0-5**, a

majority of the proposed development would be located within the northern and central portions of the Plan area. Potential County roadway improvements (including potential widening of SR 267 to four lanes) and trail extensions could also further contribute to significant impacts to paleontological resources.

AA Existing Martis Valley General Plan Land Use Map

Subsequent development under the Existing Martis Valley General Plan Land Use Map would result in the similar potential impacts to paleontological resources in the Plan area as the Proposed Land Use Diagram. As shown in **Figure 3.0-6**, a majority of the proposed development would be located within the northern and central portions of the Plan area. Potential County roadway improvements and (including potential widening of SR 267 to four lanes) and trail extensions could also further contribute to significant impacts to paleontological resources.

AB Alternative 1 Land Use Map

Subsequent development under the Alternative 1 Land Use Map would result in the similar potential impacts to paleontological resources in the Plan area as the Proposed Land Use Diagram. However, this alternative would avoid major development east of the Northstar-at-Tahoe resort community on the Sierra Pacific property that is currently proposed under the Proposed Land Use Diagram. As shown in **Figure 3.0-7**, a majority of the proposed development would be located within the northern and central portions of the Plan area. Potential County roadway improvements (including potential widening of SR 267 to four lanes) and trail extensions could also further contribute to significant impacts to paleontological resources.

AC Alternative 2 Land Use Map

Subsequent development under the Alternative 2 Land Use Map would result in the similar potential impacts to paleontological resources in the Plan area as the Proposed Land Use Diagram. However, this alternative would avoid major development east of the Northstar-at-Tahoe resort community on the Sierra Pacific property that is currently proposed under the Proposed Land Use Diagram. As shown in **Figure 3.0-8**, a majority of the proposed development would be located within the northern and central portions of the Plan area. Potential County roadway improvements (including potential widening of SR 267 to four lanes) and trail extensions could also further contribute to significant impacts to paleontological resources.

Policies and Implementation Program

The following Martis Valley Community Plan policies and implementation program would reduce potential impacts discussed regarding paleontological resources.

Policy 8.A.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.*

Policy 8.A.5 *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 database, to be maintained by the Department of Museums.

Policy 8.A.6 *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.*

Implementation Programs

1. *Review development projects for compliance with the goals, policies and specific discussions contained in the Cultural Resources Section and throughout the Plan.*

   Responsible Agency/Department: Board of Supervisors, Planning Commission, Land Development Departments
   Time frame: Ongoing
   Funding: Application fees

3. *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.*

   Responsible Agency/Department: Planning Department, Department of Museums, Assessor
   Time frame: Ongoing
   Funding: Grants, General Fund

5. *Because of the moderate to high sensitivity rating for most of the Plan area, it is believed prudent that all future projects which will involve potential ground disturbance be requested to provide a project specific record search as a part of environmental review. Based on the results of the record search, specific recommendations for archaeological or historical field survey, archival research, architectural evaluations, etc., could be made. In most cases, a field survey may be required.*

   Responsible Agency/Department: Department of Museums/Planning Department
   Time frame: On-going
   Funding: Permit fees/mitigation fees

Mitigation Measures

Implementation of Mitigation Measure MM 4.10.1 in addition to the above proposed Community Plan policies and implementation programs would mitigate this impact for the Proposed Land Use Diagram and Alternatives AA, AB and AC to **less than significant**.

4.10.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

SETTING

As identified in the database search conducted by the North Central Information Center (NCIC) for archaeological and cultural studies in the Martis Valley and previous environmental studies associated with development in the area, the Martis Valley area is known to be rich in cultural resources. While many prehistoric and historic sites and resources have been identified, the probability is high that many of these resources remain undiscovered and should be taken under consideration upon any grading, excavation, or construction. In addition to cultural resources, Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units are located throughout the Town of Truckee and Nevada County portions of Martis Valley. As noted in Section 4.10.1 (Existing Setting), paleontological resource discoveries have been made in Martis Valley north of the Truckee River.

Development of proposed projects and planned land uses within the Town of Truckee and Nevada County portions of the Martis Valley area (see **Table 3.0-1** and **Figures 3.0-3** and **3.0-4**) would contribute to potential conflicts with cultural resources.

IMPACTS AND MITIGATION MEASURES

Impact 4.10.3 Cumulative Impacts to Prehistoric and Historic Resources in the Martis Valley Area

PP Implementation of the Proposed Land Use Diagram in combination with proposed and planned development in the Martis Valley area could contribute to the disturbance of known and undiscovered prehistoric and historic resources in the Martis Valley area. This would be a **cumulative significant** impact.

AA Implementation of the existing Martis Valley General Plan Land Use Map in combination with proposed and planned development in the Martis Valley area could contribute to the disturbance of known and undiscovered prehistoric and historic resources in the Martis Valley area. This would be a **cumulative significant** impact.

AB Implementation of the Alternative 1 Land Use Map in combination with proposed and planned development in the Martis Valley area could contribute to the disturbance of known and undiscovered prehistoric and historic resources in the Martis Valley area. This would be a **cumulative significant** impact.

AC Implementation of the Alternative 2 Land Use Map in combination with proposed and planned development in the Martis Valley area could contribute to the disturbance of known and undiscovered prehistoric and historic resources in the Martis Valley area. This would be a **cumulative significant** impact.

PP Proposed Land Use Diagram

As described under Impact 4.10.1, development under development under the Proposed Land Use Diagram could conflict with existing known cultural resources as well as areas considered cultural sensitive in the Plan area. This would add to potential cultural resource conflicts from development in the Martis Valley (see **Table 3.0-1** and **Figures 3.0-3** and **3.0-4**), as well as from conceptual ski resort and recreation facility expansions by Northstar-at-Tahoe.

AA Existing Martis Valley General Plan Land Use Map

As described under Impact 4.10.1, development under development under the existing Martis Valley General Plan Land Use Map could conflict with existing known cultural resources as well as areas considered cultural sensitive in the Plan area similar to the Proposed Land Use Diagram. This would add to potential cultural resource conflicts from development in the Martis Valley (see **Table 3.0-1** and **Figures 3.0-3** and **3.0-4**), as well as from conceptual ski resort and recreation facility expansions by Northstar-at-Tahoe.

AB Alternative 1 Land Use Map

As described under Impact 4.10.1, development under development under the Alternative 1 Land Use Map could conflict with existing known cultural resources as well as areas considered cultural sensitive in the Plan area similar to the Proposed Land Use Diagram. This would add to potential cultural resource conflicts from development in the Martis Valley (see **Table 3.0-1** and **Figures 3.0-3** and **3.0-4**), as well as from conceptual ski resort and recreation facility expansions by Northstar-at-Tahoe.

AC Alternative 2 Land Use Map

As described under Impact 4.10.1, development under development under the Alternative 2 Land Use Map could conflict with existing known cultural resources as well as areas considered cultural sensitive in the Plan area similar to the Proposed Land Use Diagram. This would add to potential cultural resource conflicts from development in the Martis Valley (see **Table 3.0-1** and **Figures 3.0-3** and **3.0-4**), as well as from conceptual ski resort and recreation facility expansions by Northstar-at-Tahoe.

Policies and Implementation Programs

Martis Valley Community Plan policies and implementation programs would reduce the Community Plan's contribution to potential cultural resource impacts are identified under Impact 4.10.1.

Mitigation Measure

Implementation of Mitigation Measure MM 4.10.1 in addition to the proposed Community Plan policies and implementation programs would mitigate this cumulative impact for the Proposed Land Use Diagram and Alternatives AA, AB and AC to **less than significant**.

Impact 4.10.4 Cumulative Impacts to Paleontological Resource Impacts in the Martis Valley Area

PP Implementation of the Proposed Land Use Diagram in combination with proposed and planned development in the Martis Valley area could contribute to the loss of paleontological resources in the Martis Valley area. This would be a **cumulative significant** impact.

AA Implementation of the existing Martis Valley General Plan Land Use Map in combination with proposed and planned development in the Martis Valley area could contribute to the loss of paleontological resources in the Martis Valley area. This would be a **cumulative significant** impact.

AB Implementation of the Alternative 1 Land Use Map in combination with proposed and planned development in the Martis Valley area could contribute to the loss of paleontological resources in the Martis Valley area. This would be a **cumulative significant** impact.

AC Implementation of the Alternative 2 Land Use Map in combination with proposed and planned development in the Martis Valley area could contribute to the loss of paleontological resources in the Martis Valley area. This would be a **cumulative significant** impact.

PP Proposed Land Use Diagram

As described under Impact 4.10.2, development under the Proposed Land Use Diagram could result in the loss of paleontological resources in the Plan area as a result of placing development within the Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units. This would add to potential paleontological resource impacts from development in the Martis Valley (see **Table 3.0-1** and **Figures 3.0-3** and **3.0-4**).

AA Existing Martis Valley General Plan Land Use Map

As described under Impact 4.10.2, development under the existing Martis Valley General Plan Land Use Map could result in the loss of paleontological resources in the Plan area as a result of placing development within the Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units similar to the Proposed Land Use Diagram. This would add to potential paleontological resource impacts from development in the Martis Valley (see **Table 3.0-1** and **Figures 3.0-3** and **3.0-4**).

AB Alternative 1 Land Use Map

As described under Impact 4.10.2, development under the Alternative 1 Land Use Map could result in the loss of paleontological resources in the Plan area as a result of placing development within the Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units similar to the Proposed Land Use Diagram. This would add to potential paleontological resource impacts from development in the Martis Valley (see **Table 3.0-1** and **Figures 3.0-3** and **3.0-4**).

AC Alternative 2 Land Use Map

As described under Impact 4.10.2, development under the Alternative 2 Land Use Map could result in the loss of paleontological resources in the Plan area as a result of placing development within the Pleistocene nonmarine sedimentary rocks (Prosser Creek Alluvium) and Quaternary alluvium geologic units similar to the Proposed Land Use Diagram. This would add to potential paleontological resource impacts from development in the Martis Valley (see **Table 3.0-1** and **Figures 3.0-3** and **3.0-4**).

Policies and Implementation Program

Martis Valley Community Plan policies and implementation programs would reduce the Community Plan's contribution to potential paleontological resources impacts are identified under Impact 4.10.2.

Mitigation Measures

Implementation of Mitigation Measure MM 4.10.1 in addition to the proposed Community Plan policies and implementation programs would mitigate this cumulative impact for Proposed Land Use Diagram and Alternatives AA, AB and AC to **less than significant**.

REFERENCES

KEA Environmental. March 1, 2001. *Cultural Resources Baseline Data for Northstar-at-Tahoe*. Sacramento, California.

NCIC, 2000. North Central Information Center. July 30, 2000. California Historical Resources Information System Record Search for the Martis Valley Plan. Department of Anthropology, Sacramento, California.

Pacific Legacy, Inc. July 2001. *Archaeological Investigations for the Hopkins Ranch Residential Development*. Cameron Park, California.

Pacific Legacy, 2002. Pacific Legacy, Inc. January 2002. *Archaeological Investigations for the Siller Ranch Residential Development*. Cameron Park, California.

Placer County. 1994. *Countywide General Plan Policy Document*. Placer County Planning Department, Auburn, California.

Placer County. 1994. *General Plan Background Report Volume II*. Placer County Planning Department, Auburn, California.

Placer County. 1993. *Gooseneck Ranch Final Environmental Impact Report*. Placer County Planning Department, Auburn, California.

Placer County. 1999. Lahontan II Final Environmental Impact Report. Placer County Planning Department, Auburn, California.

Placer County. 1975. *Martis Valley General Plan*. Placer County Planning Department, Auburn, California.

Placer County. 1999. *Village at Squaw Valley USA Draft Environmental Impact Report*. Placer County Planning Department, Auburn, California.

Town of Truckee. 1997. *Downtown Truckee Specific Plan*. Town of Truckee Planning Department, Town of Truckee, California.

Town of Truckee. 1996. *Town of Truckee General Plan*. Town of Truckee Planning Department, Town of Truckee, California.

Town of Truckee. 2000. *Planned Community - 2 Specific Plan*. Town of Truckee Planning Department, Town of Truckee, California.

Wagner & Associates. August 2001. *Paleontologic Resource Assessment of the Hopkins Ranch Project*. Placer County, California.

March 2001. *Paleontologic Resource Assessment of the Eaglewood Project*. Placer County, California.

SECTION 4.11
PUBLIC SERVICES

This section of the Draft EIR includes an assessment of public services and an evaluation of potential impacts to public services that could result from implementation of the Martis Valley Community Plan. Public services include: fire protection, emergency medical services, law enforcement, schools, water, wastewater, parks and recreation, and other associated services.

4.11.1 FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

4.11.1.1 EXISTING CONDITIONS

The Truckee Fire Protection District (TFPD), the California Department of Forestry and Fire Protection (CDF), and the Northstar Community Services District (CSD) provide fire protection services in the Plan area. The TFPD provides residential fire protection and emergency services to the Plan area from their closest fire station, which is located in the Town of Truckee. The CDF provides wild fire protection to undeveloped forested areas of the Sierra Nevada, including the Plan area. The CDF is largely concerned with the prevention and control of wildland fires, and deterring their spread into developed areas. Although the CDF does not normally respond to structure fires, the Department provides protection to structures threatened by forest fires. The Northstar Community Services District provides fire protection for Northstar. Through a mutual aid agreement, a number of other sources provide fire protection assistance. These other sources include U.S. Forest Service, and North Tahoe F.P.D., among others.

TRUCKEE FIRE PROTECTION DISTRICT (TFPD)

The Truckee Fire Protection District provides services in the areas of fire prevention, fire suppression, emergency medical care and/or transportation, assorted rescue services, and public education. The Plan area is primarily a "dual jurisdiction" with Truckee Fire Department as the primary fire department and CDF providing wildland fire services and structural fire support (Rinella, 2001). TFPD serves an area of approximately 66 square miles, encompassing areas of Placer County, Nevada County, and the Town of Truckee. **Figure 4.11-1** shows the TFPD boundaries that are roughly Donner Summit to Nevada State Line, Highway 89 north to Sierra County Line, Highway 89 south to Cabin Creek, and State Route 267 to Northstar Drive. The Truckee Fire Protection District's service area and sphere of influence do not include the area of Martis Valley east of State Route 267 south of the Truckee-Tahoe Airport, the Northstar-at-Tahoe community, or the areas southwest, south and southeast of Northstar-at-Tahoe, including sections 21, 22, 23, 24, 25,26, 27, 28, 33, 34, and 35 of Township 17 North, Range 17 East; sections 30 and 31 of Township 17 North, Range 18 East; sections 2, 3, 4, 5, 6, 7, 8, and 9 of Township 16 North, Range 17 East; and sections 1, 2, 3, 10, 11, and 12 of Township16 North, Range 16 East. This area is currently undeveloped and therefore would fall within the CDF service area. However, if this area were to be developed, TFPD or CSD would need to expand their service area and sphere of influence to include the area. This action would require approval from LAFCO.

The TFPD consists of six fire stations throughout Placer and Nevada Counties. In total, TFPD has eight engines and four ambulances. The District has 25 full-time staff and 15 part-time staff, of which seven are volunteers. In 2000, TFPD constructed a new station that is located at Truckee-Tahoe Airport Road and Airshow Road within the Plan area. With this advantageous location, response times are typically between 3 and 4 minutes within the Martis Valley Community Plan area (Engler, 2001).

TFPD's new station in Truckee is capable of providing current and future fire protection services within the Plan area and the entire bi-county Fire District. This station was built to accommodate future development allowed under the 1975 Martis Valley General Plan. Currently, the station is manned full-time and operates one engine and one ambulance. TFPD recently updated their sphere of influence with LAFCO and does not anticipate any increase in their service area or require any additional facilities to accommodate future development in their service area (Terwilliger, 2001). Funding for TFPD comes entirely from property tax revenue (Engler, 2001).

NORTHSTAR COMMUNITY SERVICES DISTRICT/NORTHSTAR FIRE DEPARTMENT (CSD)

This Northstar Community Services District (CSD) covers six square miles and has a seasonal service population ranging from 500 to 18,000. The Northstar Fire Department, which is part of CSD, has one fire station. This station is located north of the intersection of Northstar Drive and Big Springs Drive within the Northstar-at-Tahoe resort area and is staffed by eight full-time and 20 part-time personnel. At least 90 percent of the staff is qualified as Emergency Medical Technician I (EMT I). This department operates three pumper trucks and one ladder truck. Response times are typically within four minutes because of its location within Northstar-at-Tahoe. Funding for CSD comes entirely from property tax revenue (Bartolini, 2001).

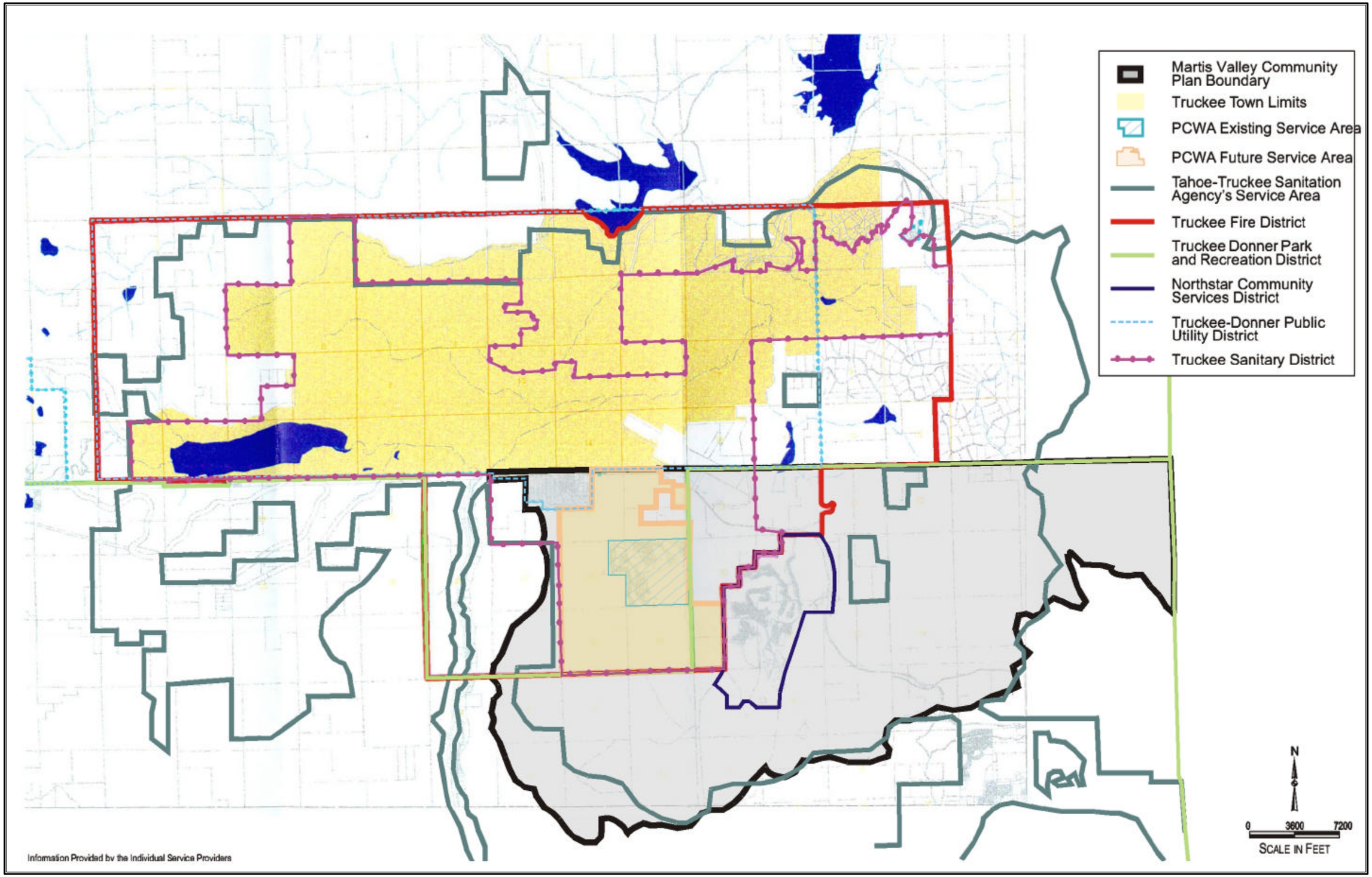
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION (CDF)

During the fire season (May 15 to November 1), the California Department of Forestry and Fire Protection Services (CDF) maintains two engines at the new Truckee Fire Protection District station, also called the "Martis Valley Fire Station," which is located near the Truckee-Tahoe Airport. The Martis Valley Fire Station currently contains both the CDF station, "Station 50," and the Truckee Fire Department station, "Station 96". CDF primarily deals with wildland fire hazards in the area and the Truckee Fire Department and CSD provide protection for structural fires. CDF also responds to structural fires in emergency situations as part of their mutual aid agreement with TFPD, CSD, and the U.S. Forest Service. From July 1 to October 15, CDF staffs the Lookout for three days a week with volunteers. CDF would ultimately like to provide daily staffing in the Lookout during fire season (Rinella, 2001).

The CDF service area includes Cisco Grove east to the Nevada state line, and the area stretching five miles north of Truckee to the area 10 miles south of Truckee. CFD has four staff members at their Truckee station, including the Battalion Chief who is present at the facility four days a week. Within the Plan area, CDF's response time is five minutes or less. Both fire engines are "type 3" and have a 500 gallon per minute (gpm) flow. One of the engines has 4-wheel drive with a 500-gallon capacity. The second engine has 2-wheel drive with a 650-gallon capacity (Rinella, 2001).

CDF is funded entirely by the State, and does not charge a development fee for the extension of fire protection services. Additionally, CDF can be contracted by the Truckee Fire Department to provide fire protection services throughout the winter (non-fire) season (Rinella, 2001).

CDF recommends several provisions for new development projects, including: 1) implementation and management of a fuel reduction zone along project boundaries; 2) reduction of fuel loading over the entire project; 3) maintenance in perpetuity of the fuel reduction zone; 4) recordation of the fuel reduction zone as property owner's association property; 5) verification by the property owner's association of its responsibility to maintain the fuel reduction zone; 6) use of noncombustible building materials.



PMC

FIGURE 4.11-1
MARTIS VALLEY SERVICE DISTRICTS

4.11.1.2 REGULATORY FRAMEWORK FOR FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

STATE

California Department of Forestry

The state adopted fire protection regulations to establish minimum wildfire protection standards in conjunction with building, construction, and development in state responsibility areas, which includes all of the California Department of Forestry service responsibility areas within the Martis Valley Community Plan area. The regulations do not apply to existing structures, roads, streets, and private lanes, or facilities; however, they do apply to the permitting or approval of new parcels. The regulations include provisions for emergency access, road width, roadway surface, roadway grades and radius, roadway turnarounds, signage, one-way road designs, gate entrances, and emergency fire use and fuel breaks and greenbelts. These requirements reduce the potential for wildland fires, decrease response times, and improve firefighters' chances of extinguishing wildland fires.

Pursuant to California Public Resources Code Section 4125 et seq., commonly known as the State Fire Responsibility Act, the State Board of Forestry classifies all lands within the State of California based on certain factors. Examples of these factors include cover, beneficial use of water from watersheds, probable damage from erosion, and fire risks and hazards. Next, the State Board of Forestry determines those areas for which the financial responsibility of preventing and suppressing fires is primarily the responsibility of the State of California. The prevention and suppression of fires in all areas that are not within a state responsibility area (SRA) becomes primarily the responsibility of the local or federal agencies, as applicable.

State Responsibility Areas include those lands that are:

- Covered wholly or in part by forests or by trees producing or capable of producing forest products.
- Covered wholly or in part by timber, brush, undergrowth, or grass, whether of commercial value or not, which protect the soil from excessive erosion, retard runoff of water or accelerate water percolation, if such lands are sources of water which is available for irrigation or for domestic or industrial use.
- Located in areas principally used or useful for range or forage purposes and are contiguous to the lands described above.

State Responsibility Areas do not include those lands that are:

- Owned or controlled by the federal government or any agency of the federal government.
- Located within the exterior boundaries of any city, except a city and county with a population of less than 25,000 if, at the time the city and county government is established, the county contains no municipal corporations.
- Located within the State but do not come within any of the classes specifically described as being included.

LOCAL

Martis Valley General Plan

The following policy, intended as a guideline and a directive to be used and understood by County staff, legislative bodies, advisory groups, and private citizens, concerns outdoor recreation as it relates to the Martis Valley and the valley's future development:

Community Development and Transportation Policies

Policy 19 A fire safe plan must be prepared on each development to assure protection of both man and the environment. Such a plan must take into consideration the existing fire fighting facilities and the potential of forming an overall fire protection district for the Martis Valley area.

Placer County General Plan

The Placer County General Plan includes policies requiring new development to provide new fire protection services and to incorporate fire resistance and fire hazard reduction measures into their design. These policies also promote increased education and promotion of fire prevention programs, and improvements in fire protection agency service and coordination. Because of physical constraints imposed by the topography and vegetation in high fire hazard areas, as well as inadequate access, some existing and new rural residences located in remote or isolated areas would continue to be exposed to unavoidable risk from wildland fires.

Placer County General Plan Policies

The Placer County General Plan includes the following policies pertaining to fire protection:

Policy 4.I.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):

- ISO 4 in urban areas
- ISO 6 in suburban areas
- ISO 8 in rural areas

Policy 4.I.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):

- 4 minutes in urban areas
- 6 minutes in suburban areas
- 10 minutes in rural areas

Policy 4.I.3 The County shall require new development to develop or fund fire protection facilities, personnel, and operations and maintenance that, at a minimum, maintain the above service level standards.

Policy 4.I.4 The County shall work with local fire protection agencies to identify key fire loss problems and design appropriate fire safety education programs to reduce fire incidents and losses.

Policy 4.I.6 The County shall continue to promote standardization of operations among fire protection agencies and improvement of fire service levels.

Policy 4.I.7 The County shall maintain and strengthen automatic aid agreements to maximize efficient use of available resources.

Policy 4.I.8 The County shall work with local fire protection agencies to maintain a pre-fire planning program with selected high-risk occupancies reviewed at least annually.

Policy 4.I.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.

Policy 4.I.11 The County shall encourage local fire protection agencies to provide and maintain advanced levels of emergency medical services (EMS) to the public.

The proposed Martis Valley Community Plan policy document contains goals, policies and implementation programs that are generally consistent with the policy provisions of the Placer County General Plan.

4.11.1.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A public services or utilities impact is considered significant if implementation of the project would result in the following:

1) Increase the demand for additional personnel, equipment, or facilities, and/or results in a negative effect that impairs the ability of the service provider to maintain an acceptable level of service for fire protection and emergency services.

METHODOLOGY

Evaluation of potential fire service impacts of the project was based on consultation with the fire protection and emergency service providers in the Plan area, including the Truckee Fire Protection District, the California Department of Forestry, and the Northstar Community Services District, as well as review of the existing Martis Valley General Plan, Martis Valley Community Plan, and the Placer County General Plan.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.11.1.1 Fire Protection and Emergency Medical Services

PP Implementation of the Proposed Land Use Diagram would increase the population of the fire protection and emergency medical services providers' service area. The existing facilities, personnel and equipment are sufficient to accommodate the buildout conditions associated with this land use map. Additionally, the existing funding mechanisms are sufficient to pay for increased impacts on services. However, proposed development associated with the Proposed Land Use Diagram are located outside of Truckee Fire Protection District and the Northstar CSD's service areas. The areas that

would be located outside of the fire protection districts' service areas include: sections 21, 27, 33 and 34 of Township 17 North, Range 17 East. This would result in a **significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would increase the population of the fire protection and emergency medical services providers' service area. The existing facilities, personnel and equipment are sufficient to accommodate the buildout conditions associated with this alternative. Additionally, the existing funding mechanisms are sufficient to pay for increased impacts on services. However, proposed development associated with Alternative AA are located outside of Truckee Fire Protection District and the Northstar CSD's service areas. The areas that would be located outside of the fire protection districts' service areas include: sections 21, 26, 27, 28, 33, 34 and 35 of Township 17 North, Range 17 East; and sections 4, 5, 8 and 9 of Township 16 North, Range 17 East. This would result in a **significant** impact.

AB Implementation of the Alternative 1 Land Use Map would increase the population of the fire protection and emergency medical services providers' service area. The existing facilities, personnel and equipment are sufficient to accommodate the buildout conditions associated with this alternative. Additionally, the existing funding mechanisms are sufficient to pay for increased impacts on services. However, proposed development associated with Alternative AB are located outside of Truckee Fire Protection District and the Northstar CSD's service areas. The areas that would be located outside of the fire protection districts' service areas include sections 21 and 28 of Township 17 North, Range 17 East. This would result in a **significant** impact.

AC Implementation of the Alternative 2 Land Use Map would increase the population of the fire protection and emergency medical services providers' service area. The existing facilities, personnel and equipment are sufficient to accommodate the buildout conditions associated with this alternative. Additionally, the existing funding mechanisms are sufficient to pay for increased impacts on services. However, proposed development associated with Alternative AC are located outside of Truckee Fire Protection District and the Northstar CSD's service areas. The areas that would be located outside of the fire protection districts' service areas include sections 21 and 28 of Township 17 North, Range 17 East. This would result in a **significant** impact.

PP Proposed Land Use Diagram

Implementation of the Proposed Land Use Diagram would result in up to 9,220 residential units, as well as office, commercial and recreational uses and facilities. According to Truckee Fire Protection District, they are equipped for buildout of the Plan area under the Existing Martis Valley General Plan Land Use Map, which has more development potential than the Proposed Land Use Diagram. TFPD has stated, "that there will be no increased impact on the provision of fire services in this region as it pertains to the development of facilities in the region" (Terwilliger, 2001). CDF and Northstar Community Services District (CSD) provide only limited fire protection services within the Plan area. CDF and CSD may experience impacts as a result of development under this scenario; however, it is likely that TFPD would compensate for these potential impacts and deficits as part of their mutual aid agreement. Truckee Fire Protection District has fire protection requirements and standards for new development projects, including fire hydrants, fire flow, access and roadway length, which would mitigate the increased demand for fire protection services. CDF also has development standards such as fuel modification zones. Funding for TFPD comes from property taxes and development mitigation fees, Northstar CSD receives funding from property taxes, and CDF is funded by the state. Some of the money

received from these sources is used to pay for future facilities and equipment as needed. CDF does not provide fire protection for structural fires, except on rare occasions. Therefore, any development located outside of a service area would not receive adequate fire protection and emergency medical services. The following proposed Community Plan policies, existing fees, and capacity of TFPD to serve the developed area would help mitigate the impacts on fire protection and emergency services. The existing funding mechanisms would adequately pay for the increased impacts on the fire and emergency medical service providers; however, the Proposed Land Use Diagram would locate residential uses outside of existing service areas, as shown on **Figure 4.11-1,** including sections 21, 27, 33 and 34 of Township 17 North, Range 17 East (Waddle Ranch and the Sierra Pacific property).

AA Existing Martis Valley General Plan Land Use Map

Implementation of the Existing Martis Valley General Plan Land Use Map would result in up to 11,668 residential units, as well as office, commercial and recreational uses and facilities. Like the Proposed Land Use Diagram, this alternative would increase the demand for fire protection and emergency services in the Plan area. This alternative proposes residential development under this alternative in areas that are outside of the TFPD and CSD's service areas, as shown on **Figure 4.11-1**, including sections 21, 26, 27, 28, 33, 34 and 35 of Township 17 North, Range 17 East (Waddle Ranch, Sierra Pacific property, and the small ownership area east of SR 267); and sections 4, 5, 8 and 9 of Township 16 North, Range 17 East (area along the southern edge of the Plan area, west of SR 267). Alternative AA has a more intense land use pattern than the Proposed Land Use Diagram. The Existing Martis Valley General Plan locates more development outside of the TFPD and CSD service areas in locations that are not currently developed, which would require additional fire and emergency medical services than the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Implementation of Alternative 1 Land Use Map would result in up to 10,311 residential units, as well as office, commercial and recreational uses and facilities. Like the Proposed Land Use Diagram, this alternative would increase the demand for fire protection and emergency services in the Plan area. This alternative would have more of an impact on fire protection services than the Proposed Land Use Diagram because of the increased number of residential units, commercial and recreational uses. The Alternative 1 Land Use Map proposes residential development along State Route 267 in an area that is located outside of the TFPD and CSD service areas. This area includes sections 21 and 28 of Township 17 North, Range 17 East (Waddle Ranch). Currently this area is served by CDF, as the land is undeveloped forest. Because development associated with Alternative AB would be located outside of TFPD and CSD's service areas, additional fire and emergency medical services would be necessary. However, compared with the Proposed Land Use Diagram, this alternative would not result in as much developed land outside of the TFPD and CSD service areas, as this alternative does not propose residential and ski-based/tourism/commercial uses in the Sierra Pacific property.

AC Alternative 2 Land Use Map

Implementation of Alternative 2 Land Use Map would result in up to 7,956 residential units, as well as office, commercial and recreational uses and facilities. This alternative would increase the demand for fire protection and emergency services in the Plan area. Like Alternative AB, this alternative proposes residential development along State Route 267 in an area that is located outside of the TFPD and CSD service areas. This area includes sections 21 and 28 of Township 17 North, Range 17 East (Waddle Ranch). Currently this area is served by CDF, as the land is

undeveloped forest. Because the proposed development would be located outside of a service area, this would require additional fire and emergency medical services. Like the Alternative 1 Land Use Map, this alternative would not result in a residential and commercial (ski-based/tourism) land use along the east side of SR 267 in the Sierra Pacific Property. Therefore, this alternative would have less development located outside of existing service areas than the Proposed Land Use Diagram.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs in Section VI (Public Facilities and Services) would assist in reducing potential impacts discussed regarding consistency of the project with planning documents applicable to the Plan area.

Policy 6.H.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.*

Policy 6.H.4 *The County shall work with the Truckee Fire Protection District, the Northstar Community Services District, and the California Department of Forestry and Fire Protection to identify key fire loss problems and design appropriate fire safety education programs to reduce fire incidents and losses.*

Policy *6.H.5* *The County shall work with the Truckee Fire Protection District, the Northstar Community Services District, and the California Department of Forestry and Fire Protection to implement ordinances to control fire losses and fire protection costs through continued use of automatic fire detection, control, and suppression systems.*

Policy 6.H.7 *The County shall encourage Truckee Fire Protection District and Northstar CSD to maintain and strengthen mutual aid and automatic aid agreements to maximize use of closest available resources.*

Policy 6.H.14 *The County shall refer development proposals in the unincorporated county to the appropriate local fire agencies for review for compliance with fire safety standards. If dual responsibility exists, then both agencies shall review and comment relative to their area of responsibility. If standards and different or conflicting, the more stringent standards shall be applied.*

Implementation Programs

1. *Review development projects for compliance with the goals, policies and specific discussions contained in the Public Facilities and Services section and throughout the Plan.*

   Responsible Agency/Department: Board of Supervisors, Planning Commission, Land Development Departments
   Timeframe: Ongoing
   Funding: Application Fees

2. *The County, in consultation with service providers, shall establish thresholds beyond which new residential development will be restricted until adequate public services and facilities are provided. The extent of development limitations should reflect the severity of the service and facility needs.*

   Responsible Agency/Department: Public Works Department, Facility Services Department, Special Districts, Planning Department
   Timeframe: Ongoing
   Funding: General Fund

4. *The County shall continue to require developers to obtain will-serve letters from all service providers of public facilities and services to new development.*

   Responsible Agency/Department: Project Proponents
   Timeframe: Ongoing (letters to be provided prior to final project approval)
   Funding: N/A

Mitigation Measure

The following mitigation measure would apply to the Proposed Land Use Diagram and Alternatives AA, AB and AC as a new policy in Section VI (Public Facilities and Services) under Goal 6.I in the proposed Community Plan.

MM 4.11.1.1 The County shall require that property currently located outside of the Truckee Fire Protection District or Northstar CSD's service areas be annexed into 1 of the fire districts prior to approval of any entitlement that allows development to occur within these sections.

Implementation of the above mitigation measure and proposed policies and implementation programs would mitigate impacts associated with fire protection and emergency medical services within the Plan area to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB and AC.

Impact 4.11.1.2 Wildland Fire Hazards

PP Implementation of the Proposed Land Use Diagram would locate homes and structures in wooded and diverse terrain, which would expose residents to wildland fire hazards. This would be a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would locate homes and structures in wooded and diverse terrain, which would expose residents to wildland fire hazards. This would be a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map would locate homes and structures in wooded and diverse terrain, which would expose residents to wildland fire hazards. This would be a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map would locate homes and structures in wooded and diverse terrain, which would expose residents to wildland fire hazards. This would be a **less than significant** impact.

PP Proposed Land Use Diagram

Implementation of the Proposed Land Use Diagram would result in up to 9,220 residential units under maximum allowable buildout under this alternative. Many of these new residences would be located within wooded and diverse terrain exposing residents to wildland fire hazards. The proposed development associated with this alternative would locate a residential and non-residential development along steep topography in all or portions of sections 21, 27, 28, 33, 34, and 35 of Township 17 North, Range 17 East (Waddle Ranch and Sierra Pacific property), and section 31 of Township 17 North, Range 18 East (Northstar-at-Tahoe). The fire safety of residences depends on their location with respect to topography, the continuity and loading of fuels around them, and the structural design of the residences. The potential for structural damage from wildfires is greater in certain locations because of the nature of fire spread, which results from atmospheric currents (convection). Conduction, convection, and radiation of heat occur simultaneously in a hillside fire, thereby creating long flames that move rapidly upslope. CDF would be primarily responsible for fighting wildfires within the plan area. This would require appropriate access, roadways, water supplies and fire flow to fight wildland fires.

AA Existing Martis Valley General Plan Land Use Map

Implementation of the Existing Martis Valley General Plan Land Use Map would result in up to 11,688 residential units under maximum allowable buildout under this alternative. Many of these new residences would be located within wooded and diverse terrain exposing residents to wildland fire hazards. The proposed development associated with this alternative would locate a residential and ski-resort development along steep topography in all or portions of sections 21, 22, 23, 24, 25, 26, 27, 28, 33, 34, and 35 of Township 17 North, Range 17 East (Waddle Ranch and Sierra Pacific property), sections 2, 3, 4, and 9 of Township 16 North, Range 17 East (southern edge of Plan area), and section 31 of Township 17 North, Range 18 East (Northstar-at-Tahoe). These properties are currently isolated from infrastructure that could provide the necessary access and water supplies to fight wildland fires. The Existing Martis Valley General Plan Land Use Map would be exposed to similar wildland fire risks as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Implementation of Alternative 1 Land Use Map would result in up to 10,311 residential units. Many of these new residences would be located within wooded and varied terrain exposing residents to wildland fire hazards. The proposed development associated with this alternative would locate a residential and ski-resort development along steep topography in all or portions of sections 21 and 28 of Township 17 North, Range 17 East (Waddle Ranch) and section 31 of Township 17 North, Range 18 East (Northstar-at-Tahoe). Similar wildland fire risks would be associated with Alternative 1 Land Use Map as the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

Implementation of Alternative 2 Land Use Map would result in up to 7,956 residential units. Many of these new residences would be located within wooded and varied terrain exposing residents to wildland fire hazards. The proposed development associated with this alternative would locate a residential and ski-resort development along steep topography in all or portions of sections 21 and 28 of Township 17 North, Range 17 East (Waddle Ranch and small ownership property east of SR 267), sections 2, 3, 4, and 9 of Township 16 North, Range 17 East, and section 31 of Township 17 North, Range 18 East. Similar fire risks would be associated with Alternative 2 Land Use Map as the Proposed Land Use Diagram.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs in Section VI (Public Facilities and Services) would assist in reducing potential impacts discussed regarding wildland fire hazards in the Plan area to less than significant.

Policy 6.H.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.*

Policy 6.H.11 *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.*

Policy 6.H.12 *The County shall require that discretionary permits for new development in fire hazard areas be conditioned to include requirements for fire-resistant vegetation, cleared firebreaks, 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.*

Policy 6.H.13 *The County shall require that new development meets state, county, and local fire district standards for fire protection.*

Policy 6.H.14 *The County shall refer development proposals in the unincorporated county to the appropriate local fire agencies for review for compliance with fire safety standards. If dual responsibility exists, then both agencies shall review and comment relative to their area of responsibility. If standards and different or conflicting, the more stringent standards shall be applied.*

Policy 6.H.15 *The County shall ensure that existing and new buildings of public assembly incorporate adequate fire protection measures to reduce the potential loss of life and property in accordance with state and local codes and ordinances.*

Policy 6.H.17 *The County shall work with the Truckee Fire Protection District and Northstar Community Services District, 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.*

Policy 6.H.21 *The County shall continue to work cooperatively with the California Department of Forestry and Fire Protection, the Truckee Fire Protection District and the Northstar Community Services District in managing wildland fire hazards.*

Policy 6.H.22 *The County shall encourage and work with the Truckee Fire Protection District and Northstar CSD to develop coordinated all-hazard disaster response procedures for the following types of disasters: wildfires, flooding, earthquakes, severe winter storms, transportation accidents, acts of terrorism, civil disturbance, and hazardous materials releases.*

Implementation Programs

Permit Fees

24. Require new development plans to be submitted to the local fire district and CDF for review and approval prior to approval and/or issuance of certificates of occupancy, as appropriate.

Responsible Agency/Department: Land Development Departments
Time Frame: On-going
Funding: Permit fees

25. Require land developers to pay in lieu fees, dedicate land, or purchase equipment as necessary to ensure adequate fire protection facilities are available as the Plan area builds out.

Responsible Agency/Department: Servicing Fire Districts
Time Frame: On-going
Funding: Impact fees

26. Continued provision by CDF of wildlands protection of State Responsibility Area lands throughout the Community Plan area, and provision of contract services as needed.

Responsible Agency/Department: Board of Supervisors, California Department of Forestry
Time Frame: On-going
Funding: General Fund

27. Inspect all new construction and remodel projects for fire code compliance prior to issuance of certificates of occupancy.

Responsible Agency/Department: Placer County Building Department /Truckee/Northstar Fire Protection District
Time Frame: On-going
Funding: User fees

28. Inspect and test all automatic fire extinguishing systems in accord with State Fire Marshal regulations and the National Fire Protection Standards.

Responsible Agency/Department: Placer County Building Department/Truckee/Northstar Fire Districts
Time Frame: On-going
Funding: User fees

29. Establish training requirements with fire fighter certification for paid fire fighters and volunteer fire fighter certification for on-call fire fighters.

Responsible Agency/Department: Truckee/Northstar Fire Protection District
Time Frame: On-going
Funding: District funds

The proposed policies and implementation programs would mitigate impacts to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Mitigation Measures

None required.

4.11.1.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

SETTING

The projected development within the Plan area associated with the buildout conditions under the Proposed Land Used Diagram and Alternatives AA, AB and AC are anticipated to result in substantial increases in the resident population and the existence of non-residential structures. At present, there are several projects that are currently approved or under application with Placer County, the Town of Truckee, and Nevada County (see **Table 3.0-1**). The proposed development within the Plan area associated with the Proposed Land Use Diagram and the three alternatives would change the way emergency situations are handled, requiring additional infrastructure and potentially additional personnel in order to provide the current level of service to residents and businesses in the area for the Truckee Fire Protection District, Northstar CSD and CDF within their service areas.

Buildout of the Plan area would increase the number of homes and other structures currently located within wooded areas and relatively steep terrain. An increased number of structures located in such locations would increase the risk of wildland fire hazards.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.1.3 Cumulative Fire Protection and Emergency Medical Services

PP Implementation of the Proposed Land Use Diagram would result in residential uses outside of local fire district service areas. This would place future residents at risk of a loss resulting from a structural fire and contribute to cumulative fire protection and emergency service demands in the Plan area. This would be a **cumulative significant** impact.

AA Implementation of Alternative AA would result in residential uses outside of local fire district service areas. This would place future residents at risk of a loss resulting from a structural fire and contribute to cumulative fire protection and emergency service demands in the Plan area. This would be a **cumulative significant** impact.

AB Implementation of Alternative AB would result in residential uses outside of local fire district service areas. This would place future residents at risk of a loss resulting from a structural fire and contribute to cumulative fire protection and emergency service demands in the Plan area. This would be a **cumulative significant** impact.

AC Implementation of Alternative AC would result in residential uses outside of local fire district service areas. This would place future residents at risk of a loss resulting from a structural fire and contribute to cumulative fire protection and emergency service demands in the Plan area. This would be a **cumulative significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

If the fire and emergency medical service providers are equipped to handle the future development in the Plan area, the level of service for fire protection and emergency services would remain constant. The Truckee Fire Protection District has stated that they are prepared and staffed to handle the buildout conditions projected under the Existing Martis Valley General Plan Land Use map (Terwilliger, 2001). TFPD receives funding from property taxes and developer impact fees; CDF is funded by the State; and CSD receives funding from property taxes. However, the Proposed Land Use Diagram and Alternatives AA, AB and AC propose residential development outside of fire district service areas. Because CDF would not provide fire protection or emergency protection services to properties after they are developed, the inhabited areas would not receive adequate protection from fires or emergencies.

Policies and Implementation Programs

New development projects in the Plan area would be required to comply with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation for fire and emergency medical services impacts. The reader is referred to Impact 4.11.1.1 regarding applicable proposed policies and implementation programs.

Mitigation Measure

Mitigation measure MM 4.11.1.1 and proposed policies and implementation programs would mitigate the impacts to a **less than significant** level for the Proposed Land Use Diagram and Alternatives AA, AB and AC under cumulative conditions.

Impact 4.11.1.4 Cumulative Wildland Fire Hazard

PP Development under the Proposed Land Use Diagram would locate additional residences within wildland fire hazard zones under cumulative conditions. Proposed policies and implementation programs in the proposed Community Plan would mitigate potential impacts to **less than significant**.

AA Development under the Existing Martis Valley General Plan Land Use Map would locate additional residences within wildland fire hazard zones under cumulative conditions. Proposed policies and implementation programs in the proposed Community Plan would mitigate potential impacts to **less than significant**.

AB Development under the Alternative 1 Land Use Map would locate additional residences within wildland fire hazard zones under cumulative conditions. Proposed policies and implementation programs in the proposed Community Plan would mitigate potential impacts to **less than significant**.

AC Development under the Alternative 2 Land Use Map would locate additional residences within wildland fire hazard zones under cumulative conditions. Proposed policies and implementation programs in the proposed Community Plan would mitigate potential impacts to **less than significant**.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

The future growth patterns associated with buildout of the Plan area under the Proposed Land Use Diagram and Alternatives AA, AB, and AC would result in new structures located within wildland fire hazard zones, which would increase the risk of wild fires and endanger additional residents and structures. The Martis Valley Community Plan's proposed policies and implementation programs would mitigate potential wildland fire impacts by requiring projects be reviewed for fire safety standards and that they incorporate appropriate design features.

Policies and Implementation Programs

New development projects in the Plan area would be required to comply with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation for wildland fire hazard impacts. The reader is referred to Impact 4.11.1.2 regarding applicable proposed policies and implementation programs. The proposal policies and implementation programs would mitigate impacts to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Mitigation Measure

None required.

4.11.2 LAW ENFORCEMENT

4.11.2.1 EXISTING CONDITIONS

Placer County Sheriff Coroner-Marshal (Placer County Sheriff) currently provides law enforcement services to the majority of the proposed Martis Valley Community Plan area with some assistance from the Nevada County Sheriff's Department and the Truckee Police Department. The Truckee Police Department, which began its operations in September 2001, provides law enforcement services to the Town of Truckee and provides mutual aid to the Placer County Sheriff's Department and Nevada County Sheriff's Department in the areas surrounding Truckee. Additionally, the California Highway Patrol assists with traffic violations and provides mutual law enforcement assistance to the Placer County Sheriff.

In addition to County and Town of Truckee law enforcement services, both Lahontan and Northstar-at-Tahoe provide private security services for community residents.

Placer County Sheriff's Department

The Placer County Sheriff's Department has a service area of approximately 125 square miles, stretching from Tahoma on the southern boundary, around Lake Tahoe to the state line, north to Truckee, and west to the crest of the Sierra Nevada Mountains. Patrol and investigation services operate out of the Sheriff's headquarters in the DeWitt Center, located in Auburn, and three sub-stations, one of which is located in North Tahoe. Currently the Department has only two beats, an east and a west beat. The resident population within the service area is approximately 10,000. However, the average daily population ranges from 25,000 to 30,000 residents, with a peak seasonal population ranging from 85,000 to 90,000. Currently, the Department has 42 sworn officers at the North Lake Tahoe station, 25 of which are part of the patrol division and five are part of the investigations division. The Plan area falls within the east beat, which includes Kings Beach, Carnelian Bay, Lahontan and Truckee (Hawthorne, 2001).

For planning purposes, the Placer County Sheriff uses a Countywide-staffing ratio of one patrol officer to every 1,000 residents in the unincorporated area. This ratio represents an acceptable national standard often used by other law enforcement agencies. Response times in the proposed Martis Valley Community Plan area can vary from three to 15 minutes in good conditions to 35 minutes in poor conditions. The weather, traffic, and crime conditions in the other communities within the beat can slow response times considerably. Because 90 percent of the calls in the East Beat are for incidents in Kings Beach, the patrol officers spend most of their time outside of the Plan area (Hawthorne, 2001).

The current Placer County Sheriff's Department facility in North Tahoe was constructed in 1959. This station has a Type 1 jail facility, which can hold two inmates for 96 hours. If an inmate needs to be detained longer than 96 hours, they are transferred to the Placer County Jail in Auburn. The existing North Tahoe facility is substandard and is too small for current staffing needs and services. In order to continue providing the same level of service, the Department plans to relocate the Patrol Division to Carnelian Bay and use the Nevada County Regional Jail facility in Truckee instead of its own jail. Short of constructing a new facility, a third beat may eventually be established to better serve the Plan area (Hawthorne, 2001).

Future needs for the Placer County Sheriff's Department include additional staff and a new facility for the North Tahoe area. The proposed regional law enforcement facility in Truckee near the airport would better serve the area. Funds from property taxes, building impact fees, facility impact fees, bonds, and sales tax from Proposition 172 would be used to help pay for the facility. However, it is unlikely that the joint facility would be constructed before the year 2006(Hawthorne, 2001).

Town of Truckee Police Department

The Town of Truckee established its own police force on September 1, 2001 after contracting law enforcement services from the Nevada County Sheriff's Department (NCSD). The Truckee Police Department provides police protection to the Town of Truckee. The NCSD is still under contract with the Town to dispatch for the Truckee Police Department and provide jail services at the Nevada County Sheriff's Office (NCSO) substation. Additionally, NCSD will continue to provide law enforcement and civil services to the unincorporated areas of Nevada County.

The Truckee Police Department consists of 25 officers under the command of Police Chief Dan Boon. Their temporary facilities are comprised of modular units located at the Town Hall. The Town of Truckee is constructing a 7,000 square foot space at the Town Hall to temporarily house the department for a few years. The Police Department would ultimately have a facility located in Downtown Truckee. The Police Department is currently staffed to accommodate the existing population of Truckee. As Truckee continues to grow in size, the police force would need to expand to provide the same level of service. Because the Truckee Police Department was only recently established, no level of service, staffing ratios or response time information is available. Funding for the police department comes from sales tax, property tax and transit occupancy tax (Boon, 2001).

Nevada County Sheriff's Department (NCSD)

The Nevada County Sheriff's Department (NCSD) provides law enforcement and civil service to the unincorporated areas of Nevada County. Within the Plan area the unincorporated areas include the Truckee Airport and the Martis Valley Lake campground. The Department provides dispatch and jail services for Nevada County and the Town of Truckee at their substation in Truckee. They also provide booking services for Placer County Sheriff's Department at their jail

facility. With the recent inception of the Truckee Police Department, the NCSD will reduce their presence in Truckee from 42 to 17 personnel. Of the 17 employees, there are only two patrol officers and 1 sergeant assigned to patrol the unincorporated area of Nevada County within the vicinity of the Plan area. The officers are not on 24-hour coverage due to the recent transfer of power to the Truckee Police Department. Based on this change, response times can be up to 24 hours, unless the event is a major crime (Perea, 2001).

Nevada County Sheriff's Office Substation

In August of 2001, Nevada County and the Town of Truckee finalized an agreement to use the existing Nevada County Sheriff's Office (NCSO) substation, located in the Town of Truckee, to provide round-the-clock jail and dispatch services for the Nevada County Sheriff's Department and Truckee Police Department (Sommer, 2001). Before the agreement is final, the Placer County Board of Supervisors must approve the reallocation of funds for use of the NCSO jail, which includes a $200,000 annual contribution for after hours and weekend use of the jail facility. This contribution will help keep the NCSO jail fully operational. This agreement would greatly improve emergency services in the Plan area. As part of the agreement, Nevada County Sheriff's Department officers will continue to serve the unincorporated area of Nevada County, operating from the substation. Additionally, Nevada County will continue to provide mandated functions including search and rescue, civil process service and coroner.

4.11.2.2 REGULATORY FRAMEWORK FOR LAW ENFORCEMENT

LOCAL

Martis Valley General Plan

The existing Martis Valley General Plan incorporates 1 policy that relates to police protection, including the following:

Community Development and Transportation

Policy 6 Develop a bi-county plan or agreement which indicates who will provide services as police protection, snow removal, and road maintenance before allowing further, major developments.

Placer County General Plan

The Placer County General Plan includes policies and programs that provide for policies and funding programs that would help the County ensure that facility and service standards are maintained.

Placer County General Plan Policies

The Placer County General Plan includes the following policies pertaining to law enforcement:

Policy 4.H.1 ... the County shall strive to maintain the following staffing ratios (expressed as the ration 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

Policy 4.H.2 The County 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

Policy 4.H.3 ... 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.

Policy 4.H.4 The County shall require new development to develop or fund sheriff facilities that, at a minimum, maintain the above standards.

Policy 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.

The proposed Martis Valley Community Plan policy document contains goals, policies and implementation programs that are generally consistent with the policy provisions of the Placer County General Plan.

4.11.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A public services or utilities impact is considered significant if implementation of the project would result in the following:

1) Increase the demand for additional personnel, equipment, or facilities, and/or results in a negative effect that impairs the ability of the service provider to maintain an acceptable level of service for sheriff and police protection services.

METHODOLOGY

Evaluation of potential sheriff and police protection impacts of the Proposed Land Use Diagram in addition to the Existing Martis Valley General Plan Land Use Map, and Alternatives 1 and 2 was based on consultation with the Truckee Police Department, Placer County Sheriff's Department and Nevada County Sheriff's Department, as well as review of the existing Martis Valley General Plan, proposed Martis Valley Community Plan, and the Placer County General Plan.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.11.2.1 Law Enforcement Services

PP Implementation of the Proposed Land Use Diagram would result in an increased demand for sheriff/police protection. This would be considered a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would result in an increased demand for sheriff/police protection. This would be considered a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map would result in an increased demand for sheriff/police protection. This would be considered a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map would result in an increased demand for sheriff/police protection. This would be considered a **less than significant** impact.

PP Proposed Land Use Diagram

Implementation of the Proposed Land Use Diagram would result in 9,220 residential units, as well as office, commercial and recreational uses and facilities. Using a worst-case scenario of 2.63 persons per dwelling unit and a permanent resident occupancy rate of 20 percent, this map could result in a permanent population of 4,850 residents. The Proposed Land Use Diagram would increase the demand for sheriff and police protection services in the Plan area and possibly require an additional beat dedicated solely to the Plan area. Based on the Placer County staffing ratio of 1/1,000, the Proposed Land Use Diagram would require approximately four to five additional officers.

The Placer County Sheriff's Department is currently in need of new facilities. The eastern beat, which includes the Plan area, primarily focuses its efforts on crime prevention and response in Kings Beach. Therefore, response times are increased due to driving distances between the two areas. The development that would occur as a result of this plan would have a significant impact on sheriff/police protection provided by Placer County Sheriff's Department in the Plan area. However, Truckee recently established its own police department, which would help provide emergency services to the Plan area. This would alleviate some of the impacts on the Placer County Sheriff's Department. Development under this plan could have a potentially significant impact on the ability of the service providers to maintain an acceptable level of service for sheriff and police protection. Truckee Police Department also anticipates the need for future personnel to accommodate growth. Additionally, Placer County Sheriff's Department receives funding from property taxes, building impact fees, facility impact fees and bonds. The Department may also use sales tax from Proposition 172 to help pay for the facility. Truckee Police Department receives funds from sales tax, property tax and transit occupancy tax. As the Plan area expands in size, the increased population would contribute additional funds, which would pay for the increased impacts on law enforcement.

AA Existing Martis Valley General Plan Land Use Map

Implementation of the Existing Martis Valley General Plan Land Use Map would result in 11,688 residential units, as well as office, commercial and recreational uses and facilities. Using a worst-case scenario of 2.63 persons per dwelling unit and a permanent resident occupancy rate of 20 percent, this map could result in a permanent population of 6,148 residents. This alternative would increase the demand for sheriff and police protection services in the Plan area and possibly require an additional beat dedicated solely to the Plan area. Based on the Placer County staffing ratio of 1/1,000, Alternative AA would require approximately six additional officers, thus having more of an impact than the Proposed Land Use Diagram on police and sheriff protection services. However, Placer County Sheriff's Department receives funding from property taxes, building impact fees, facility impact fees and bonds. The Department may also use sales tax from Proposition 172 to help pay for the facility. Truckee Police Department receives funds from sales tax, property tax and transit occupancy tax. As the Plan area expands

in size, the increased population would contribute additional funds, which would pay for the increased impacts on law enforcement.

AB Alternative 1 Land Use Map

Implementation of Alternative 1 Land Use Map would result in approximately 10,311 residential units, as well as office, commercial and recreational uses and facilities. Using a worst-case scenario of 2.63 persons per dwelling unit and a permanent occupancy rate of 20 percent, this map could result in a permanent population of 5,424 residents. This alternative would require approximately five to six additional officers, thus having more of an impact than the Proposed Land Use Diagram on police and sheriff protection services. However, Placer County Sheriff's Department receives funding from property taxes, building impact fees, facility impact fees and bonds. The Department may also use sales tax from Proposition 172 to help pay for the facility. Truckee Police Department receives funds from sales tax, property tax and transit occupancy tax. As the Plan area expands in size, the increased population would contribute additional funds, which would pay for the increased impacts on law enforcement.

AC Alternative 2 Land Use Map

Implementation of Alternative 2 Land Use Map would result in up to 7,956 residential units, as well as office, commercial and recreational uses and facilities. Using a worst-case scenario of 2.63 persons per dwelling unit and a permanent occupancy rate of 20 percent, this map could result in a permanent population of 4,185 residents. This alternative would require approximately four additional officers, thus having less of an impact on police and sheriff protection services as compared to the Proposed Land Use Diagram. Placer County Sheriff's Department receives funding from property taxes, building impact fees, facility impact fees and bonds. The Department may also use sales tax from Proposition 172 to help pay for the facility. Truckee Police Department receives funds from sales tax, property tax and transit occupancy tax. As the Plan area expands in size, the increased population would contribute additional funds, which would pay for the increased impacts on law enforcement.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs in Section VI (Public Facilities and Services) would further assist in reducing service impacts discussed regarding sheriff and police protection in the Plan area.

Policy 6.G.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

Policy 6.G.2 *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.*

Policy 6.G.3 *The County shall require new development to develop or fund sheriff facilities that maintain appropriate standards for the area.*

Policy 6.G.4 *The County shall consider public safety issues in all aspects of commercial and residential project design, including crime prevention through environmental design.*

Implementation Programs

Law Enforcement

22. The County shall implement the law enforcement goals and policies of the Community Plan designed to reduce response time and maintain sheriff's department staff levels at an acceptable level.

Responsible Agency/Department: County Sheriff's Department/Board of Supervisors / Land Development Departments.
Time Frame: On-going
Funding: General Fund

23. The County shall consult with the Placer County Sheriff's Department during the review of new development plans to ensure that public safety aspects, including adequate lighting, circulation etc., are provided.

Responsible Agency/Department: Land Development Departments /County Sheriff's Department
Time Frame: On-going
Funding: Permit fees

Mitigation Measures

None required.

4.11.2.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

SETTING

The projected development within the Plan area associated with the buildout conditions under the Proposed Land Use Diagram and Alternatives AA, AB and AC is anticipated to substantially increase the resident population and non-residential uses. This would require additional sheriff and police protection to continue providing the same level of service to the area. Cumulative conditions would require additional sheriff and police personnel and facilities. Currently, the east beat of the Placer County Sheriff's Department, which serves the Plan area, is in need of new facilities and additional staffing. The Placer County Sheriff's Department has a response time ranging from three minutes to 35 minutes depending upon weather conditions and crime conditions in Kings Beach. The Truckee Police Department, which was established in September of 2001, is still in its beginning stages. The Truckee Police Department is staffed to serve the existing population in Truckee and would most likely require additional staffing and expanded facilities under cumulative conditions. The Nevada County Sheriff's Department would have less of a role in police and sheriff protection in cumulative conditions than at present. Overall, the demand for new facilities and additional staff would increase under cumulative conditions.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.2.2 Cumulative Law Enforcement Services

PP Under cumulative conditions, implementation of the Proposed Land Use Diagram would result in an increased demand for sheriff/police protection in the region. This would be considered a **less than significant** impact.

AA Under cumulative conditions, implementation of the Existing Martis Valley General Plan Land Use Map would result in an increased demand for sheriff/police protection in the region. This would be considered a **less than significant** impact.

AB Under cumulative conditions, implementation of the Alternative 1 Land Use Map would result in an increased demand for sheriff/police protection in the region. This would be considered a **less than significant** impact.

AC Under cumulative conditions, implementation of the Alternative 2 Land Use Map would result in an increased demand for sheriff/police protection in the region. This would be considered a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

The Proposed Land Use Diagram and Alternatives AA, AB, and AC would increase the demand for sheriff and police protections within the Plan area. The cumulative conditions would translate to new development patterns spread across a larger area, requiring additional staff and facilities to provide the current level of service to residents of the Plan area and Sheriff Department beats. Placer County Sheriff's Department receives funding from property tax, building impact fees, facility impact fees and bonds. The Truckee Police Department receives funding from sales tax, property tax, and transit occupancy tax. The increased population associated with cumulative conditions would also increase the funding sources for law enforcement in the Plan area and surrounding region. The additional funding would pay for service impacts on law enforcement associated with the Propose Land Use Diagram and Alternatives AA, AB and AC.

Policies and Implementation Programs

New development projects in the Plan area would be required to adhere to policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation for impacts on law enforcement services. The reader is referred to the Impact 4.11.2.1 regarding applicable proposed policies and implementation programs.

Mitigation Measure

None required.

4.11.3 PUBLIC SCHOOLS

4.11.3.1 EXISTING CONDITIONS

TAHOE-TRUCKEE UNIFIED SCHOOL DISTRICT

The proposed Martis Valley Community Plan area is served by the Tahoe-Truckee Unified School District (TTUSD), which provides public school services for kindergarten through 12th grade. The TTUSD encompasses 4 planning areas: Town of Truckee; Nevada County; Placer County; and El Dorado County. The District covers an area of roughly 700 square miles, making it one of the geographically largest districts in the state. Transporting students to and from school facilities requires a very large bus fleet. In addition, inclement weather or snow days can extend the school year by as much as 1 to two weeks.

The TTUSD adopted a Facilities Master Plan on July 17, 1999, which identifies major facility issues and detailing information on future school needs, options, and costs. The District recently updated the Master Plan with the Developer Fee Justification Study and School Facilities Needs Analysis in May 2001. The Needs Analysis was prepared pursuant to Senate Bill 50 (SB 50), Chapter 407, Statute 1998, which became effective on November 4, 1998. TTUSD prepared the Needs Analysis in order to evaluate the need for developer mitigation fees and the appropriate amount of such fees to provide educational services and school facilities to new students generated by residential and commercial construction in the District (TTUSD, 2001).

In the 2000-2001 school year, TTUSD had a total enrollment of 4,558 students (Pew, 2001). At present, the District has an estimated total capacity of 5,529 students, with "design" capacity for 2,775 (K-5) elementary students, 1,053 (6-8) middle school students, and 1,701 (9-12) high school students. Based on these numbers, the District is currently under capacity by 434 students (TTUSD, 2001). Current enrollment and existing facility capacity numbers are provided in **Table 4.11-1.**

TABLE 4.11-1
CURRENT ENROLLMENT AND EXISTING CAPACITY

School	Current Enrollment[1]	Existing Capacity[2]	Percentage of the Capacity[2]
Truckee Elementary	683	506	135 percent
Glenshire Elementary	500	391	128 percent
Sierra Mountain Middle School	708	502	141 percent
Tahoe Truckee High School	792	870	91 percent
TOTALS[3]	**2,683**	**2,269**	**118 percent**

Notes: [1] CBEDS Report, 2001.
[2] TTUSD, 2001.
[3] Only includes the 4 schools listed in this table.

Dr. Joel Kirschenstein of the Tahoe Truckee Unified School District has stated that the majority of the schools within the District are currently above capacity. School capacity is based on the standard of 25 students per classroom. The California Department of Education recommends allowing 25 percent more classrooms using portable classrooms. When this number is exceeded, the schools are considered over capacity (Britto, 2001). Based on the recent California Basic Educational Data System (CBEDS) Report for the District and TTUSD's capacity numbers, Truckee Elementary School is operating at 135 percent capacity; Glenshire Elementary is operating at

128 percent capacity; Sierra Mountain Middle School is operating at 141 percent capacity; and Truckee High School is operating at 91 percent (see **Table 4.11-1**). TTUSD uses loading factors of 20 students in Kindergarten through 3rd grade, 33 students in 4th and 5th grades, 30 students in 6th through 8th grades, and 28 students in 9th through 12th grades. Schools can operate above capacity if portable classrooms are brought to the school sites to accommodate the increased number of students. However, by doing so, a school site loses space necessary for playfield, hardcourt, apparatus areas, and sometimes parking (Britto, 2001).

TTUSD uses the current generation rates of 0.309 students per dwelling unit of single-family detached residences and 0.290 students per dwelling unit of single-family attached and mobile homes, to project future enrollment numbers (TTUSD, May 2001). TTUSD anticipates an additional 1,052 students over the next five years, based on projections for 3,485 new dwelling units in the District (TTUSD, 2001).

TTUSD will be constructing a new middle school within the Planned Community 2 (PC-2), which is now called Gray's Station, project site at Alder Drive and Highway 89 North. Approximately 25 acres of this site have been offered to the TTUSD to be used for a new middle school. This school would be designed for a capacity of 1,000 students with a faculty of 40 teachers and 20 other staff members. The facility will include space for classrooms, administrative and other support functions requiring approximately 84,000 square feet in the main building, an additional 12,000 square feet of modular classrooms, and a 10,800 square foot gymnasium. It should be noted that TTUSD is currently conducting an environmental review of the proposed school site for the new middle school (O'Gorman, 2001).

Once the new middle school is constructed, the existing Sierra Mountain Middle School would be converted to an elementary school. This additional school would help reduce overcrowding in the two existing elementary schools and allow for a more even distribution of students among three elementary school facilities. However, the overall capacity of the District would not increase with the addition of a middle school and the conversion of Sierra Mountain to an elementary school (TTUSD, 2001). Additionally, the District anticipates that in five years 618 students would be "unhoused" (without classroom facilities), based on current projections (TTUSD, 2001). Unhoused students would be provided with an education within one of the schools; however, the increased number of students would impact the current conditions of the affected schools, requiring portable classrooms and additional teachers in some instances (Britto, 2001).

Any new development that occurs within the Plan area would contribute students to the Truckee area schools, thus having a significant impact on the schools (Britto, 2001). Based on growth projections, the District anticipates the need for a new elementary school and high school. No potential school sites have been selected at this time. An elementary school requires at least 10 acres and a high school requires 40 acres. School sites need access from one or two directions, a level ground surface and should be outside of the 2-mile airport runway radius (Britto, 2001).

TTUSD owns a vacant 10-acre parcel, which is located within the Kingswood subdivision in the School Facility Improvement District 2. The parcel was dedicated to the District by the subdivision. Additionally, the District is currently involved the following construction projects, which would not increase the District's capacity (TTUSD, 2001:

- Middle School (grades 6-8) – located in Truckee
- Student Activity Center (grades K-5) – located in Kings Beach
- Gymnasium (grades K-5) – located in Truckee

- Gymnasium (high school) – located in Tahoe City
- Future conversion of existing Sierra Mountain Middle School to an elementary school – located in Truckee
- Future Performance Arts Center – located in Tahoe City

Construction of the new middle school is being paid for by bond funds from the General Obligation funds passed in 1999. TTUSD expects that construction of the middle school would consume the entire $35 million bond.

TTUSD is currently on a waiting list with the State to receive bond money from the statewide school bond election, Proposition 1A and the State Facilities Act, in November of 1998. Because TTUSD is waiting for state funding from these bonds, they have been unable to complete planned projects within the District. Additionally, TTUSD has been using bond money to pay for the construction of the new middle school, rather than using the bond money for its intended use on other needed projects. It is not certain when the statewide school bonds will be reinstated, as they have not been placed on the November 2002 ballot (O'Gorman, 2001).

SB 50 and Developer Mitigation Fees

Under Senate Bill 50, school districts can levy three different levels of developer fees from residential construction to pay for school improvements. Government Code Section 65995 allows statutory fees, which cannot exceed $2.08 per square foot of residential construction for K-12 facilities and $0.33 per square foot of commercial/industrial construction. These statutory fees are considered "level one" fees. There are 2 additional levels of developer fees, "level two" fees are allowed under specific circumstances beyond the base statutory fees, and "level three" fees are implemented if the State Allocation Board determines that the State School Facilities Program has run out of bond funding. Level three fees can pay for up to 100 percent of the cost of the school facility or mitigation, minus additional local dedicated school funding.

TTUSD conducted their Needs Analysis in May of 2001 in order to determine which levels of fees could be charged to new construction. The Analysis concluded that the District could charge all three levels of fees. Both Level Two and Three fees are justified under SB 50 because the District has filed a new construction eligibility application with OPSC and is eligible for new construction funding, the District placed a general obligation bond to finance schools on the ballot during the past four years.

Additionally, the Needs Analysis determined that statutory fees for commercial and industrial development were justified and could be levied at a maximum of $0.33 per square foot. Based on the same rationale, the Analysis concluded that residential development could be levied at a rate of $2.08 for Level Two fees and $4.16 for Level Three fees (TTUSD, 2001). Because there are currently no local funding sources for capital improvements, new development within the District would be subject to Alternative fees (e.g., Levels One, Two, and Three developer impact fees).

Pursuant to SB50, the allowable cost of school construction fees is levied at the following rates, with a permitted increase of 15 percent based on geographical location: $6,486 per elementary student (K-5); $6,860 per middle school student (6-8); and $8,980 per high school student (9-12). Because of TTUSD's geographical location, additional building costs for school construction, exceeding the State Grant, are warranted at a rate of: $8,842 per elementary student; $12,195 per middle school student; and $12,289 per high school student. The allowable site acquisition costs per student in TTUSD are: $1,079 per elementary school student; $3,332 per middle school student; and $1,096 per high school student. TTUSD has a provision, however, that if site

acquisition were required for a middle school, the construction costs would be adjusted (TTUSD, 2001).

At present the Tahoe Truckee Unified School District is only charging Level One and Level Two developer impact fees. Level Three fees cannot legally be charged until the State has declared that they are out of money. Once the State makes such a determination, the School Board would first have to approve of the Level Three fees before charging them (O'Gorman, 2001).

Measure A Funds

In addition to developer impact fees, the Tahoe Truckee School District receives parcel taxes from residential parcels within the service area known as Measure A funds. These funds, which are approved by a 2/3 vote, are to be used to enhance school programs and on operational expenses. The cost is $80 per parcel per year, which equates to approximately $2.4 million annually. The tax is based on a four-year cycle and is renewable every four years. Currently, the District is in years 13-16 of Measure A (Folsum, 2001). According to School Superintendent Pat Gemma, the current Measure A funds will be used in the following manner:

1) To keep class sizes at 4th and 5th grade at the 28-1 ratio.
2) To continue to provide increased music staffing at all schools.
3) To provide funds for music equipment and repair.
4) To provide instructional supplies and materials fund to each school at an amount of $65 per pupil.
5) To provide computer lab technicians at each school.
6) To provide vocational education programs at both comprehensive high schools.
7) To provide vocational education supplies and maintenance funds to both high schools.
8) To provide academic enhancement classes at our middle and high school.
9) To provide elementary p.e. specialists at all elementary schools.
10) To provide for physical education supplies and maintenance.
11) To provide ongoing funds for computer replacement and computer lab enhancements.
12) To provide funds for technology repair to include supplies, parts, and labor.
13) To provide counseling staff at the elementary and middle school levels. These counselors supplement the counselors paid for by the District at the high schools and middle schools.
14) To provide a special friends counseling program to all middle schools on top of the regular credentialed counseling.
15) To provide librarians at both comprehensive high schools.
16) To provide another school nurse to better serve the entire district.
17) To provide a bus replacement fund.
18) To provide the cost of Internet access to all schools.
19) To provide science equipment and supplies to all schools (Gemma, 2001).

Measure C Funds

In March 1999, voters approved Measure C that issued a General Obligation Bond for $35 million to pay for the construction of a new middle school (Britto, 2001). This school bond was also intended to alleviate the existing overcrowding in TTUSD elementary and middle schools as well as provide additional facilities such as multi-purpose buildings and gymnasiums. All bond money has been allocated to existing expansion projects and is not available for additional capital improvements (TTUSD, 2001). Due to the rising construction costs in the area, TTUSD anticipates that they may not be able to complete all of the projects listed on the bond's projects list (Britto, 2001).

The District will use Measure C money to pay for the construction of a new middle school. The school will be located on 25 acres off of Alder Drive and Highway 89 North within the PC-2 (Gray's Station) project site. The school will be approximately 100,000 square feet in size and will house 1,000 students. The core facility will include a gym, library, cafeteria, computer lab, stage, and administrative offices. Initially, the school will only have classrooms to accommodate 700 children. The facility is expected to be complete by Summer 2004, in time for the 2004-2005 school year (Koster, 2001).

Currently, Measure C money is being used to construct at 9,600 square foot multi-purpose room for Truckee Elementary School. The facility, which is located at the east end of the school, will include a 5,500 square foot gym, stage, bathrooms, custodial area, offices, storage and a separate after hours entrance. The anticipated completion date is July 2002. The money will also pay for a new administration area, library and media center, which will be located at the east end of the school. These improvements will be completed by January 2002. Truckee Elementary School will also receive new data ports, a phone system with intercom, safety locks on all classroom and office doors, and a roof overlay as part of the Measure C funding). Truckee High School will receive a new cafeteria/multi-use building as part of Measure C. The new building will be located near Surprise Stadium across the parking lot from the existing theater. The construction is expected to commence in 2003 and will take approximately one year to complete (Koster, 2001).

Some of the proposed projects under Measure C have been deferred until TTUSD can receive construction funding from the State. The District is eligible for 50 percent funding from the State for new construction. However, it is expected that this State money will fall short of construction needs due to the cost of construction (Britto, 2001).

Measure D Funds

Measure D is a district-wide school bond that was approved by the voters in 1992. The money was for facility improvements and the construction of a new elementary school. The District has already spent the funds associated with Measure D. However, homeowners are still making payments toward the bond as part of their taxes. The fee is approximately $30 per year per household.

State Funds

TTUSD is eligible to receive 50 percent funding from the State to pay for new construction. However, the high cost of construction in the Tahoe area limits the ability of the school district to utilize the funds to fully pay for projects. TTUSD often has to supplement the money with bond or developer fee money. The District is also eligible for "modernization funds" that can be used to improve existing school facilities. Several of the older schools in the District are currently using this funding to make improvements. The modernization money is awarded through per pupil grants that are based on the total number of school children being housed in the area that would be modernized (Britto, 2001).

Certificate of Participation Funding

TTUSD has decided to take out a Certificate of Participation (C.O.P.) from the State in the amount of $9 million to pay for school facilities improvements and the relocation of a transportation building in Truckee. The C.O.P. will be repaid using Developer Fees over the next 15 years (Britto, 2001).

4.11.3.2 REGULATORY FRAMEWORK FOR PUBLIC SCHOOLS

LOCAL

Martis Valley General Plan

The Existing Martis Valley General Plan states that there is a major problem with locating any new schools within the Plan area, "By state law, no new schools may be built within 2 miles of an airport. This precludes many otherwise suitable sites in the plan area, allowing a school location in only the extreme northern or southern portions. It may become necessary for the district to acquire a new school site outside Martis Valley and transport pupils to it." The Existing Martis Valley General Plan does not contain any policies pertaining to schools.

Placer County General Plan

The Placer County General Plan policies call for the County to coordinate its planning efforts with local school districts to ensure that development under the General Plan does not result in an unmet demand for school facilities.

Placer County General Plan Policies

The Placer County General Plan contains the following policies pertaining to schools:

Policy 4.J.1 The County should continue to assist school districts in providing quality education facilities that will accommodate projected student growth.

Policy 4.J.3 The County shall work cooperatively with school districts in monitoring housing, population, and school enrollment trends and in planning for future school facility needs, and shall assist school districts in locating appropriate sites for new schools.

Policy 4.J.4 The County's land use planning should be coordinated with the planning of school facilities and should involve school districts in the early stages of the land use planning process.

Policy 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.

Policy 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.

Policy 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 designate existing and future school sites in community plans and specific plans to accommodate school district needs.

Policy 4.J.8 The County shall encourage school facility sitting that establishes schools as focal points within the neighborhood and community.

The proposed Martis Valley Community Plan policy document contains goals, policies and implementation programs that are generally consistent with the policy provisions of the Placer County General Plan.

STATE

Leroy F. Greene School Facilities Act of 1998 (SB 50)

The "Leroy F. Greene School Facilities Act of 1998," also known as Senate Bill No. 50 (Stats. 1998, Ch.407), governs a school district's authority to levy school impact fees. This comprehensive legislation, together with the $9.2 billion education bond act approved by the voters in November 1998 as "Proposition 1A" reforms methods of school construction financing in California.

Prior to the Leroy F. Greene School Facilities Act of 1998 (Government Code Sections 65995-65998), case law allowed cities to consider and impose conditions to mitigate impacts of new development on school facilities. The 1998 School Facilities Act suspended this authority, commonly referred to as *Mira* authority.

Government Code Section 65995, as amended by SB 50, establishes the dollar amount school districts may impose on new development. The statute provides that, with limited exceptions, the amount of any fees, charges, dedications, or other requirements may not exceed the following:

1) In the case of residential construction, two dollars and eight cents ($2.08) per square foot of assessable space ... "
2) In the case of any commercial or industrial construction, thirty-three cents ($0.33) per square foot of chargeable covered and enclosed space ... " (Gov. Code Section 65995, subd. (b)).

These amounts will be adjusted for inflation in the year 2000, and every two years thereafter (Id., subd. (b)(3)).

Under specified circumstances, school districts may impose alternative fees pursuant to Government Code Sections 65995.5 and 65995.7 (Level 2 and/or Level 3 fees, respectively). If State funding expires at any time, school districts may impose up to 100 percent of the State average cost of school facilities on new development (alternative Level 3 fees). However, in 2006, if a State bond measure fails, *Mira* authority is partially restored to the extent that a city could deny an application but could not condition the project to pay fees above the fee set by the State.

California Government Code Section 65995(e) states that a city does not have the ability to condition any land use approval, whether legislative or adjudicative, on the need for school facilities. In addition, Government Code Section 65995(f) prohibits a city or county from imposing a requirement to participate in a Community Facilities District ("CFD," also known as Mello-Roos district). Government Code Section 65995(g)(1) further states that a developer's refusal to participate in a CFD cannot be a factor in considering a "legislative or adjudicative" act. However, Government Code Section 65995(g)(2) further states that a "person can voluntarily elect" to pay a fee through a CFD.

Government Code Section 65995(h) states that the payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the

amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities.

Section 65996 (b) states that the provisions of this chapter are hereby deemed to provide full and complete school facilities mitigation and, notwithstanding Section 65858, or Division 13 (commencing with Section 21000) of the Public Resources Code, or any other provision of state or local law, a state or local agency may not deny or refuse to approve a legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property or any change in governmental organization or reorganization, as defined in Section 56021 or 56073, on the basis that school facilities are inadequate.

4.11.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A public services or utilities impact is considered significant if implementation of the project would result in any of the following:

1) Increased demand for additional personnel, equipment, or facilities, and/or results in a negative effect that impairs the ability of the service provider to maintain an acceptable level of service for public schools that would result in a physical impact on the environment.

METHODOLOGY

The analysis of school impacts was based on correspondence with the Tahoe-Truckee Unified School District, TTUSD's Developer Fee Justification Study and School Facilities Needs Analysis (Proposition 1A/Senate Bill 50) dated May 2001, direction provided in SB 50, as well as review of the existing Martis Valley General Plan, proposed Martis Valley Community Plan, and the Placer County General Plan.

Impact 4.11.3.1 Impacts on School Services

PP Implementation of the Proposed Land Use Diagram would increase student enrollment at the Tahoe Truckee Unified School District's schools. Additional development associated with this alternative would impact TTUSD's current school facilities and would require additional schools to serve the growing population. The impacts on schools services would be **less than significant**.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would increase student enrollment at the Tahoe Truckee Unified School District's schools. Additional development associated with this alternative would impact TTUSD's current school facilities and would require additional schools to serve the growing population. The impacts on schools services would be **less than significant**.

AB Implementation of the Alternative 1 Land Use Map would increase student enrollment at the Tahoe Truckee Unified School District's schools. Additional development associated with this alternative would impact TTUSD's current school facilities and would require

additional schools to serve the growing population. The impacts on schools services would be **less than significant**.

AC Implementation of the Alternative 2 Land Use Map would increase student enrollment at the Tahoe Truckee Unified School District's schools. Additional development associated with this alternative would impact TTUSD's current school facilities and would require additional schools to serve the growing population. The impacts on schools services would be **less than significant**.

PP Proposed Land Use Diagram

Based on TTUSD generation rates (0.309 students per single-family residential use and 0.29 per multi-family residential use), approximately 552 students (292 students from single-family residential uses and 260 students from multi-family residential uses) would be generated by the buildout associated with the Proposed Land Use Diagram, all of which would be within the Tahoe Truckee Unified School District. These numbers are based on a 20 percent permanent occupancy rate in the Plan area. Due to the current conditions in the District, any additional increase in students would require new school facilities, personnel and equipment, as existing schools within TTUSD are already at or above capacity. Additional school facilities would need to be to be provided to accommodate the increased student population under buildout conditions in the District. This would require portable classrooms in the interim and new schools in the long-term. TTUSD has already determined the need for an additional elementary school and high school to serve the increasing student population. No potential school sites have been selected at present. As such, there is a need for new school sites. It is not likely that the schools would be located within the Placer County portion of the Martis Valley due to the District's criteria that recommends schools are located at least two miles from the Truckee Tahoe Airport's runway radius. Additionally, TTUSD requires a 10-acre site for an elementary school and a 40-acre site for a high school. As a result of SB 50, Placer County has no jurisdiction over the location of future school sites.

The commercial and office uses associated with the Proposed Land Use Diagram could contribute additional students to the District from employees that may not reside within the Plan area.

Portable classrooms could result in environmental effects, based on their location within the school site. If a portable classroom were located on a previously disturbed site (e.g., parking lot or playground), the environmental impacts would be negligible as they would have already occurred and/or been evaluated. Whereas, if the portable classroom were located within a sensitive area of the school site (e.g., wetlands), environmental effects would likely occur. New schools would contribute environmental impacts through increased traffic, noise, potential habitat loss, air quality, water service, water quality wastewater, solid waste, public services, etc. However, TTUSD would be required to do an environmental analysis of a new school's environmental impacts.

TTUSD charges developer fees equal to $2.08 per square foot of residential development and $0.33 per square foot of commercial and industrial uses for school facility impacts. Additionally, TTUSD receives funding through the various voter-approved bond measures and from the State of California to pay for the construction of new facilities, improvements to existing facilities, equipment and personnel. The existing funding mechanisms under SB 50, bond measures within the school district, and compliance with the proposed Martis Valley Community Plan policies and implementation programs would fully mitigate the impacts of future development on TTUSD per California Government Code Section 65995(h), which states "the payment or satisfaction of

a fee, charge, or other requirement levied or imposed… [is] deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." Additionally, Section 65996(b) states that the provisions of this chapter [Sections 65995-65998] are hereby deemed to provide full and complete school facilities mitigation.

AA Existing Martis Valley General Plan Land Use Map

Based on TTUSD generation rates (0.309 students per single-family residential use and 0.29 per multi-family residential use), approximately 694 students (251 students from single-family residential uses and 443 students from multi-family residential uses) would be generated by the buildout associated with the Existing Martis Valley General Plan Land Use Map, all of which would be within the Tahoe Truckee Unified School District. The impacts associated with the Existing Martis Valley General Plan Land Use Map would be fully mitigated by the existing funding mechanisms under SB 50, bond measures within the school district, and compliance with the proposed Martis Valley Community Plan policies and implementation programs would fully mitigate the impacts of future development on TTUSD per California Government Code Sections 65995(h) and 65996(b).

AB Alternative 1 Land Use Map

Based on TTUSD generation rates (0.309 students per single-family residential use and 0.29 per multi-family residential use), approximately 630 students (523 students from single-family residential uses and 107 students from multi-family residential uses) would be generated by the buildout associated with the Alternative 1 Land Use Map, all of which would be within the Tahoe Truckee Unified School District. Impacts associated with Alternative 1 would be fully mitigated by the existing funding mechanisms under SB 50, bond measures within the school district, and compliance with the proposed Martis Valley Community Plan policies and implementation programs would fully mitigate the impacts of future development on TTUSD per California Government Code Section 65995(h) and 65996(b).

AC Alternative 2 Land Use Map

Based on TTUSD generation rates (0.309 students per single-family residential use and 0.29 per multi-family residential use), approximately 474 students (214 students from single-family residential uses and 260 students from multi-family residential uses) would be generated by the buildout associated with the Alternative 2 Land Use Map, all of which would be within the Tahoe Truckee Unified School District. Impacts associated with Alternative 2 would be fully mitigated by the existing funding mechanisms under SB 50, bond measures within the school district, and compliance with the proposed Martis Valley Community Plan policies and implementation programs would fully mitigate the impacts of future development on TTUSD per California Government Code Section 65995(h) and 65996(b).

<u>Policies and Implementation Programs</u>

The following Martis Valley Community Plan policies and implementation programs in Section VI (Public Facilities and Services) that would provide mitigation for school facility impacts in the Plan area.

Policy 6.I.3 *The County shall work cooperatively with school districts in monitoring housing, population, and school enrollment trends and in planning for future school facility needs, and shall assist school districts in locating appropriate sites for new schools.*

Policy 6.I.4 *The County shall include school among those public facilities and services that are considered an essential part of the infrastructure that should be in place as development occurs.*

Policy 6.I.5 *The County shall consider school district plans in determining school location and land and facility needs.*

Policy 6.I.6 *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 the individual development project's impacts.*

Policy 6.I.7 *The County and residential developers shall 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.*

Policy 6.I.8 *The County shall support enactment of state legislation to finance the construction of new schools and shall support the modification of state laws and regulations to improve the funding of new school sites and facilities.*

Policy 6.I.9 *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.*

Implementation Programs

Public Education

30. *School districts shall have primary responsibility for ensuring that school facilities exist, or will exist in a timely manner, to accommodate projects student populations of new residential development projects in compliance with established service level standards. The County will assist the school districts by requiring will-serve letters from affected school districts for each new residential land use project. [6.D.]*

Responsible Agency/Department: Planning Department/Office of Education
Time Frame: On-going

Funding: Permit fees

Mitigation Measures

None required.

4.11.3.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

SETTING

The increased population associated with the cumulative conditions would result in an increased student population requiring schooling within the Tahoe Truckee Unified School District. According to the Needs Analysis conducted by TTUSD, buildout conditions of the Plan area would translate to 4,000 students between grades kindergarten and 12th (TTUSD, 2001). Many of these students would be unhoused in current school facilities. Based on a 20 percent permanent occupancy rate in the Plan area and TTUSD's generation rates for students, the maximum number of students associated with the proposed Martis Valley Community Plan would be approximately 694.

New development within the Plan area is largely representative of second homes, which would not contribute as many students to the Tahoe Truckee Unified School District as the Town of Truckee. It is anticipated that this trend will continue, especially within the existing and proposed resort developments in the area. Environmental impacts of future school sites would be evaluated individually by TTUSD for immediate and cumulative impacts as required by CEQA.

SB 50 enables School Districts to levy Levels One, Two, and Three developer impact fees of new residential, commercial and industrial development. At present, the Tahoe Truckee Unified School District only levies the Level One and Two fees. TTUSD would only be able to levy Level Three funds after the State of California declares that they are out of school funding and after approval from TTUSD's School Board. The District plans to continue using bond money, developer impacts fees, parcel tax, and school construction fees to pay for facilities improvements and new school facilities. Bond measures, such as Measure A, are renewable every four years. Currently, TTUSD is in years 13 through 16 of the Measure A bond. This trend of bond renewal is expected to continue. Funding is currently available for the District through a variety of different bonds and fees. TTUSD has not received their statewide school bond money from the passage of Proposition 1A on November 4, 1998. This has forced the TTUSD to use different funding sources to pay for planned facility improvements and the construction of the new middle school. Because the District has not yet received the statewide school bond money, they have had to postpone the construction of other planned school facilities. Even with their current sources of funding, the District is not able to pay for the necessary improvements or construction of new school facilities to accommodate the growing student population within TTUSD.

New schools planned within the Plan area would provide additional capacity to accommodate existing and future enrollment. The District is currently over capacity and in need of a new elementary school and high school to serve the projected development in the Plan area. New schools and additional portable classrooms have the potential to create environmental effects, such as increased traffic, noise, potential loss of habitat, water service, water quality, wastewater, solid waste, etc. However, the District would conduct an environmental analysis to determine the environmental impacts of a new school.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.3.2 Cumulative Impacts on School Services

PP Implementation of the Proposed Land Use Diagram would contribute to a cumulative increase in student enrollment at the Tahoe Truckee Unified School District's schools. Additional development associated with this alternative would impact TTUSD's school facilities and would require additional schools to serve the student population under cumulative conditions. The cumulative impacts on schools services would be **less than significant.**

AA Implementation of the Existing Martis Valley General Plan Land Use Map would contribute to a cumulative increase in student enrollment at the Tahoe Truckee Unified School District's schools. Additional development associated with this alternative would impact TTUSD's school facilities and would require additional schools to serve the student population under cumulative conditions. The cumulative impacts on schools services would be **less than significant.**

AB Implementation of the Alternative 1 Land Use Map would contribute to a cumulative increase in student enrollment at the Tahoe Truckee Unified School District's schools. Additional development associated with this alternative would impact TTUSD's current school facilities and would require additional schools to serve the student population under cumulative conditions. The cumulative impacts on schools services would be **less than significant.**

AC Implementation of the Alternative 2 Land Use Map would contribute to a cumulative increase in student enrollment at the Tahoe Truckee Unified School District's schools. Additional development associated with this alternative would impact TTUSD's current school facilities and would require additional schools to serve the student population under cumulative conditions. The cumulative impacts on schools services would be **less than significant.**

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Development associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC would contribute to the increase in student populations under cumulative conditions and would be subject to mitigation consistent with payment of fees as established between the school district, the State, and the local jurisdictions. Under cumulative conditions, the Tahoe Truckee Unified School District would require additional school sites, school facilities and funding to accommodate the needs of the increased student population. However, state law restricts local jurisdictions from imposing additional impact fees (per the Leroy F. Greene School Facilities Act of 1998). Construction of new school facilities would result in physical impacts. New development within the school district would be requested to provide school sites to the District, with a developer impact fee reduction as an incentive. Pursuant to state law, payment of statutory fees represents full and complete school facilities mitigation. Per California Government Code Sections 65995(h) and 65996(b), the existing fee mechanisms in addition to the proposed Martis Valley Community Plan policies and implementation programs would fully mitigate the environmental effects of the student population associated with cumulative conditions under the Existing Martis Valley General Plan Land Use Map.

Policies and Implementation Programs

New development projects in the Plan area would be required to adhere with policies and implementation programs in the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide mitigation for school services impacts. The reader is referred to Impact 4.11.3.1 regarding applicable proposed policies and implementation programs.

Mitigation Measure

None required.

4.11.4 WATER SERVICE

4.11.4.1 EXISTING CONDITIONS

Water service in the Plan area is provided by three agencies: the Placer County Water Agency (PCWA), the Truckee-Donner Public Utility District (TDPUD), and the Northstar Community Services District (CSD). However, new development in the Plan area would be served by PCWA. Both PCWA and TDPUD extract groundwater for their source of potable water and do not currently rely on surface water sources. Northstar CSD uses a combination of surface water sources from springs, which are located within the Northstar development, and groundwater. The reader is referred to Section 4.7 (Hydrology and Water Quality) regarding surface and groundwater resources in Martis Valley.

PLACER COUNTY WATER AGENCY

The Placer County Water Agency (PCWA) was created in 1957 by a special act of the State Legislature, entitled "Placer County Water Agency Act." This Act gives PCWA special Countywide authority, with a broad Agency-wide powers associated with water. The boundary of PCWA encompasses over 1,500 square miles and is identical in territory to the County of Placer. PCWA is also designated as a local agency and an independent "special district" encompassing all of Placer County.

PCWA has a service area in the Plan area, which is called Zone 4, located south of Truckee and east of the Truckee River. Zone 4 includes the existing Lahontan I development and the areas approximately 4½ square miles around Lahontan I and II, including the proposed Hopkins Ranch, Eaglewood, Siller Ranch, and Waddle Ranch.

The Placer County Water Agency has contracted with the TDPUD for water system operations and maintenance in the Lahontan subdivision. PCWA provides the domestic water service to this subdivision. The Zone 4 system includes two wells, a storage tank and a pipeline distribution system. The Zone 4 system was installed by the Lahontan development and dedicated to PCWA.

PCWA's Zone 4 System

Zone 4 Pumping Facility

PCWA's Lahontan system provides water from two wells. The domestic production well has a current pumping capacity of 500 gallons per minute (gpm) and the irrigation well currently has a 1,000 gpm pumping capacity. Both wells are located along the western edge of Lahontan. The domestic well is approximately 900 feet deep with a 17.5-inch gravel packed bore and a 12-inch steel casing. This well also has a 100-foot sanitary seal. The domestic well does not have an automatic pump to waste system, which contributes to colored water problems from the well casing and water quality problems due to the steel casing. The existing domestic well is capable of serving the built out conditions of Lahontan, including Phases 1 and 2.

The second well is used as a backup domestic water source as well as for irrigating the Lahontan golf course. The backup well is also approximately 900 feet deep, with a 26-inch gravel packed bore, an 18-inch steel casing, and 100-foot sanitary seal. The pumping capacity of this well is 1,000 gpm.

Zone 4 Storage Facility

Onsite storage facilities include a welded steel storage tank with 500,000 gallons of storage capacity, which is located west of the Lahontan 1 development. The tank is sufficient to accommodate the full development of Lahontan 1 and 2. However, it will be slightly undersized in that buildout requires 530,000 gallons of storage (Toy, 2002). The storage tank includes a telemetry system that controls the wells. Because of the current lack of storage facilities, PCWA would design future water systems to include 2 storage tanks in each pressure zone (PCWA, 2001).

Zone 4 Treatment Facility

The water treatment system includes separate chlorination facilities, which treat the well water before discharging it directly into the distribution system. The facilities contribute to fluctuations in chlorine residuals in the treated water for those services closest to the wells.

Zone 4 Distribution System

The distribution system is comprised of approximately 60,000 linear feet of pipelines. The pipes range in size from 6 to 12 inches. The distribution system is designed to provide maximum daily water demand to the 2 phases of Lahontan as well as provide a 2,100 gpm fire flow at the golf course clubhouse.

Placer County Water Agency's Draft Water System Facilities Plan for Martis Valley

PCWA issued a draft document entitled "Draft Water System Facilities Plan for Placer County Water Agency, Martis Valley Service Area (Zone 4)," dated April 26, 2001. This report discusses the current water capacity and demand within the Plan area, storage capacity, existing well system, existing distribution, water requirements including water system demands, production requirements and storage requirements for the study area, which is limited to Zone 4 in Placer County. The report states that Hopkins Ranch, Eaglewood, Lahontan II, Siller Ranch, and Waddle Ranch developments would likely be served by PCWA. Because of the future water system demand, PCWA is interested in developing a facilities plan that would provide for orderly water development of the Plan area (PCWA, 2001). The Agency foresees that the above listed

proposed developments in combination with Lahontan I, would have a total water system demand equal to 4,474 gallons per minute during a peak hour.

In order to provide water service to the proposed projects within Zone 4, the system may need to contain several wells in order for each development to have its own system. This would include a domestic well and a backup well for each development. The other alternative would be a coordinated system with fewer and larger wells in strategic locations. PCWA would prefer a coordinated system of wells with a transmission and distribution system. A coordinated system would be more efficient to operate and maintain. The new wells will possibly require on-site treatment or treatment at a centralized facility to remove arsenic and radon.

The expanded system would need to have three storage components, including operational (25 percent of maximum daily flow), fire (2100 gpm fire flow for 2 hours), and emergency reserve (25 percent of maximum daily flow). At present, the Zone 4 system has only one storage facility. PCWA proposes that there should be at least two storage tanks in each pressure zone. The Draft Water System Facilities Plan also calls for operation, fire, and emergency reserve storage components to be provided for each pressure zone. The location of the storage tanks would be based on base elevation for the individual pressure zone and the topography of the area.

In addition to the necessary expansion of the Zone 4 water system, the Agency has determined that it would need additional acreage and permanent facilities in the Plan area order to adequately serve these proposed developments. PCWA anticipates that it would need approximately three acres and a 4,000 to 5,000 square foot building in which to run their Martis Valley operations. The new building would need to include:

- Office facility for administrative and operations and maintenance staff.
- Vehicle and equipment storage area.
- Indoor storage for water system components.
- Indoor shop for equipment repair area.
- Staff and customer parking.
- Water system telemetry control.
- Vehicle and equipment wash down area.
- Outdoor storage for pipe and materials.

Supervisory Control and Data Acquisition (SCADA)

The Zone 4 water system includes a computerized Supervisory Control Data Acquisition (SCADA) system to aid in system operation. The SCADA system allows operators to remotely check system status, collect and store important system data and operate the system from PCWA and TDPUD computer workstations or in the field using portable computer equipment. The system uses radio communication between water system facilities and the SCADA control center. Virtually all water system facilities are connected to the SCADA system including wells, pumps, and storage tanks. Operators can access information in real time such as which wells and booster pumps are in operation and the water level in each of the tanks.

TRUCKEE-DONNER PUBLIC UTILITY DISTRICT

The District acquires its water from aquifers hundreds of feet deep all within the Truckee groundwater basin area. The water is transported to Truckee's higher elevations through a series of pump stations and is stored in water tanks strategically placed throughout the community. The Truckee-Donner Public Utility District's (TDPUD) water system is comprised of three components that include source, storage, and distribution.

There are approximately 7,000 water customers served by the District. However, this includes only a small number of customers in the Plan area. As **Figure 4.11-1** shows, only two subdivisions, Ponderosa Palisades and Martiswoods Estates, in the northwestern most portion of the Plan area are located within the TDPUD boundary. In addition, the TDPUD and PCWA have a formal contract where by the TDPUD provides water maintenance and billing for the Lahontan subdivision in exchange for a fee from the PCWA.

As **Table 4.11-2** shows, presently there are approximately 8,366 equivalent dwelling units (edu) served by the TDPUD's water system. In addition, **Table 4.11-2** shows at buildout, the TDPUD estimates that there will be 20,593 edu's including existing service areas and potential new service areas within and outside the current TDPUD service boundaries. TDPUD is currently negotiating the acquisition of the Donner Lake Utility Company and the Glenshire system. These acquisitions will effectively expand TDPUD's existing system.

TABLE 4.11-2
TDPUD PROJECTED WATER SYSTEM DEMAND (EDU)

Year	Residential Dwelling Units	Commercial Equivalent Dwelling Units	Total Equivalent Dwelling Units
1996	5807	1650	7457
2000	6511	1855	8366
2005	7475	2174	9649
2010	8595	2448	11043
2015	9620	2706	12326
Buildout	13522	7061	20583

Source: TDPUD, 1997

The TDPUD currently has a maximum daily demand of 6,337 gallons per minute (gpm). In 1999 this figure was 5,299 gpm. The source demand is estimated to be approximately 12,255 gpm at buildout. The TDPUD currently has potable water source capacity of 9,480 gpm; however, due to limitations in pumping and transmission, only approximately 7,800 gpm are available to the water system. One additional well has been constructed since the 1997 Water System Masterplan was printed. This additional well has increased the District's potable water source capacity by approximately 1,601 gpm (Kaufman, 2001).

The 1997 Water System Masterplan proposed a new service area, Area 5, which would have provided water service to a small area within the Placer County side of Martis Valley, including Lahontan I and II, as well as areas of Eaglewood and Hopkins Ranch. Area 5 would have required the construction of the proposed Placer Well and water distribution system. The 2001 Water System Masterplan has removed all mention of Area 5 and the proposed Placer Well. At present, TDPUD has no plans to build wells outside of the service area or within the Placer County side of Martis Valley. TDPUD is currently involved in discussions with PCWA regarding water service provision to the entire Martis Valley area. No agreements have been finalized at this time (Kaufman, 2001).

Pumping Facilities

The TDPUD utilizes groundwater exclusively as its source of water supply. Historically, the TDPUD used a series of springs for water, but due to water quality concerns, these springs are no longer in active service. The TSPUD currently has twelve wells in service. In addition, the TDPUD utilizes a number of pumping facilities to serve the various pressure zones throughout the TDPUD water

supply boundaries. There are 27 pump stations with a total of 66 pumps, including: 12 well pumps; 40 booster pumps; and 14 hydropneumatic system pumps.

Storage Facilities

There are 26 storage tanks in the TDPUD water system with a total capacity of approximately 6,235,000 gallons. All of the tanks, except one, are constructed of steel, either welded or bolted. The Airport Tank is constructed of concrete. In addition, there is one elevated tank that sits about 60 feet above the ground on a steel tower.

Treatment Facilities

Since the TDPUD relies solely on generally high quality groundwater sources, extensive treatment is not required. With one exception, the only treatment process used is chlorine disinfection. Most of the TDPUD's sources include chlorination facilities though some are makeshift installations located in the well buildings. All but one of the chlorination installations uses liquid sodium hypochlorite solution with one gas chlorine installation.

NORTHSTAR COMMUNITY SERVICES DISTRICT

Northstar Community Services District (CSD) provides domestic water service to the Northstar-at-Tahoe resort community. The water sources originate from two natural springs, Sawmill Flat and Big Spring, and one manmade reservoir with 180 acre-feet (af) of storage. The total spring production for low water years is estimated to be 638 acre-feet-annually (afa), based on minimum recorded spring flows. The springs located within Northstar-at-Tahoe discharge directly to the surface whether or not the water is used for domestic purposes. Existing spring sources have declined in response to below normal precipitation patterns. Additionally, Northstar-at-Tahoe has two wells located within the golf course. The second well was drilled in the summer of 2001 and is not yet in operation. The residential, commercial, golf course and ski hill (snowmaking) uses in Northstar require water. The golf course is on its own separate well system, which is located within the golf course. The new well is located in the 7th fairway of the golf course (MacKenzie, 2001).

CSD has 2 280,000-gallon storage tanks in Reservoir C, which are located in the Ski Trails Condominium area at an approximate elevation of 6,500 feet. Additionally, there are two 1-million gallon storage tanks in Reservoir D, which is located above the Big Springs development at approximate elevation of 6,700 feet. CSD also has one 180-acre storage reservoir that they use for fire fighting, snow making, and emergency water supplies (MacKenzie, 2001).

All water used within the Northstar is treated through the existing CSD treatment plant, with the exception of the snowmaking water, which is used directly from the reservoir and/or Big Springs.

The use of pressure reducing valves establishes several pressure zones. This provides system pressures in the range of 60 to 120 psi. Existing distribution storage is located to the south of the Ski Trail Condominiums, and consists of two steel tanks with a total capacity of two million gallons. Most transmission and distribution mains are located along Big Springs Drive.

Future Infrastructure

New development within the resort community of Northstar-at-Tahoe will be served by existing water supplies, wells and pumps. Existing supply lines are sized to accommodate planned development. New pipes will be installed along road rights-of-way to supply the future

development areas within the community, including the Northstar Village expansion, employee housing and future residential development.

Future plans include an upgrade to the existing water treatment plant, a third well at the north edge of the development along State Route 267, and a new storage tank to remediate the water pressure problems in Unit 7 (Overlook Place). The storage tank is planned for construction in summer 2002. The exact location of the storage tank has not yet been determined (MacKenzie, 2001).

Historical Water Usage

Historical water usage is summarized in **Table 4.11-3.** These calculations include water lost through leaks or breaks.

TABLE 4.11-3
NORTHSTAR HISTORICAL WATER USE (1988 – 1990)

	Average Use	Maximum Use
Domestic and Commercial	199 AF	232 AF (1989)
Golf Course	219 AF	245 AF (1988)
Snowmaking	72 AF	122 AF (1990)
TOTAL	**490 AF**	

Source: Northstar CSD (Lochridge, 2001)

4.11.4.2 REGULATORY FRAMEWORK FOR WATER SERVICES

STATE

Drinking Water Standards

Drinking water standards are defined in various chapters of Title 22 of the California Code of Regulations (CCR). Several revisions are currently proposed and under review that would bring the CCR into compliance with the Federal Interim Enhanced Surface Water Treatment Rule (IESWTR) and the Stage 1 Disinfectants and Disinfection Byproducts Rule (DBPR). These regulations are administered by the California Department of Health Services (DHS).

Senate Bill (SB) 610 and Assembly Bill (AB) 901

During the 2001 regular session of the State Legislature, SB 610 and AB 910 – Water Supply Planning were signed and became effective January 1, 2002. SB 610 amends Public Resources Code section 21151.9, requiring any EIR, negative declaration, or mitigated negative declaration for a qualifying project to include consultation with affected water supply agencies (current law applies only to NOPs). SB 610 also amends the following: Water Code 10656 and 10657 to restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resource; Water Code section 10910 to describe the water supply assessment that must be undertake for projects referred under PRC section 21151.9, including an analysis of groundwater supplies. Water agencies would be given 90 days from the start of consultation in which to provide a water supply assessment of the CEQA lead agency; Water Code section 10910 would also specify the circumstances under which a project for which a water supply assessment was once prepared would be required to obtain another assessment. AB 910 amends Water Code section 10631, expanding the contents of the urban

water management plans to include further information on future water supply projects and programs and groundwater supplies.

Senate Bill (SB) 221

SB 221 adds Government Code section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within 5 days of the subdivision application being accepted as complete for processing by the city or county. It adds Government Code section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring a sufficient water supply to be available. Proof of availability must be requested of and provided by the applicable public water system. If there is no public water system, the city or county must undertake the analysis described in section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

LOCAL

Martis Valley General Plan

The existing Martis Valley General Plan incorporates policies pertaining to groundwater.

Environmental Resource

Policy 5 Maintain sufficient groundwater recharge areas to allow the groundwater source to be perpetually available for domestic use.

Policy 7 A determination must be made of the effect of high intensity uses on the underground water level of Martis Valley, including usage and water quality, before any extensive development, which may affect the groundwater, occurs.

Community Development and Transportation

Policy 7 The counties should establish or designate a single controlling entity within the valley for water and sewage disposal services. A timetable of development for both water and sewer facilities prepared by this entity would be included in the guidelines for the county on all future approvals of development. Further development cannot proceed until an effective sewer and water system is funded and under way for each development project.

Placer County General Plan

The Placer County General Plan includes policies and programs that require new development to occur only when there is a demonstrated long-term reliable water supply, promote the maintenance of state water quality standards in domestic water supplies, and promote efficient use of water and water conservation in new and existing development. In addition, the policies and programs under Goal 4.B of the General Plan address funding of public facilities and services.

Placer County General Plan Policies

The Placer County General Plan includes the following policies pertaining to domestic water supplies:

Policy 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 reports(s) from qualified professionals will be required substantiating the long-term availability of suitable groundwater.

Policy 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.

Policy 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.

Policy 4.C.7 The County shall promote the use of reclaimed wastewater to offset the demand for new water supplies.

Policy 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.

Policy 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.

Policy 4.C.12 The County shall limit the annual rate of growth to three percent in areas where domestic water is supplied by individual or community wells.

The proposed Martis Valley Community Plan policy document contains goals, policies and implementation programs that are generally consistent with the policy provisions of the Placer County General Plan.

4.11.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A public services or utilities impact is considered significant if implementation of the project would result in any of the following:

1) Result in the need for new systems, or a substantial expansion or alteration to the local or regional water treatment or distribution facilities; local or regional water supplies that would result in a physical impact to the environment.

METHODOLOGY

Analysis of potential water service impacts of the Proposed Land Use Diagram and Alternatives AA, AB and AC was based on consultation with the Placer County Water Agency (PCWA), Truckee Donner Public Utility District (TDPUD), and a review of reports produced by PCWA and TDPUD. Review of the Placer County General Plan, the Existing Martis Valley General Plan, and the proposed Martis Valley Community Plan were also used in this analysis. The reader is referred to Section 4.7 (Hydrology and Water Quality) regarding the evaluation of groundwater resource and hydrological impacts of increased groundwater usage. This impact focuses on potential environmental impacts associated with development of the water distribution system for planned growth.

Impact 4.11.4.1 Water Facilities and Distribution Systems

PP Implementation of the Proposed Land Use Diagram would increase the demand for water facilities and distribution systems in the Plan area, including new systems, supplies, and infrastructure. This would be a **significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would increase the demand for water facilities and distribution systems in the Plan area, including new systems, supplies, and infrastructure. This would be a **significant** impact.

AB Implementation of the Alternative 1 Land Use Map would increase the demand for water facilities and distribution systems in the Plan area, including new systems, supplies, and infrastructure. This would be a **significant** impact.

AC Implementation of the Alternative 2 Land Use Map would increase the demand for water facilities and distribution systems in the Plan area, including new systems, supplies, and infrastructure. This would be a **significant** impact.

PP Proposed Land Use Diagram

Implementation of the Proposed Land Use Diagram would result in up to 9,220 residential units as well as additional commercial and office uses. This would increase the demand for water supply

as well as new systems, supplies and facilities. Buildout under this land use map would increase the current population and extend development patterns into the Plan area. The Proposed Land Use Diagram includes residential development along the southern edge of the Plan area west of State Route 267, residential and ski-based commercial uses east of State Route 267 across from the Northstar-at-Tahoe resort community, and residential and ski-based commercial uses to the northwest of Northstar-at-Tahoe. These proposed developments would require additional infrastructure in order to receive potable water.

PCWA is prepared to accommodate the development in the Plan area. Their technical studies have determined that the water is available to serve the projected buildout of the area. However, PCWA's current facilities and infrastructure are not large enough to handle the anticipated increase in water volume or demand. In order to provide the same level or service to their customers, PCWA would require approximately three additional acres of land and a new 4,000 to 5,000 square foot permanent facility in the Plan area to adequately serve the proposed development. PCWA would also require office facility for administrative and operations and maintenance staff, vehicle and equipment storage area, indoor storage for water system components, indoor shop for equipment repair area, staff and customer parking, water system telemetry control, and a vehicle and equipment wash down area. In order for PCWA to provide water to the Plan area, excluding Northstar, they would need to expand their service area to include the proposed development areas associated with the Proposed Land Use Diagram, additional storage tanks, wells, distribution lines, and potentially pumps. PCWA and TDPUD are currently in negotiations regarding water service distribution in the Plan area. Truckee Donner Public Utility District (TDPUD) does not currently have the capacity to serve the buildout of the Plan area and PCWA wants to expand their service area. It is anticipated that PCWA would be the main purveyor of potable water in the Plan area, with Northstar CSD providing water only to the community of Northstar-at-Tahoe. New development would be required to meet the fire departments and water agencies' fire flow standards, requiring a minimum of 1,000 gallons per minute (gpm) fire flow for residential uses and 1,500 gpm for commercial uses sustained over a 2-hour period. This would likely require water storage tanks to provide fire protection, necessary pressure regulation and diurnal supply. At present no sites or rights-of-way have been secured for the future water storage tanks, office facility, wells, or water distribution lines. The potential exists for environmental impacts to result from the construction of the necessary administrative center for PCWA, new well sites, storage tanks, and other infrastructure. Most likely the pipelines would be located within existing rights-of-way. This would eliminate the risk of environmental impacts resulting from new pipelines. The wells and storage tanks would likely be located on land purchased by PCWA or on future development sites within the Plan area.

Planned development within the Northstar-at-Tahoe resort community would also require new pipelines, wells and storage facilities. An additional storage tank is also planned within an existing development area called Unit 7. The Northstar Village expansion, employee housing project and future residential developments would require additional water distribution lines within Northstar-at-Tahoe as well. The new water lines would utilize the existing supply lines that were sized to accommodate future growth and would be located within road and utility rights-of-way. CSD's existing system has adequate capacity and would not require new pumps, tanks, or wells to serve the Northstar Village expansion project (Auerbach, 2001). The planned water distribution system expansion within Northstar-at-Tahoe is expected to occur mainly within developed and disturbed areas. This would reduce the potential for environmental impacts. Implementation of the Proposed Land Use Diagram would increase the demand on the PCWA and Northstar CSD's water systems, requiring new wells, distribution lines, storage tanks and facilities within their service areas.

The reader is referred to Section 4.7 (Hydrology and Water Quality) for the water supply discussion.

AA Existing Martis Valley General Plan Land Use Map

Implementation of the Existing Martis Valley General Plan Land Use Map would result in up to 11,688 residential units and additional commercial and office uses. This would increase the demand for water supply as well as new systems, supplies and facilities. Buildout under this alternative would increase the current population and extend development patterns into the Plan area. The Existing Martis Valley General Plan Land Use Map includes residential development along the southern edge of the Plan area west of State Route 267, residential and ski-based commercial uses east of State Route 267 across from the Northstar-at-Tahoe resort community, and residential and ski-based commercial uses to the northwest of Northstar-at-Tahoe. These proposed developments would require additional infrastructure in order to receive potable water. Alternative AA would have greater impacts on water distribution than the Proposed Land Use Diagram as a result of increased development potential.

AB Alternative 1 Land Use Map

Implementation of the Alternative 1 Land Use Map would result in up to 10,311 residential units and additional commercial and office uses. This increase would impact the water supply, by increasing the demand for potable water, which would require new systems, supplies and facilities. Buildout under Alternative 1 would increase the current population and extend development patterns into the Plan area. The Alternative 1 Land Use Map proposes residential uses east of State Route 267 across from the Northstar-at-Tahoe resort community. This proposed development would require additional infrastructure in order to receive potable water. Alternative AB would have greater impacts on water distribution than the Proposed Land Use Diagram as a result of increased development potential.

AC Alternative 2 Land Use Map

Implementation of the Alternative 2 Land Use Map would result in 7,956 residential units and additional commercial and office uses. This increase would impact the water supply, by increasing the demand for potable water, which would require new systems, supplies and facilities. Buildout under Alternative 2 would increase the current population and extend development patterns into the Plan area. The Alternative 2 Land Use Map proposes residential uses east of State Route 267 across from the Northstar-at-Tahoe resort community. This proposed development would require additional infrastructure in order to receive potable water. Alternative AC would have fewer impacts on water distribution than the Proposed Land Use Diagram.

<u>Policies and Implementation Programs</u>

The following Martis Valley Community Plan policy and implementation programs in Section VI (Public Facilities and Services) would reduce potential impacts discussed regarding water distribution in the Plan area.

Policy 6.C.1 *The County shall require proponents of new development to demonstrate the availability of a long-term, reliable and adequate supply of pure, wholesome, healthful, and potable water as well as any necessary water for irrigation or other purposes. 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 hydrologic testing, and/or report(s) from qualified professionals will be required substantiating the long-term availability of sufficient and suitable groundwater.

Policy 6.C.7 *When considering formation of new water service agencies, the County shall favor systems owned and operated by a public managing entity. The County will authorize new privately owned systems only if the system can demonstrate complete TMF capacity as required by the California Health and Safety Code.*

Implementation Programs

Water Supply and Delivery

9. *In situations where the County has review authority, require mitigation for impacts resulting from new water system facilities.*

   Responsible Agency/Department: Department of Public Works
   Time Frame: On-going
   Funding: Permit Fees

10. *Before allowing individual wells to be the domestic water source in new land developments, require, as part of the environmental review process, demonstration through test wells, water quality analyses, and where appropriate through groundwater pumping and modeling, that the groundwater be a reliable and adequate source of potable water to each user.*

    Responsible Agency/Department: Division of Environmental Health
    Time Frame: On-going
    Funding: Permit Fees

Mitigation Measure

The following mitigation measure is required as an additional policy in the proposed Martis Valley Community Plan under Goal 6.C of the Public Facilities and Services Section. This mitigation measure applies to the Existing Martis Valley General Plan Land Use Map (AA), Alternative 1 Land Use Map (AB) and Alternative 2 Land Use Map (AC).

MM 4.11.4.1 The County shall require subsequent projects to demonstrate that adequate water distribution systems and connections to existing systems will be available and will be able to provide adequate flow and water quality consistent with local, state, and federal standards.

Implementation of the above mitigation measure and proposed policies and implementation programs would reduce the impacts on water distribution systems in the Plan area for the Proposed Land Use Diagram and Alternatives AA, AB and AC to **less than significant**. These measures would ensure that future planned development does not occur without adequate water infrastructure and distribution systems in place.

4.11.4.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

SETTING

The increased population associated with the cumulative conditions would increase the resident population and non-residential uses in the Plan area and would expand development into areas that are currently without water distribution infrastructure. PCWA and Northstar CSD would provide potable water to the Plan area in cumulative conditions. Northstar CSD would only serve development within the Northstar-at-Tahoe resort community. PCWA would serve the rest of the plan area. The cumulative setting for the projected PCWA service area includes all of the Plan area, except for the Northstar CSD and its sphere of influence. PCWA would be required to expand their service area to encompass the proposed development areas associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC, excluding the Northstar-at-Tahoe resort community. Additionally, further development within Zone 4 would likely require additional infrastructure, including wells, storage tanks, distribution pipelines and treatment facilities.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.4.2 Cumulative Impacts on Water Facilities and Distribution Systems

PP Under cumulative conditions, implementation of the Proposed Land Use Diagram would not increase the demand for water facilities and distribution systems outside of the Plan area, including new systems, supplies, and infrastructure. This would be a **less than significant** impact.

AA Under cumulative conditions, implementation of the Existing Martis Valley General Plan Land Use Map would not increase the demand for water facilities and distribution systems outside of the Plan area, including new systems, supplies, and infrastructure. This would be a **less than significant** impact.

AB Under cumulative conditions, implementation of the Alternative 1 Land Use Map would not increase the demand for water facilities and distribution systems outside of the Plan area, including new systems, supplies, and infrastructure. This would be a **less than significant** impact.

AC Under cumulative conditions, implementation of the Alternative 2 Land Use Map would not increase the demand for water facilities and distribution systems outside of the Plan area, including new systems, supplies, and infrastructure. This would be a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

The water suppliers in the area are not currently equipped to supply water to the areas outside of the Plan area under cumulative conditions. PCWA does not currently have adequate facilities, wells, storage tanks or distribution systems to provide water service to the entire Martis Valley area (outside of the Plan area). New water facilities and distribution systems would be required to accommodate buildout under cumulative conditions if water service was required outside of the Plan area. However, development associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC would not have a significant impact on water facilities and distribution systems in the Plan area under cumulative conditions.

Policies and Implementation Programs

New development projects in the area would be required to comply with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation on water services. The reader is referred to Impact 4.11.4.1 regarding applicable proposed policies and implementation programs.

Mitigation Measures

None required.

4.11.5 WASTEWATER SERVICE

4.11.5.1 EXISTING CONDITIONS

Wastewater service in the Plan area is provided by 3 entities: Tahoe-Truckee Sanitation Agency, Truckee Sanitation District, and Northstar Community Services District. However, Tahoe-Truckee Sanitation Agency collects wastewater from the other 2 and conveys it to treatment facilities east of Truckee.

TAHOE-TRUCKEE SANITATION AGENCY

In 1972, after a decade of debate and concern regarding the impact that numerous wastewater discharges were creating on the water quality of Lake Tahoe, 1 regional entity, Tahoe-Truckee Sanitation Agency (T-TSA), became responsible for collecting and treating wastewater from communities located along the northern and western shore of Lake Tahoe and the Town of Truckee and its environs. In 1978, the original wastewater treatment facilities began operation.

T-TSA provides sewage collection services to Truckee, the Plan area, Kings Beach, Tahoe City, Squaw Valley, and development along the western edge of Lake Tahoe. The T-TSA currently collects wastewater from 5 member sewage collection agencies and conveys it to the treatment facilities located east of the Town of Truckee. After treatment, the facilities discharge effluent to a land disposal area via subsurface leach field system. The treated effluent then migrates through the soil northward approximately 1 mile, where it eventually enters the Truckee River and the lower reaches of Martis Creek. The member agencies served by T-TSA facilities include:

- Tahoe City Public Utility District
- North Tahoe Public Utility District
- Alpine Springs County Water District
- Squaw Valley Public Service District
- Truckee Sanitary District (TSD)

In addition, T-TSA facilities serve the Northstar Community Services District through an agreement with TSD.

Existing Capacity and Treatment Facilities

Tahoe-Truckee Sanitation Agency operates a 7.4 million gallon per day (mgd) treatment facility east of Truckee. The T-TSA's Water Reclamation Plant (WRP) facilities provide tertiary-level

treatment of wastewater. The mainstream treatment processes consist of raw sewage screening, grit removal, primary sedimentation, pure oxygen activated sludge, biological phosphorous removal, filtration, ion exchange ammonia removal, and chlorination. Organic sludges are anaerobically digested and then dewatered and transported to an existing landfill in Lockwood, Nevada.

The T-TSA's facilities consist of 6 major systems that compose the wastewater treatment process which include:

- Primary and secondary treatment
- Phosphorous removal
- Advanced wastewater treatment
- Effluent disposal and final soil treatment
- Organic sludge digestion
- Solids dewatering

The T-TSA WRP is sized primarily to treat the maximum sewage flows that occur during summer periods with the influx of seasonal residents and visitors. While winter periods actually show larger seasonal populations in the T-TSA service area, the character and activities of the summer visitors result in greater sewage loadings on the treatment facility.

The WRP is currently operating at about 80 percent of its design capacity of 7.4 million gallons per day (mgd) during peak summer-flow periods based on seven day average flow, with approximately 1.5 mgd remaining in unutilized capacity. The plant was operating at the same capacity in 1999 when the service area population was 90,190 (T-TSA, 1999). However, based on current estimates of planned population growth, peak wastewater flows would exceed the capacity of the plant near the year 2004.

T-TSA uses a wastewater generation rate of 200 gallons per day (gpd) per single-family residential dwelling unit or single-family units (sfu's). Rates for commercial and other land uses are based on sfu's. One sfu is equal to two toilets and two laboratories or sinks. Lodging units are each equivalent to 1/3 sfu, swimming pools are equal to ½ sfu, and ten restaurant seats are equal to one sfu. Ski resorts in the area, such as Northstar-at-Tahoe, could equate to 235 sfu's including the ski runs and the commercial uses associated with the Village-at-Northstar (Beals, 2001). Wastewater volumes produced by non-residential land uses are calculated by multiplying the equivalent sfu by the 200 gallon per day rate. T-TSA's service charges are based upon these values (Beals, 2001).

The WRP is currently in the environmental review stages for a planned expansion of the current facility to a capacity of 9.6 mgd. The planned WRP expansion would also include improvements to the Truckee River Interceptor (TRI) and the existing TSD sewage treatment lagoons. The TRI, which is a gravity sewer, runs from Tahoe City to the WRP collecting raw sewage from five member districts. The TRI includes pipes with diameters ranging from 24 to 42 inches. Most likely, new sewer lines would connect to the existing siphon line along State Route 267 and would be located within road rights-of-way. As part of the WRP expansion, selected manholes along the TRI would be reconstructed to increase the capacity of the TRI. An increased capacity would allow the TRI to operate in a pressurized condition along various segments of the pipeline route in order to accommodate future populations. T-TSA anticipates that the expansion will cost $50,000,000 and will most likely be paid for by money in the Wastewater Capital Reserve Fund and possibly from a State Revolving Fund loan. Otherwise, T-TSA may float a bond issue in order to pay for the planned expansion. T-TSA anticipates that the facility would be constructed by 2005 (Beals, 2002). The Lahontan Regional Water Quality Control Board recently issued T-TSA's

permits for the WRP expansion. Additional sewer trunk lines would also be necessary to serve new development areas. The planned expansion to the WRP is expected to accommodate projected development in the Plan area within T-TSA's service area (Woods, 2001). A 9.6 mgd capacity would accommodate buildout conditions in the entire T-TSA service area (based on a projected population of 143,000 people), assuming a peak summer seven day average flow in the year 2015 (T-TSA, 1999).

T-TSA is funded by property tax revenue, service charges and connection charges. Property tax revenue is used for administration and overhead expenses of T-TSA. Service charges pay for operation and maintenance costs of the facility, and connection charges pay for capital outlay and expansion costs. Connection charges, 4,000 dollars per equivalent dwelling unit, are paid as development occurs. In 2001, T-TSA's budgeted capital expenses are projected to be $3,867,295. T-TSA's budget also includes $945,900 in property tax and $5,954,534 in service charges (Woods, 2001).

Wastewater Conveyance Facilities in the Martis Valley Community Plan Area

There are currently wastewater conveyance pipelines and facilities located along Schaffer Mill Road and within the Northstar-at-Tahoe resort community. These facilities connect into the siphon line along State Route 267, maintained by TSD. This siphon line extends from the T-TSA Water Reclamation Plant to Northstar. There are approximately 20 miles of sewer line than run from the T-TSA treatment plant to Tahoe City along the Truckee River.

Petition filed against Tahoe-Truckee Sanitation Agency by Reno, et al.

The EIR for the proposed expansion of the T-TSA treatment facility was challenged by the City of Reno, City of Sparks, and the Lake Paiute Tribe in 1998 because of concerns over the adequacy of the environmental analysis of the WRP expansion and the potential for the expanded facility with a 9.6mgd capacity to dramatically increase pollutant loadings in the Truckee River and Pyramid Lake, which could impact 2 fish species protected under the Endangered Species Act. A settlement was reached in January 2002 with an agreement that T-TSA would construct an enhanced wastewater treatment system utilizing biological nitrogen removal technology. The upgraded plant is anticipated to reduce salt loading by 22 percent, thus preventing approximately 26 million pounds of salt from entering the Truckee River over the next 30 years (DeLong, 2002). Additionally, nitrogen and chlorine pollution would be significantly reduced, by 34 percent and 30 percent respectively, thereby reducing chlorides by 3,000 pounds per day (City of Reno, 2002). The biological nitrogen removal technology would cost approximately $15 million dollars in addition to the $59 million dollars required to expand the facility (DeLong, 2002; City of Reno, 2002).

TRUCKEE SANITATION DISTRICT

Formed in 1906, the Truckee Sanitary District (TSD) currently operates under the Sanitary District Act of 1923. The TSD operates and maintains a wastewater collection system of over 300 miles of sewer pipelines and related appurtenances in an area of approximately 38 square miles. The boundaries for the TSD are depicted in **Figure 4.11-1**. Wastewater is transported to the Tahoe-Truckee Sanitation Agency's (T-TSA) Water Reclamation Plant (WRP) which is located south of Glenshire Drive and the Truckee River, and north of the Truckee Airport.

NORTHSTAR COMMUNITY SERVICES DISTRICT

Sewage is currently collected primarily by gravity flow throughout the Northstar development, and is transported through a siphon line along State Route 267 to the Truckee Sanitary District (TSD) main in Airport Road. The Northstar CSD and the TSD have an agreement whereby the TSD conveys this sewage to the Tahoe Truckee Sanitation Agency (T-TSA) regional sewage treatment plant located along the Truckee River.

Seasonal population variations result in a broad range of sewage flows. During some parts of the year such as specific holiday weekends during the summer, peak flows may be as high as 400,000 gallons per day (gpd). Weekend ski season flows may be as high as 250,000 gpd. A typical daily average is about 120,000 gpd. Existing wastewater conveyance facilities are designed to provide adequate capacity for the transmission of wastewater flows from approximately 3,700 residential dwelling units.

4.11.5.2 REGULATORY FRAMEWORK FOR WASTEWATER SERVICE

LOCAL

Martis Valley General Plan

The following policy, intended as a guideline and a directive to be used and understood by County staff, legislative bodies, advisory groups, and private citizens, concern outdoor recreation as it relates to the Plan area and the valley's future development.

Community Development and Transportation Policies

Policy 7 The counties should establish or designate a single controlling entity within the valley for water and sewage disposal services. A timetable of development for both water and sewer facilities prepared by this entity would be included in the guidelines for the county on all future approvals of development. Further development cannot proceed until an effective sewer and water system is funded and under way for each development project.

Placer County General Plan

The Placer County General Plan includes policies that provide for new development only where it can be served by adequate wastewater treatment systems, promote water conservation to reduce the need for unnecessary wastewater facility capacity, promote water improvements in existing wastewater treatment systems including improvements to areas which currently have failing onsite systems. These policies also limit new onsite sewage treatment and disposal to areas where the soils and other characteristics would allow for such facilities without threatening surface or groundwater and where such facilities can meet all other County requirements and standards.

Placer County General Plan Policies

The Placer County General Plan includes the following policies pertaining to wastewater:

Policy 4.D.1 The County shall limit the expansion of urban communities to areas where community wastewater treatment systems can be provided.

Policy 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.

Policy 4.D.3 The County shall discourage extension of sewer service outside of city spheres of influence and community plan areas, except in limited circumstances to resolve a public health hazard resulting from existing development, or where there is a substantial overriding public benefit.

Policy 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.

Policy 4.D.5 The County shall encourage pretreatment of commercial and industrial wastes prior to their entering community collection and treatment systems.

Policy 4.D.6 The County shall promote functional consolidation of wastewater facilities.

Policy 4.D.7 The County shall permit on-site sewage treatment and disposal on parcels where all current regulations can be met and where parcels have the area, soils, and other characteristics that permit such disposal facilities without threatening surface or groundwater quality or posing any other health hazards.

Policy 4.D.8 The County shall require that the on-site treatment, development, operation, and maintenance of disposal systems comply with the requirements and standards of the County Division of Environmental Health.

Policy 4.D.9 The County requires septic tank maintenance by a public entity as a condition of tentative map approval for major subdivisions in which septic tanks are to be used.

Policy 4.D.10 The County shall continue use of current technically based criteria in review and approval of septic tank/leachfield systems for rural development.

Policy 4.D.11 The County shall facilitate extension of septic tank effluent pumping (STEP) service or conventional wastewater collection service to areas with failing on-site systems.

The proposed Martis Valley Community Plan policy document contains goals, policies and implementation programs that are generally consistent with the policy provisions of the Placer County General Plan.

Town of Truckee

TRUCKEE SANITARY DISTRICT CODE

Standards for construction of sanitary sewer facilities are found in the Truckee Sanitary District Code, currently Ordinance 1-98. The TSD Code outlines TSD policy, provisions and regulations, fees, and charges, installation, inspection, and maintenance of sanitary sewer facilities.

Typically, the TSD requires large developments to design, fund, and install the sanitary sewer system necessary to service the proposed development in accordance with the TSD Code. If the installed sanitary sewer system meets TSD specifications, the developer may choose to dedicate said facilities to the TSD, whereby the TSD takes over the responsibility for operation and maintenance of the system.

4.11.5.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A public services or utilities impact is considered significant if implementation of the project would result in any of the following:

1) Result in the need for new systems or supplies, or a substantial expansion or alteration to the wastewater treatment and disposal systems.

2) Result in a substantial increase in wastewater flows over current conditions and treatment capacity.

METHODOLOGY

Evaluation of potential impacts on wastewater facilities and services was based on consultation with Tahoe-Truckee Sanitation Agency, Tahoe Sanitation Agency, and Northstar Community Services District, review of the Tahoe-Truckee Sanitation Agency Water Reclamation Plant Expansion Project Draft EIR (April 1999), and County and Martis Valley documents and policies.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.11.5.1 Wastewater Service

PP Implementation of the Proposed Land Use Diagram would require additional capacity in the WRP and the extension of sewer trunk lines to serve additional residents, businesses, and recreational uses within the Plan area. This would be a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would require additional capacity in the WRP and the extension of sewer trunk lines to serve additional residents, businesses, and recreational uses within the Plan area. This would be a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map would require additional capacity in the WRP and the extension of sewer trunk lines to serve additional residents, businesses, and recreational uses within the Plan area. This would be a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map would require additional capacity in the WRP and the extension of sewer trunk lines to serve additional residents, businesses, and recreational uses within the Plan area. This would be a **less than significant** impact.

PP Proposed Land Use Diagram

Implementation of the Existing Martis Valley General Plan Land Use Map would result in up to 9,220 residential units, as well as commercial and recreational uses. The residential domestic flow associated with this alternative would generate approximately 1.8 million gallons of wastewater per day, assuming full-time occupancy of the residences. Based on a 20 percent full-time occupancy, the Proposed Land Use Diagram would generate approximately 0.37 mgd of wastewater. This volume is based on T-TSA's wastewater generation rate of 200 gallons per day per residential dwelling unit (gpd/du), which does not include commercial and recreation uses or peak use periods (Beals, 2001). Based on current wastewater generation rates in the Plan area, reasonable estimates for non-residential uses would be one sfu for an 18-hole golf course, five sfu's for commercial uses, 20 sfu's for a 200-seat restaurant, 100 sfu's for a 300-room hotel, and 235 sfu's for a ski resort. Wastewater generation rates for non-residential uses are based upon the specific uses and the size of the use. Therefore, it is difficult to assess the impacts of the commercial, office, and recreation uses associated with the Proposed Land Use Diagram. T-TSA's existing Water Reclamation Plant (WRP) is currently operating at 80 percent of its 7.4 mgd capacity, which is approximately 5.9 mgd. The residential uses associated with the Proposed Land Use Diagram would increase the amount of wastewater treated in the WRP to 8.2 mgd. T-TSA anticipates their service area population to reach 143,000 by the year 2015. The entire Martis Valley Community Plan area is included within the T-TSA service area, except for the federally owned lands that are scattered throughout the plan area. The proposed expansion of the WRP would accommodate the projected wastewater flows associated with buildout of their service area, assuming a seven day peak population of 143,000 (T-TSA, 1999). The expanded WRP with a capacity of 9.6 mgd would adequately accommodate buildout of the Plan area under the Proposed Land Use Diagram. The expansion of the WRP is scheduled for 2005 and the Lahontan Regional Water Quality Control Board recently approved discharges permits for the expansion.

The Proposed Land Use Diagram would require the extension of sewer trunk lines to provide wastewater collection service to the new development areas in the Plan area. The Tahoe-Truckee Sanitation Agency pays for facility improvements and expansions through connection charges, service charges, and tax revenue. Developers pay connection charges ($4,000 per equivalent dwelling unit) at the time development occurs. Therefore, the existing fee program mitigates the financial impacts on the wastewater treatment system. The planned WRP expansion would also include improvements to the Truckee River Interceptor (TRI) and the existing TSD sewage treatment lagoons. The TRI, which is a gravity sewer, runs from Tahoe City to the WRP collecting raw sewage from five member districts. The TRI includes pipes with diameters ranging from 24 to 42 inches. As part of the WRP expansion, selected manholes along the TRI would be reconstructed to increase the capacity of the TRI by allowing it to operate in a pressurized condition along various segments of the pipeline route. This would accommodate future populations. Additional sewer trunk lines would be necessary to serve new development areas. The majority of the sewer trunk lines would be located within road rights-of-way. As such, extensions to sewer trunk lines and new lines would not result in new environmental impacts. However, if any lines would be located outside of road rights-of-way, the project could

potentially result in environmental impacts. Such impacts are addressed in the other sections of this EIR relating to land uses and biological resources.

AA Existing Martis Valley General Plan Land Use Map

Implementation of the Existing Martis Valley General Plan Land Use Map would result in up to 11,688 residential units as well as commercial and recreational uses. The residential domestic flow associated with this alternative would generate approximately 2.3 million gallons of wastewater per day. Based on a 20 percent full-time occupancy rate, Alternative AA would generate approximately 0.47 mgd of wastewater. This volume is based on T-TSA's wastewater generation rate of 200 gallons per day per residential dwelling unit (gpd/du), which does not include commercial and recreation uses or peak use periods (Beals, 2001). Like the Proposed Land Use Diagram, this alternative would require additional infrastructure to accommodate buildout conditions. The Existing Martis Valley General Plan Land Use Map would have the same impacts on wastewater service as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Implementation of this alternative would result in 10,311 residential units, as well as commercial and recreational uses. The residential domestic flow associated with the Alternative 1 Land Use Map would generate approximately 2.1 million gallons of wastewater per day. Based on a 20 percent full-time occupancy rate, Alternative AB would generate approximately 0.41 mgd of wastewater. This volume is based on T-TSA's wastewater generation rate of 200 gallons per day per residential dwelling unit (gpd/du), which does not include commercial and recreation uses or peak use periods (Beals, 2001). Like the Proposed Land Use Diagram, this alternative would require additional infrastructure to accommodate buildout conditions. Alternative AB would have the same impacts on wastewater service as the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

Implementation of this alternative would result in 7,956 residential units, as well as commercial and recreational uses. The residential domestic flow associated with the Alternative 2 Land Use Map would generate approximately 1.6 million gallons of wastewater per day. Based on a 20 percent full-time occupancy rate, Alternative AC would generate approximately 0.32 mgd of wastewater. This volume is based on T-TSA's wastewater generation rate of 200 gallons per day per residential dwelling unit (gpd/du), which does not include commercial and recreation uses or peak use periods (Beals, 2001). Like the Proposed Land Use Diagram, this alternative would require additional infrastructure to accommodate buildout conditions. The Alternative 2 Land Use Map would have the same impacts on wastewater service as the Proposed Land Use Diagram.

<u>Policies and Implementation Programs</u>

The following Martis Valley Community Plan policies and implementation programs in Section VI (Public Facilities and Services) would assist in minimizing impacts on the T-TSA wastewater treatment facility and collection system in the Plan area.

Policy 6.D.1 *The County shall limit the expansion of all but large lot (10 acres+) developments to areas where community wastewater treatment systems can be provided.*

Policy 6.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 facilities are available or needed improvements will be made prior to occupancy.*

Policy 6.D.3 *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 feasible.

Policy 6.D.4 *The County shall require the pretreatment of commercial and industrial wastes prior to their entering community collection and systems where they are found to be detrimental to the community treatment system and in conformance with the requirements of the federal Clean Water Act, federal General Pretreatment Regulations, related State laws, and the Tahoe-Truckee Sanitation Agency Ordinances.*

Policy 6.D.5 *The County shall permit on-site sewage treatment and disposal on parcels larger than 1 acre where access to a wastewater treatment facility is not available and all current County and State regulations can be met, parcels have the area, soils, and other characteristics that permit such disposal facilities without threatening surface or groundwater quality or posing any other health hazards. Where the County will approve individual on-site sewage treatment and disposal, appropriate hydrologic/geologic testing and reporting by a qualified professional, will be required.*

Policy 6.D.6 *The County shall require that the on-site treatment, development, operation, and maintenance of disposal systems comply with the requirements and standards of the County Division of Environmental Health and the Lahontan Regional Water Quality Control Board.*

Policy 6.D.7 *The County shall facilitate the extension of septic tank effluent pumping (STEP) service or conventional wastewater collection service to areas with failing on-site systems.*

Implementation Programs

Sewage Collection, Treatment and Disposal

14. Pursuant to County Ordinance (Chapter 4, Subchapter 1, Section 4.45), require that as part of the environmental review process, each new development proposing to use onsite sewage disposal systems be required to provide appropriate soils testing and study, and be required to provide acceptable preliminary onsite sewage disposal system designs.

Responsible Agency/Department: Division of Environmental Health
Time frame: On-going
Funding: Permit fees

15. *Where testing cannot establish acceptable onsite sewage system designs, require reduced density by elimination of lots which cannot sustain onsite sewage disposal systems.*

    Responsible Agency/Department: Division of Environmental Health
    Time frame: On-going
    Funding: Permit fees

Mitigation Measure

None required.

4.11.5.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

SETTING

Under cumulative conditions, the Tahoe-Truckee Sanitation Agency's service area would be the same as at present and would include the communities of Truckee, Kings Beach, Tahoe City, the Plan area, the western shore of Lake Tahoe, and Squaw Valley. T-TSA service area currently includes the entire Plan area, with the exception of federally owned properties. It is anticipated that unless federally owned properties are purchased by private entities, these properties would continue to be excluded from T-TSA's service area. Under cumulative conditions, T-TSA would continue to provide service either directly or through contracts with the Northstar CSD, or the Truckee Sanitation District (TSD) to all the developed areas of the Plan area. The current T-TSA wastewater treatment facility is operating at 80 percent of its 7.4 million gallons per day (mgd) capacity. The expanded capacity will accommodate the projected service area population of 143,000 in the year 2015. All proposed development associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC falls within T-TSA's service area. Cumulative conditions associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC require the WRP to have an increased capacity. T-TSA is currently expanding the WRP to a capacity of 9.6 mgd. The expanded facility, which is scheduled to be constructed by the year 2005, will include an enhanced wastewater treatment system utilizing biological nitrogen removal technology.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.5.2 Cumulative Wastewater Service

PP Under cumulative conditions, implementation of the Proposed Land Use Diagram would require additional capacity in the WRP and the extension of sewer trunk lines to serve additional residents, businesses, and recreational uses within the Plan area. This would be a **less than significant** impact.

AA Under cumulative conditions, implementation of the Existing Martis Valley General Plan Land Use Map would require additional capacity in the WRP and the extension of sewer trunk lines to serve additional residents, businesses, and recreational uses within the Plan area. This would be a **less than significant** impact.

AB Under cumulative conditions, implementation of Alternative 1 Land Use Map would require additional capacity in the WRP and the extension of sewer trunk lines to serve additional residents, businesses, and recreational uses within the Plan area. This would be a **less than significant** impact.

AC Under cumulative conditions, implementation of Alternative 2 Land Use Map would require additional capacity in the WRP and the extension of sewer trunk lines to serve additional residents, businesses, and recreational uses within the Plan area. This would be a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Cumulative conditions associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC and buildout of the Plan area would require additional capacity in the T-TSA wastewater treatment plant. The current 7.4 mgd facility is not large enough to accommodate the projected growth in the Plan area. TSA projected a buildout population of 143,000 people within their service area in the year 2015. Using the existing wastewater generation numbers in addition to predictions for reasonably foreseeable projects located within the Plan area (as listed in **Table 3.0-1**), it can be deduced that the cumulative conditions in the Martis Valley Community Plan area would generate approximately 1.15 million gallons of effluent per day. This number is based on projected development associated with the proposed and approved projects in the entire Martis Valley, including the Plan area, Placer County, Nevada County and the Town of Truckee. T-TSA's wastewater generation rates for residential uses are 200 gallons per day. In order to calculate cumulative conditions for non-residential uses, single-family unit equivalency factors that were provided by T-TSA were multiplied by the wastewater generation rate for a single-family residential unit (200 gpd). Based on these calculations, cumulative conditions would increase the operational level of the current 7.4 mgd facility to 95 percent of its current capacity. A 95 percent operational capacity would be unacceptable due to the seasonal fluxes in wastewater flow. Furthermore, these calculations do not include the communities outside of the Plan area that are located within T-TSA's service area. T-TSA anticipates that the WRP will be upgraded and expanded to a capacity of 9.6 mgd by 2005. The 9.6 mgd capacity of the expanded WRP facility would accommodate T-TSA's service area under cumulative conditions (Woods, 2001; Beals, 2002).

Cumulative conditions in the Plan area under the Proposed Land Use Diagram and Alternatives AA, AB, and AC would require the extension of sewer trunk lines to serve new development areas, the expansion of T-TSA's current facility, or alternative wastewater treatment methods such as septic systems. As part of the EIR for the WRP expansion, T- T-TSA is funded by property tax revenue, service charges and connection charges equal to $4,000 per equivalent dwelling unit. The planned expansion to the treatment facility would likely be paid for with money in the Wastewater Capital Reserve Fund, a State Revolving Fund loan, or a bond. Additionally, as the population size increases, the funding sources would also increase. The increased funding in addition to current funding sources would pay for impacts associated with cumulative conditions in the Plan area and T-TSA's service area. The impacts associated with the extension of infrastructure are addressed in other sections of this EIR.

<u>Policies and Implementation Programs</u>

New development projects in the area would be required to comply with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation for impacts on

wastewater services. The reader is referred to Impact 4.11.5.1 regarding applicable proposed policies and implementation programs.

Mitigation Measures

None required.

4.11.6 SOLID WASTE SERVICE

4.11.6.1 EXISTING CONDITIONS

TAHOE-TRUCKEE SIERRA DISPOSAL (TTSD)

Tahoe-Truckee Sierra Disposal (TTSD) provides waste removal services for the Lake Tahoe area, including the Plan area. TTSD's service area is generally bordered by Emerald Bay, Crystal Bay, Colfax, Floriston, and Truckee. TTSD is comprised of two separate entities, Tahoe Truckee Disposal and Eastern Regional Landfill Material Recovery Facility (MRF). Tahoe Truckee Disposal is responsible for collecting household waste and recyclables. The Eastern Regional Landfill Material Recovery Facility is located 2 miles south of Interstate 80 on Cabin Creek Road in Placer County, between Truckee and Squaw Valley, west of the Truckee River. The land where the MRF is located is owned by Placer County, resulting from a land trade between the Forest Service and Placer County. TTSD leases the land from Placer County. The MRF is a recycling center for household and construction materials. It also doubles as a transfer station for household waste. All incoming solid waste is recycled or transported to the Lockwood Regional Landfill in Storey County, Nevada. The Lockwood Regional Landfill is comprised of 1,535 acres, which accepts municipal solid waste. At the present rate, the landfill has a 60-year capacity to accommodate the buildout projections for TTSD's service area. Tahoe-Truckee Sierra Disposal and MRF have an 80-year contract with the Lockwood Regional Landfill for disposal services. Currently, they are in year 5 of the contract. The landfill has 200 years of permitted capacity at the site (Ratto, 2001).

The Material Recovery Facility, which was built in 1994-1995, handles household recyclables, including: plastics, aluminum, tin, glass, cardboard, newspaper, carpet, and computers. Additionally, the facility recycles "white goods" such as refrigerators and freezers, and waste wood, which includes dimensional wood (construction remnants) and lot clearing debris. The MRF accepts all the waste for processing. Grinding operations (wood and rubble) occur at the site. The residue is then landfilled in Lockwood, Nevada. In the year 2000, 23,232 tons of material were recovered from the MRF (Johnston, 2001). The MRF also accepts household and small business hazardous waste. Residents may dispose of hazardous waste at the MRF on two Saturdays a month between March and November by appointment. The service is free-of-charge to residents. Businesses are charged a small fee for the service.

The collection arm of TTSD is Tahoe Truckee Disposal (TTD). TTD uses a combination of pickup trucks equipped with large rear mounted bins, and regular front loader garbage trucks to collect waste within the service area. The pickup trucks are used mostly for single-family residences and low-density areas, while the front loaders are used in commercial and multi-family areas. In total, TTD operates close to 40 vehicles.

Funding for solid waste collection comes from collection fees. Residential fees are approximately $13 per can per residence and $16 for two cans per residence. The rates are based on TTSD's contract with Placer County and are increased according to the Consumer Price Index.

Tahoe Truckee Sierra Disposal currently employs 90 people, including both the Eastern Regional MRF and Tahoe Truckee Disposal. These positions include administrative personnel, staff at the shop, MRF and transfer station, as well as truck operators. TTSD increases their workforce by approximately two employees every four years.

At present, TTSD handles approximately 60,000 tons of waste per year and is operating at 75 percent of their capacity. Their total current capacity is 80,000 tons per year. TTSD is planning an expansion of the transfer station and MRF during the summer of 2002. This expansion would increase their capacity by 100 percent (Ratto, 2001). TTSD will continue to expand their services to accommodate the growth and increasing needs of their service area (Ratto, 2001).

Solid Waste Source Reduction Programs in Placer County

The Placer County Solid Waste Management Division manages the Western Placer Waste Management Authority (WPWMA), which works with municipalities and unincorporated areas in the western portion of Placer County. The eastern half of Placer County has only a recycling program that encourage businesses to recycle office paper and the household hazardous waste recycling center which operates from the Eastern Regional Landfill Material Recovery Facility (MRF) in Truckee. Placer County does not currently have a formal solid waste reduction program for the eastern county area, which includes the Plan area.

4.11.6.2 REGULATORY FRAMEWORK FOR SOLID WASTE SERVICES

STATE

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed the California Integrated Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995 and 50 percent by January 1, 2000. They must promote (in order of priority): source reduction, recycling and composting, and environmentally safe transformation and land disposal.

LOCAL

Martis Valley General Plan

The Martis Valley General Plan provides no goals or policies regarding solid waste services.

Placer County General Plan

The Placer County General Plan policies and programs promote safe waste collection, reduction, and recycling and ensure the development of solid waste facilities to serve the needs of Placer County in appropriate locations and sites and designed to minimize the effects of such facilities on adjoining land uses. In addition, the Draft Source Reduction and Recycling Element identifies cost effective diversion programs for Placer County to maximize the life of the existing landfills by means of source reduction, recycling, composting, and environmentally safe transformation and landfill disposal.

Placer County General Plan Policies

The Placer County General Plan contains the following policies pertaining to solid waste:

Policy 4.G.1 The County shall require waste collection in all new urban and suburban development.

Policy 4.G.2 The County shall promote maximum use of solid waste source reduction, recycling, composting, and environmentally safe transformation of wastes.

Policy 4.G.7 The County shall require that all new development complies with applicable provisions of the Placer County Integrated Waste Management Plan.

4.11.6.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A public services or utilities impact is considered significant if implementation of the project would result in any of the following:

1) Result in the need for new systems or supplies, or a substantial expansion or alteration to the solid waste materials recovery or disposal.

2) Substantially affect the County's ability to comply with solid waste source reduction programs.

METHODOLOGY

Evaluation of potential solid waste impacts of the Proposed Land Use Diagram, the Existing Martis Valley General Plan Land Use Map (AA), the Alternative 1 Land Use Map (AB) and Alternative 2 (AC) was based on consultations with the Placer County Waste Management Division and the Tahoe-Truckee Sierra Disposal (TTSD), review of current waste reduction and recycling programs, information provided on the California Integrated Waste Management Board website, the Placer County General Plan, existing Martis Valley General Plan, and proposed Martis Valley Community Plan. Projected development in the Plan area would produce household waste, construction waste, and hazardous waste. Additionally, economics, Placer County and Truckee policies, and State regulations would dictate how solid waste is disposed of and recycled. Market factors would impact the ability of TTSD to continue providing recycling services. The amount of waste that is recycled would impact the amount of solid waste disposed of in landfills. Based on Placer County and MRF standards, solid waste generation rates were assumed to be nine pounds per day per person and construction waste generation rates were assumed to range from two to seven tons per single-family detached house during the course of construction.

Impact 4.11.6.1 Solid Waste Disposal

PP The Proposed Land Use Diagram would require solid waste disposal services. However, the solid waste provider, Tahoe-Truckee Sierra Disposal (TTSD), is capable of accommodating buildout of the Plan area. The Proposed Land Use Diagram would result in **less than significant** impacts on solid waste disposal services.

AA The Existing Martis Valley General Plan Land Use Map would require solid waste disposal services. However, the solid waste provider, Tahoe-Truckee Sierra Disposal (TTSD), is

capable of accommodating buildout of the Plan area. Alternative AA would result in **less than significant** impacts on solid waste disposal services.

AB Alternative 1 Land Use Map would require solid waste disposal services. However, the solid waste provider, Tahoe-Truckee Sierra Disposal (TTSD), is capable of accommodating buildout of the Plan area. Alternative AB would result in **less than significant** impacts on solid waste disposal services.

AC Alternative 2 Land Use Map would require solid waste disposal services. However, the solid waste provider, Tahoe-Truckee Sierra Disposal (TTSD), is capable of accommodating buildout of the Plan area. Alternative AC would result in **less than significant** impacts on solid waste disposal services.

PP Proposed Land Use Diagram

Implementation of the Proposed Land Use Diagram would result in up to 9,220 residential units, 6 acres of office uses and 39 acres of general commercial uses under maximum allowable buildout. At buildout this Land Use Map would generate approximately 43,647 pounds per day, which equates to 7,966 tons of solid waste annually, not including construction waste. This number is based on Placer County's solid waste generation rate of 9 pounds per day per person (Johnston, 2001) and 2.63 persons per household, assuming a 20 percent full-time occupancy rate. Placer County's generation rate, which is based on residential numbers, takes into account all land uses. However, these numbers do not include construction waste. Based upon the construction generation rates of solid waste, two to seven tons per single-family detached house, it can be assumed that the development associated with the Proposed Land Use Diagram would generate between 18,438 tons and 64,533 tons of construction waste. Construction waste is temporary in nature and only occurs once for each structure. Much of the construction waste would be recycled at the MRF. The remaining construction waste would be ground and then transported to the Lockwood Regional Landfill for disposal. Tahoe-Truckee Sierra Disposal (TTSD) provides solid waste disposal services for the Plan area. TTSD's recycling program (Material Recovery Program) at the MRF dramatically reduces the amount of residential and construction waste to be disposed of in landfills. TTSD has a long-term contract (200 years) with a landfill in Lockwood, Nevada where they dispose of residential and commercial solid waste. The Nevada landfill has a 60-year capacity based on the total buildout calculations for TTSD's service area. The increase in population associated with the Proposed Land Use Diagram would not have a significant impact on the Lockwood Regional Landfill's capacity. However, the increase would eventually require additional vehicles and trips to the landfill to dispose of the waste. This could potentially have an environmental impact on air quality and traffic. Such impacts are addressed in Sections 4.4 (Traffic and Circulation) and 4.6 (Air Quality). Implementation of the Proposed Land Use Diagram would have a less than significant impact on the solid waste services in the Plan area.

AA Existing Martis Valley General Plan Land Use Map

Implementation of the Existing Martis Valley General Plan Land Use Map would result in up to 11,688 residential units and 26 acres of general commercial uses under maximum allowable buildout. At buildout this alternative would generate approximately 55,331 pounds per day, which equates to 10,098 tons of solid waste annually, not including construction waste. This number is based on Placer County's solid waste generation rate of nine pounds per day per person (Johnston, 2001) and 2.63 persons per household, assuming a 20 percent full-time occupancy rate. Placer County's generation rate takes into account all land uses. However, these numbers do not include construction waste. Based upon the construction generation

rates of solid waste, two to seven tons per single-family detached house, it can be assumed that the development associated with the Existing Martis Valley General Plan would generate between 23,112 tons and 80,892 tons of construction waste. This alternative would result in similar impacts as the Proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Implementation of the Alternative 1 Land Use Map would result in up to 10,311 residential units, one acre of office space and 22 acres of general commercial uses under maximum allowable buildout. At buildout this alternative would generate approximately 48,812 pounds per person, which equates to 8,908 tons per year, not including construction waste. Based upon the construction generation rates of solid waste, two to seven tons per single-family detached house, it can be assumed that the development associated with Alternative AB would generate between 21,162 tons and 74,067 tons of construction waste. This alternative would result in similar impacts as the Proposed Land Use Diagram.

AC Alternative 2 Land Use Map

Implementation of the Alternative 2 Land Use Map would result in up to 7,956 residential units, 12 acres of office space and 29 acres of general commercial uses. At buildout this alternative would generate approximately 37,664 pounds of solid waste per day, which equates to 6,874 tons annually, not including construction waste. Based upon the construction generation rates of solid waste, two to seven tons per single-family detached house, it can be assumed that the development associated with Alternative AC would generate between 15,810 tons and 55,335 tons of construction waste. This alternative would result in similar impacts as the Proposed Land Use Diagram.

Policies and Implementation Programs

The proposed Community Plan does not contain policies or implementation programs pertaining to solid waste service and disposal. It refers to the Placer County General Plan Section 4, Goals & Policies 4.G 1 through 4, 6, and 11.

Mitigation Measure

None required.

4.11.6.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

SETTING

The service area of the Tahoe-Truckee Sierra Disposal Company (TTSD) encompasses the greater Lake Tahoe area. Specifically, TTSD's service area is bordered by Emerald Bay, Crystal Bay, Colfax, Floriston, and Truckee. The population within TTSD's service area would likely exceed 140,000 by the year 2015. Under cumulative conditions, TTSD would expand their services to provide solid waste disposal service to developed areas within their service area. Assuming TTSD's planned expansion of the transfer station and MRF during the summer of 2002 is successful, the current MRF would have an increased capacity of 160,000 tons per year. TTSD will continue to expand their services to accommodate the growth and increasing needs of their service area (Ratto, 2001). TTSD has a guaranteed 60-year capacity at the Lockwood Regional Landfill and an 80-year contract. Additionally, the landfill has 200 years of permitted capacity. If necessary TTSD could revise or renew their contract to dispose additional solid waste in the

Lockwood Regional Landfill. The solid waste collection service is paid through collection fees, which range from $13 to $16 per residence. Collection fees are based on a contract with Placer County and are occasionally increased in accordance with the Consumer Price Index.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.6.2 Cumulative Solid Waste Disposal

PP Under cumulative conditions, the Proposed Land Use Diagram would require solid waste disposal services. However, the solid waste provider, Tahoe-Truckee Sierra Disposal (TTSD), is capable of accommodating buildout of the Plan area. The Proposed Land Use Diagram would result in **less than significant** impacts on solid waste disposal services.

AA Under cumulative conditions, the Existing Martis Valley General Plan Land Use Map would require solid waste disposal services. However, the solid waste provider, Tahoe-Truckee Sierra Disposal (TTSD), is capable of accommodating buildout of the Plan area. Alternative AA would result in **less than significant** impacts on solid waste disposal services.

AB Under cumulative conditions, Alternative 1 Land Use Map would require solid waste disposal services. However, the solid waste provider, Tahoe-Truckee Sierra Disposal (TTSD), is capable of accommodating buildout of the Plan area. Alternative AB would result in **less than significant** impacts on solid waste disposal services.

AC Under cumulative conditions, Alternative 2 Land Use Map would require solid waste disposal services. However, the solid waste provider, Tahoe-Truckee Sierra Disposal (TTSD), is capable of accommodating buildout of the Plan area. Alternative AC would result in **less than significant** impacts on solid waste disposal services.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Based on population projections, cumulative conditions in the Plan area associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC would generate between 6,874 and 10,098 tons of solid waste per year. Assuming a population exceeding 140,000 in the year 2015, TTSD's entire service area would generate more than 230,000 tons of waste per year, not including construction waste. Construction waste in the Plan area associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC would contribute between 15,810 and 80,892 tons of construction waste to the MRF. The generation of construction waste would be temporary in nature, whereas the household solid waste would be continuous. The Lockwood landfill has a 60-year capacity for buildout conditions of the TTSD service area. Tahoe Truckee Sierra Disposal has 75 years left on an 80-year contract with the landfill. The additional solid waste associated with cumulative conditions would require additional personnel and equipment at the MRF and additional trips to Lockwood Regional Landfill in Storey County, Nevada to dispose of the solid waste. TTSD's funding from service charges could be used to pay for an expansion of their current facilities and operations. Such money could also be used to invest in state-of-the-art equipment for collection, grinding, recycling, and transport of the solid waste. TTSD would continue to implement source reduction principles and practices through their Material Recovery Program as part of the State's AB 939 requirements. TTSD provides household and construction recycling at their MRF near Truckee. Additionally, they plan to expand their recycling capabilities at the MRF.

Potential impacts on air quality and traffic are discussed in Sections 4.4 and 4.6 of this EIR.

Policies and Implementation Programs

The proposed Community Plan does not contain policies or implementation programs pertaining to solid waste service and disposal. It refers to the Placer County General Plan Section 4, Goals & Policies 4.G 1 through 4, 6, and 11.

Mitigation Measures

None required.

4.11.7 ELECTRICAL, NATURAL GAS, AND TELEPHONE SERVICES

4.11.7.1 EXISTING CONDITIONS

ELECTRICAL AND NATURAL GAS SERVICE

The Sierra Pacific Power Company currently provides electric service to the plan area. The Sierra Pacific Power Company is a regulated utility in Nevada and is currently required to serve projects in its service area. The Sierra Pacific Power Company serves the plan area from a substation in Truckee. This arrangement would be sufficient to supply a small increment in area development provided the load is in close proximity to the areas including the Northstar and Lahontan developments. Additional load would require the construction of a new electrical substation or substation and transmission line in the vicinity of the 115 KV transmission line located within the Lahontan development area. The additional transmission line would be required if no location for a new substation were available near the Lahonton transmission line. Alternatively the existing substation would be expanded and the distribution lines from the substation to the proposed development area would be constructed if the load increase would be small.

The Sierra Pacific Power Company generates approximately 80 percent of the power it supplies. The remaining supplies are purchased as needed. Provided that electricity is available for purchase, no shortfall in electrical energy supply is anticipated.

The Truckee Donner Public Utility District (TDPUD), which in turn receives electricity from Idaho Power has been discussing provision of power to the plan area with the Sierra Pacific Power Company. The TDPUD operates an electrical substation in the Plan area that is used mainly for backup supply. The TPUD indicates that they have sufficient power and resources to provide power to the plan area if an agreement to do so can be reached with the Sierra Pacific Power Company.

The California electrical industry was deregulated in March 1998. Since the summer of 2000, the State has been experiencing a shortage of electrical generation. This shortage has been caused by several factors including, but not limited to, substantial statewide population and industry growth, complications associated with deregulation, increases in power and natural gas costs, decreases in power generation capacity of the Pacific Northwest (Oregon and Washington), and inadequate power generation capacity within the State.

There have been short-term shortages of electrical energy on the California transmission grid during peak use times and rolling blackouts in 2001. The California Energy Commission has been accelerating the approval and construction of additional electrical generation facilities and the California Public Utilities Commission has been working to improve the transmission grid. There

remains a threat of power shortages during peak period demand in the next year as many of the new facilities are not yet available but will be in the next year or two.

The availability of electrical energy from the electrical grid in California has been of concern since deregulation of electrical utilities (while Sierra Pacific Power Company is not a part of the area governed by the Independent System Operator in California it is linked to the California transmission grid with a 115 KV line in the vicinity of the proposed plan area and would be able to use power supplied from the California grid).

Much of the new additional electrical generating capacity uses natural gas as the source of energy. There have been problems since deregulation getting sufficient supplies to California to meet demand during peak usage periods forcing up the price of natural gas. This situation is expected to diminish as other transmission facilities are constructed to transport natural gas from Texas and Canada. Supplies of natural gas are expected to be adequate for the planning period.

Currently natural gas service is available in some portions of the Plan area including the Northstar-at-Tahoe area from Southwest Gas. There is an existing high-pressure transmission line located in the State Route 267 right-of-way.

The cost of installing new pipelines and pressure reduction equipment is generally considered too high to be feasible for small amounts of development. Tapping into the high pressure main costs an estimated $250,000.00 and installing pipe and pressure reduction equipment could cost an estimated $1,000,000.00. There is a high-pressure transmission line along State Route 267 that could supply gas to the Plan area and has sufficient capacity for the amount of development proposed.

Propane, also known as liquefied petroleum gas, consumption totals approximately 18.4 billion gallons per year in the USA. Residential uses account for approximately 36 percent of domestic propane consumption. Ninety percent of US consumption of propane is produced in the US with the bulk of the imports from Mexico and Canada. Propane is an approved alternative clean fuel listed the 1990 Clean Air Act and National Energy Policy Act of 1992. Propane is produced from natural gas (53 percent) and refining of crude oil (47 percent). Propane is not subject to any price control and is available to those willing to pay the price. The price of natural gas has been related to the price of oil and has historically tracked crude oil prices.

TELEPHONE SERVICE

The Plan area is located within the service area of Pacific Bell Telephone Company that provides telephone service to the area. Pacific Bell has indicated that telephone service can be extended to serve new development provided that sufficient lead-time and details of development locations are provided to ensure that facilities are properly located in anticipation of pending development projects.

4.11.7.2 REGULATORY FRAMEWORK FOR UTILITY SERVICES

LOCAL

Martis Valley General Plan

The existing Martis Valley General Plan does not contain any goals or policies regarding utility services.

Placer County General Plan

The Placer County General Plan does not contain any goals or policies regarding utility services.

4.11.7.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A public services or utilities impact is considered significant if implementation of the project would result in any of the following:

1) Result in the need for new systems or supplies, or a substantial expansion or alteration to power or natural gas that results in a physical impact on the environment.

METHODOLOGY

Evaluation of potential impacts on electrical, natural gas and telephone services resulting from the 3 alternatives was based on consultation with the service providers, review of California Energy Commission policies, State standards, the Placer County General Plan, existing Martis Valley General Plan, and proposed Martis Valley Community Plan.

Impact 4.11.7.1 Availability of Electrical Energy

PP Development associated with the Proposed Land Use Diagram would increase the demand for electricity. However, it would have a **less than significant** impact on electrical supplies.

AA Development associated with the Existing Martis Valley General Plan Land Use Map would increase the demand for electricity. However, it would have a **less than significant** impact on electrical supplies.

AB Development associated with Alternative 1 Land Use Map would increase the demand for electricity. However, it would have a **less than significant** impact on electrical supplies.

AC Development associated with Alternative 2 Land Use Map would increase the demand for electricity. However, it would have a **less than significant** impact on electrical supplies.

PP Proposed Land Use Diagram

Development associated with the Proposed Land Use Diagram would permit up to 9,220. Projected total daily average electrical demand under the Proposed Land Use Diagram is estimated to be approximately 188,752 Kwh (153,052 Kwh for residential uses and 35,700 Kwh for office and commercial uses), assuming full-time occupancy, or 37,750 Kwh, assuming 20 percent full-time occupancy. This is based upon the average consumption of electrical energy, which is 16.6 Kwh per day per residential unit and 0.03 Kwh for every square foot of commercial and office use.

Electrical supplies are available to serve the proposed Martis Valley Community Plan area currently and into the future. Although there have been recent short-term constraints on

electrical energy supplies, this situation is expected to change and new generation facilities will be available in California to supply project needs in the time frame that the development would occur in the Plan area. Even though Sierra Pacific Power Company, a Nevada-based company, would serve the Plan area, the energy situation in California is relevant to development in the Tahoe-Truckee area. The California Energy Commission (CEC) has estimated that during peak power use conditions, the State could be as short as 3,050 megawatts (CEC, 2001). The Plan area is currently served by Nevada, which is outside of the California transmission grid. Based on the current situation with the CEC, it is expected that adequate power supplies will be available to serve California. Electrical distribution lines in the project area would need to be extended and improved to Sierra Pacific Power Company standards. Any short-term energy shortages would be limited, temporarily and would create an inconvenience. The Plan area obtains power from Nevada that has not experienced the temporary energy shortages experienced in California in the last year. These services are operated for profit at this time and electrical generation would be expanded to meet the demand as development in the area occurs. As the price of energy rises, the tendency to waste it will be reduced. Project use of electricity would indirectly result in increased use of natural gas (see natural gas supply discussion for more discussion). Since the development within the Plan area would obtain electricity from available supplies in Nevada, potential project energy supply impacts would be considered less than significant.

AA Existing Martis Valley General Plan Land Use Map

Development associated with the Existing Martis Valley General Plan Land Use Map would permit up to 11,688 residential units. Projected total daily average electrical demand under this Alternative is estimated to be 244,451 Kwh (194,021 Kwh for residential uses and 50,430 Kwh for office and commercial uses), assuming full-time occupancy, or 48,890 Kwh, assuming 20 percent full-time occupancy. This alternative would have similar impacts as the Proposed Land Use Diagram on electrical energy supplies.

AB Alternative 1 Land Use Map

Development associated with the Alternative 1 Land Use Map would permit up to 10,311 residential units. Projected total daily average electrical demand under this alternative is estimated to be 207,763 Kwh (171,163 Kwh for residential uses and 36,600 Kwh for office and commercial uses), assuming full-time occupancy, or 41,553 Kwh, assuming 20 percent full-time occupancy. This alternative would have simislar impacts as the Proposed Land Use Diagram on electrical energy supplies.

AC Alternative 2 Land Use Map

Development associated with the Alternative 2 Land Use Map would permit up to 7,956 residential units. Projected total daily average electrical demand under this alternative is estimated to be 167,260 Kwh (132,070 Kwh for residential uses and 35,190 Kwh for office and commercial uses), assuming full-time occupancy, or 33,452 Kwh, assuming 20 percent full-time occupancy. This alternative would have similar impacts as the Proposed Land Use Diagram on electrical energy supplies.

Policies and Implementation Programs

The following Martis Valley Community Plan policy and implementation programs in Section IV (Community Design) and implementation programs in Section VI (Public Facilities and Services) would provide mitigation for impacts on electricity service in the Plan area.

Section IV

Policy 2.B.5 *The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.*

Implementation Programs

Section IV

1. *New development projects shall be reviewed for consistency with the Community Design Section goals and policies contained herein, the Design/Development Standards, and the County's Design and Landscape Design Guidelines available under separate cover at the Planning Department.*

   Responsible Agency/Department: Principally the Planning Department, but may involve other Land Development Departments
   Time frame: Ongoing
   Funding: General Fund

Section VI (General)

2. *The County, in consultation with service providers, shall establish thresholds beyond which new residential development will be restricted until adequate public services and facilities are provided. The extent of development limitations should reflect the severity of the service and facility needs.*

   Responsible Agency/Department: Public Works, Facility Services Department, Special Districts, Planning Department
   Timeframe: Ongoing
   Funding: General Fund

5. *The County shall establish a program, which creates underground conversion districts and establishes priorities for the undergrounding of utilities within specified scenic corridors. This program shall also adopt an ordinance for the payment of in-lieu fees where it is infeasible to underground.*

   Responsible Agency/Department: Public Works Department
   Timeframe: Ongoing
   Funding: General Fund, Permit Fees

Section VI (Utilities)

31. *Review projects for compliance with the EMF doctrine of prudent avoidance.*

    Responsible Agency/Department: Division of Environmental Health
    Timeframe: Ongoing
    Funding: Permit Fee

Mitigation Measure

None required.

Impact 4.11.7.2 Increased Demand for Natural Gas

PP Development associated with the Proposed Land Use Diagram would increase the demand for natural gas. However, it would have a **less than significant** impact on natural gas supplies.

AA Development associated with the Existing Martis Valley General Plan Land Use Map would increase the demand for natural gas. However, it would have a **less than significant** impact on natural gas supplies.

AB Development associated with Alternative 1 Land Use Map would increase the demand for natural gas. However, it would have a **less than significant** impact on natural gas supplies.

AC Development associated with Alternative 2 Land Use Map would increase the demand for natural gas. However, it would have a **less than significant** impact on natural gas supplies.

PP Proposed Land Use Diagram

The Proposed Land Use Diagram would permit up to 9,220 residential units. Therefore, it would contribute an estimated average total natural gas demand of 2,147,990 cubic feet per day (2,046,840 cubic feet per day for residential uses and 101,150 cubic feet per day for commercial and office uses), assuming full-time occupancy, or 429,598 cubic feet per day, assuming 20 percent full-time occupancy. This is based on the average consumption of 222 cubic feet of natural gas per household per day and 0.085 cubic feet of natural gas per day per square foot of commercial development.

Supplies of natural gas to power plants are expected to meet demand for the next 50 years based on studies by the California Energy Commission. Natural gas is used to generate more than 30 percent of electrical energy and at current consumption rates no significant indirect impacts associated with use of natural gas for power generation at other locations are anticipated.
If propane were used by development because natural gas services were not available the project would use approximately eight percent more propane or approximately 240 cubic feet per household per day and 0.92 cubic feet of propane per square foot of commercial development.

AA Existing Martis Valley General Plan Land Use Map

The Existing Martis Valley General Plan Land Use Map would permit up to 11,688 residential units. Therefore, the Existing Martis Valley General Plan Land Use Map (AA) would have an estimated average total natural gas demand of 2,737,621 cubic feet per day (2,594,736 cubic feet per day for residential uses and 142,885 cubic feet per day for commercial and office use), assuming full-time occupancy, or 547,524 cubic feet per day, assuming 20 percent full-time occupancy. This alternative would result in similar impacts as the proposed Land Use Diagram.

AB Alternative 1 Land Use Map

Development associated with the Alternative 1 Land Use Map would permit up to 10,311 residential units. Therefore, the Alternative 1 Land Use Map (AB) would have an estimated average total natural gas demand of 2,392,742 cubic feet per day (2,289,042 cubic feet per day for residential uses and 103,700 cubic feet per day of commercial and office uses), assuming full-time occupancy, or 478,548 cubic feet per day, assuming 20 percent full-time occupancy. This alternative would result in similar impacts as the proposed Land Use Diagram.

AC Alternative 2 Land Use Map

Development associated with the Alternative 2 Land Use Map would permit up to 7,956 residential units. Therefore, the Alternative 2 Land Use Map (AC) would have an estimated average total natural gas demand of 1,865,937 cubic feet per day (1,766,232 cubic feet per day for residential uses and 99,705 for commercial and office uses), assuming full-time occupancy, or 373,187 cubic feet per day, assuming 20 percent full-time occupancy. This alternative would result in similar impacts as the proposed Land Use Diagram.

Policies and Implementation Programs

The following Martis Valley Community Plan policy and implementation programs in Section IV (Community Design) and implementation programs in Section VI (Public Facilities and Services) would provide mitigation for impacts on natural gas service in the Plan area.

Section IV

Policy 2.B.5 *The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.*

Implementation Programs

Section IV

1. *New development projects shall be reviewed for consistency with the Community Design Section goals and policies contained herein, the Design/Development Standards, and the County's Design and Landscape Design Guidelines available under separate cover at the Planning Department.*

   Responsible Agency/Department: Principally the Planning Department, but may involve other Land Development Departments
   Time frame: Ongoing
   Funding: General Fund

Section VI (General)

2. *The County, in consultation with service providers, shall establish thresholds beyond which new residential development will be restricted until adequate public services and facilities are provided. The extent of development limitations should reflect the severity of the service and facility needs.*

Responsible Agency/Department: Public Works, Facility Services Department, Special Districts, Planning Department
Timeframe: Ongoing
Funding: General Fund

5. The County shall establish a program, which creates underground conversion districts and establishes priorities for the undergrounding of utilities within specified scenic corridors. This program shall also adopt an ordinance for the payment of in-lieu fees where it is infeasible to underground.

Responsible Agency/Department: Public Works Department
Timeframe: Ongoing
Funding: General Fund, Permit Fees

Section VI (Utilities)

31. Review projects for compliance with the EMF doctrine of prudent avoidance.

Responsible Agency/Department: Division of Environmental Health
Timeframe: Ongoing
Funding: Permit Fee

Mitigation Measure

None required.

Impact 4.11.7.3 Extension of Electrical, Natural Gas and Telephone Infrastructure

PP The Proposed Land Use Diagram would result in the extension of substantial electrical, natural gas and telephone infrastructure that may impact the environment. This would be a **potentially significant** impact.

AA The Existing Martis Valley Land Use Plan would result in the extension of substantial electrical, natural gas and telephone infrastructure that may impact the environment. This would be a **potentially significant** impact.

AB Alternative 1 Land Use Map would result in the extension of substantial electrical, natural gas and telephone infrastructure that may impact the environment. This would be a **potentially significant** impact.

AC Alternative 2 Land Use Map would result in the extension of substantial electrical, natural gas and telephone infrastructure that may impact the environment. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

Implementation of the Proposed Land Use Diagram would require the extension of electrical, natural gas and telephone infrastructure within the Plan area. Electrical service infrastructure extensions would be required to serve proposed developments that may include an electrical sub-station, distribution lines and transmission lines. A new substation may be required or the existing substation would be reinforced. A new substation would require a transmission line to

serve the substation. Use of the existing substation would require reconductoring of existing transmission routes. Use of the new substation would also require new transmission poles and lines and both options would require varying amounts of distribution facilities. Implementation of the Proposed Land Use Diagram would require the extension of natural gas infrastructure within the Plan area. Some areas of the Plan area are not easily served with pipeline natural gas because of the cost of tapping into the high pressure main along State Route 267. Natural gas infrastructure would be extended to proposed development when sufficient development to pay the costs for hooking into the locally available infrastructure is proposed. Typically natural gas pipelines are located within road or utility rights-of-ways. Locating them within existing rights-of-way would eliminate potential environmental impacts resulting from new trenches. Implementation of the Proposed Land Use Diagram would require the extension of telephone infrastructure within the Plan area. Substantial areas of the Plan area are currently without telephone service and would require new telephone lines. For the most part, new phone lines would be located underground and along rights-of-way. However, there are no infrastructure plans to determine where new telephone lines would be located within the Plan area.

Policies in the proposed Martis Valley Community Plan require that land use patterns encourage energy efficiency, conserve energy requiring less extension of infrastructure, and project approval is granted only when facilities are available or it can be demonstrated that the applicant can arrange to pay for and extend infrastructure. These policies would reduce project infrastructure requirements. Distribution lines would be installed underground avoiding the visual impacts associated with views of these facilities.

AA Existing Martis Valley General Plan Land Use Map

Implementation of this Alternative would also require the extension of electrical, natural gas and telephone infrastructure within the Plan area. This alternative would have similar impacts as the Proposed Land Use Diagram. Policies contained in the proposed Martis Valley Community Plan would reduce project infrastructure requirements. Distribution lines would be installed underground avoiding the visual impacts associated with views of these facilities.

AB Alternative 1 Land Use Map

Implementation of this Alternative would require the extension of electrical, natural gas and telephone infrastructure within the Plan area. This alternative would have similar impacts as the Proposed Land Use Diagram. Policies contained in the proposed Martis Valley Community Plan would reduce project infrastructure requirements. Distribution lines would be installed underground avoiding the visual impacts associated with views of these facilities.

AC Alternative 2 Land Use Map

Implementation of this Alternative would require the extension of electrical, natural gas and telephone infrastructure within the Plan area. This alternative would have similar impacts as the Proposed Land Use Diagram. Policies contained in the proposed Martis Valley Community Plan would reduce project infrastructure requirements. Distribution lines would be installed underground avoiding the visual impacts associated with views of these facilities.

Policies and Implementation Programs

The following Martis Valley Community Plan policy and implementation programs in Section IV (Community Design) and implementation programs in Section VI (Public Facilities and Services) would provide mitigation for impacts on electricity infrastructure in the Plan area.

Section IV

Policy 2.B.5 *The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.*

Implementation Programs

Section IV

1. *New development projects shall be reviewed for consistency with the Community Design Section goals and policies contained herein, the Design/Development Standards, and the County's Design and Landscape Design Guidelines available under separate cover at the Planning Department.*

   Responsible Agency/Department: Principally the Planning Department, but may involve other Land Development Departments
   Time frame: Ongoing
   Funding: General Fund

Section VI (General)

2. *The County, in consultation with service providers, shall establish thresholds beyond which new residential development will be restricted until adequate public services and facilities are provided. The extent of development limitations should reflect the severity of the service and facility needs.*

   Responsible Agency/Department: Public Works, Facility Services Department, Special Districts, Planning Department
   Timeframe: Ongoing
   Funding: General Fund

5. *The County shall establish a program, which creates underground conversion districts and establishes priorities for the undergrounding of utilities within specified scenic corridors. This program shall also adopt an ordinance for the payment of in-lieu fees where it is infeasible to underground.*
   Responsible Agency/Department: Public Works Department
   Timeframe: Ongoing
   Funding: General Fund, Permit Fees

Section VI (Utilities)

31. *Review projects for compliance with the EMF doctrine of prudent avoidance.*

    Responsible Agency/Department: Division of Environmental Health
    Timeframe: Ongoing
    Funding: Permit Fee

Mitigation Measure

The following mitigation measure would apply to the Proposed Land Use Diagram and Alternatives AA, AB and AC in Section VI (Public Facilities and Services).

MM 4.11.7.3 The County shall require new utility infrastructure and extensions for electrical, natural gas and telephone services avoid sensitive natural resources (e.g., wetlands, riparian habitat, sensitive habitats), be located so as to not be visually obtrusive, and, if possible, be located within roadway rights-of-ways or existing utility easements. Infrastructure siting shall comply with the policy and implementation programs set forth in Sections IV, VI, VIII, IX, and X of the Community Plan.

Implementation of the above mitigation measure and proposed policies and implementation programs would mitigate potential impacts on sensitive resources resulting from infrastructure extension to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB and AC.

4.11.7.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

ELECTRICAL ENERGY SETTING

Under cumulative conditions, the Plan area would be provided with electrical energy by either the current provider, the Nevada-based Sierra Pacific Power Company, or Truckee Donner Public Utility District (TDPUD). Both Sierra Pacific Power Company and TDPUD have stated that they would have adequate supplies of electrical energy to provide to the plan area under existing and cumulative conditions (Hosler, 2001; Holzmeister, 2001). Sierra Pacific Power has a substation located in Truckee. They would need additional power lines to supply electrical energy to new development areas in the Plan area. Most likely they would also need to reconductor the existing power lines, upgrade or add additional substations and add additional distribution lines. There is also a possibility that Sierra Pacific Power Company would purchase additional electrical energy supplies from the California transmission grid. TDPUD has a backup supply substation located in the Plan area. They too would likely require an additional substation in order to provide electrical supplies to the Plan area in cumulative conditions. TDPUD would also require additional power lines to provide service to new development areas in the Plan area. Currently, Sierra Pacific Power Company is the sole provider of electrical energy in the Plan area. Unless they sign a contract with TDPUD, Sierra Pacific Power Company would continue to provide power to the area.

The California electrical industry was deregulated in March 1998. Since the summer of 2000, the State has been experiencing a shortage of electrical generation. This shortage has been caused by several factors including, but not limited to, substantial statewide population and industry growth, complications associated with deregulation, increases in power and natural gas costs, decreases in power generation capacity of the Pacific Northwest (Oregon and Washington), and inadequate power generation capacity within the State. Based on the current situation with the California Energy Commission, it is expected that power supplies will be available to serve California.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.7.4 Cumulative Availability of Electrical Energy

PP Under cumulative conditions, development associated with the Proposed Land Use Diagram would increase the demand for electricity. However, it would have a **less than significant** impact on electrical supplies.

AA Under cumulative conditions, development associated with the Existing Martis Valley General Plan Land Use Map would increase the demand for electricity. However, it would have a **less than significant** impact on electrical supplies.

AB Under cumulative conditions, development associated with Alternative 1 Land Use Map would increase the demand for electricity. However, it would have a **less than significant** impact on electrical supplies.

AC Under cumulative conditions, development associated with Alternative 2 Land Use Map would increase the demand for electricity. However, it would have a **less than significant** impact on electrical supplies.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

The Proposed Land Use Diagram and Alternatives AA, AB and AC would increase the demand for electrical energy under cumulative conditions. The developments recently approved and for which applications have been submitted in the Plan area including the Town of Truckee, Placer County, and Nevada County would utilize an estimated 183,725 Kwh of electricity per day. Sierra Pacific Power Company has an adequate supply of electricity to serve the Plan area under cumulative conditions (Hosler, 2001). Additionally, if TDPUD were to take over electric service within the Plan area, they would also have adequate supplies to serve future residential, commercial and office uses associated with the Propose Land Use Diagram and Alternatives AA, AB and AC (Holzmeister, 2001).

Policies and Implementation Programs

New development projects in the area would be required to comply with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation for impacts on electrical service. The reader is referred to Impact 4.11.7.1 regarding applicable proposed policies and implementation programs.

Mitigation Measure

None required.

NATURAL GAS SETTING

Under cumulative conditions, Southwest Gas would continue to provide natural gas service to the Plan area. Southwest Gas has a high-pressure transmission line along the right-of-way of State Route 267. Developments receive natural gas service from smaller gas lines that connect to the main transmission line. In order for future development areas to receive natural gas service, they would need to tap into the main transmission line and construct separate distribution gas lines that would extend into each development. Additional pressure reduction

equipment and pressure regulators would also be required to provide adequate gas pressure to all future Southwest Gas customers.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.7.5 Cumulative Demand for Natural Gas

PP Under cumulative conditions, development associated with the Proposed Land Use Diagram would increase the demand for natural gas. However, it would have a **less than significant** impact on natural gas supplies.

AA Under cumulative conditions, development associated with the Existing Martis Valley General Plan Land Use Map would increase the demand for natural gas. However, it would have a **less than significant** impact on natural gas supplies.

AB Under cumulative conditions, development associated with Alternative 1 Land Use Map would increase the demand for natural gas. However, it would have a **less than significant** impact on natural gas supplies.

AC Under cumulative conditions, development associated with Alternative 2 Land Use Map would increase the demand for natural gas. However, it would have a **less than significant** impact on natural gas supplies.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Development associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC would increase the demand for natural gas within the Plan area. The developments recently approved and for which applications have been submitted in the entire Martis Valley including the Plan area, Town of Truckee, Placer County, and Nevada County would utilize an estimated 1,578,229 cubic feet per day of natural gas per day. Southwest Gas would have sufficient natural gas to supply cumulative development in its service area (Svensson, 2001).

Policies and Implementation Programs

The proposed Martis Valley Community Plan does not contain any policies or implementation programs pertaining to natural gas service.

Mitigation Measure

None required.

4.11.8 PARKS AND RECREATION

4.11.8.1 EXISTING CONDITIONS

Outdoor recreation within the greater Martis Valley area is diverse because of the natural setting of the area. Camping, hiking, skiing, mountain biking, hunting, and fishing are a few examples of recreational opportunities available in Martis Valley. The Truckee River to the west of the valley also provides water activities and additional passive recreational activities.

Northstar-at-Tahoe, which offers skiing in the winter, golf in the summer, is a year round vacation destination and has become one of the primary mountain bike venues during summer months.

The Truckee River offers rafting, fishing and passive recreation, while the surrounding mountains attract skiers in the winter and hikers, campers and backpackers in the summer. Lake Tahoe, located approximately fifteen minutes from the Plan area, offers all forms of recreation and is a premier vacation destination. The Martis Creek Lake Recreation Area, under the jurisdiction of the U.S. Army Corps of Engineers, provides regional recreational opportunities. This recreation area is intended to serve the recreational needs of the regional population.

The Truckee Donner Recreation and Park District (TDRPD) provides recreational facilities and programs in Truckee and Nevada County. Although TDRPD only includes small portions of the Plan area, many Martis Valley residents utilize the TDRPD parks and services located in and around Truckee.

The Martis Valley currently has a comprehensive trail system that connects the Town of Truckee with Martis Peak to the east, Northstar-at-Tahoe to the south, areas adjacent to State Route 267 south of Brockway Summit to the southeast of Truckee, and along the western and southwestern edges of the Plan area. Three proposed trails in the Plan area would provide a connection to the Truckee trail network near the Martis Creek Recreation Area and from the southern edge of Truckee near the proposed Eaglewood project. The Truckee trail system provides access out of town to the north, east, south, and west. The Town of Truckee's Trails Master Plan was recently approved. The Trails Master Plan includes existing and proposed trails within and throughout the Town limits to provide a contiguous connection from the Prosser Recreation area north of Truckee to south of the Plan area as well as an east-west connection from areas west of Donner Lake to areas south and east of Dry Lake. The Town of Truckee's trails and recreation areas are shown on **Figure 4.11-2.** The Plan area trails and recreation areas are shown on **Figure 3.0-9**.

Truckee Donner Recreation and Park District

In operation since 1962, the Truckee Donner Recreation and Park District (TDRPD) provides park and recreation facilities and programs within the Plan area. The TDRPD provides a variety of recreational programs for youth and adults. These programs include youth programs such as preschool and after school programs, special classes, seasonal camps, sports, and field trips; teen programs include activity drop-in center, trips, special events, sports, special classes, and leadership; adult programs include classes, sports and clubs; and aquatics programs include classes, training, and recreational and lap swimming. The TDRPD does not operate any facilities within the Martis Valley Community Plan area.

The recreational facilities located in and around the Town of Truckee include:

- Donner Lake Recreation Park
- Truckee River Regional Park
- Billy Rose Park
- Meadow Park
- Veteran's Hall
- Community Center

The entire TDRPD encompasses approximately 220 square miles; however, less than one-tenth of this area has experienced significant development. The boundaries of the TDRPD are shown in **Figure 4.11-1**. The population within the Truckee Donner Recreation and Park District is approximately 15,000. The populated area of the District is referred to as the "urban corridor". The USFS and private landowners own the lands surrounding the urban corridor. The other 90 percent of the land within the District is natural forests (Mitchell, 2001).

In 1991, the Truckee Donner Recreation and Park District annexed 12.16 square miles of property in the Plan area in order to provide expanded park and recreation services. It should be noted that the Truckee Donner Recreation and Park District is located within Nevada County, except where it crosses into Placer County to include Donner Lake, Sierra Meadows, and Ponderosa Palisades (Mitchell, 2001).

Currently, TDRPD funding comes from property taxes, fees, charges, special assessments, grants and mitigation fees. There are two mitigation-funding mechanisms to address growth. The first is the Quimby Act fee, which provides the District with $1,375 for each newly created parcel (Kimbril, 2001). The second is the AB 1600 fee, which is a building square footage fee of $0.42 per square foot for all new construction (Mitchell, 2001). Park dedication fees have been required from the Lahontan I and II development projects. These park fees have been used to mitigate impacts to recreation and provide public recreational facilities.

In 1994, the County of Placer held a series of meetings in order to establish Park Dedication Fees for projects within the Martis Valley Community Plan area. In 1996, the Martis Valley Parks and Recreation Evaluation and Park Dedication Fee Expenditure Plan was approved and adopted. This Community Plan is the basis for allocating Park Dedication Fees collected from development within the Placer County portion of the Martis Valley.

4.11.8.2 REGULATORY FRAMEWORK FOR PARKS AND RECREATION

LOCAL

Martis Valley General Plan

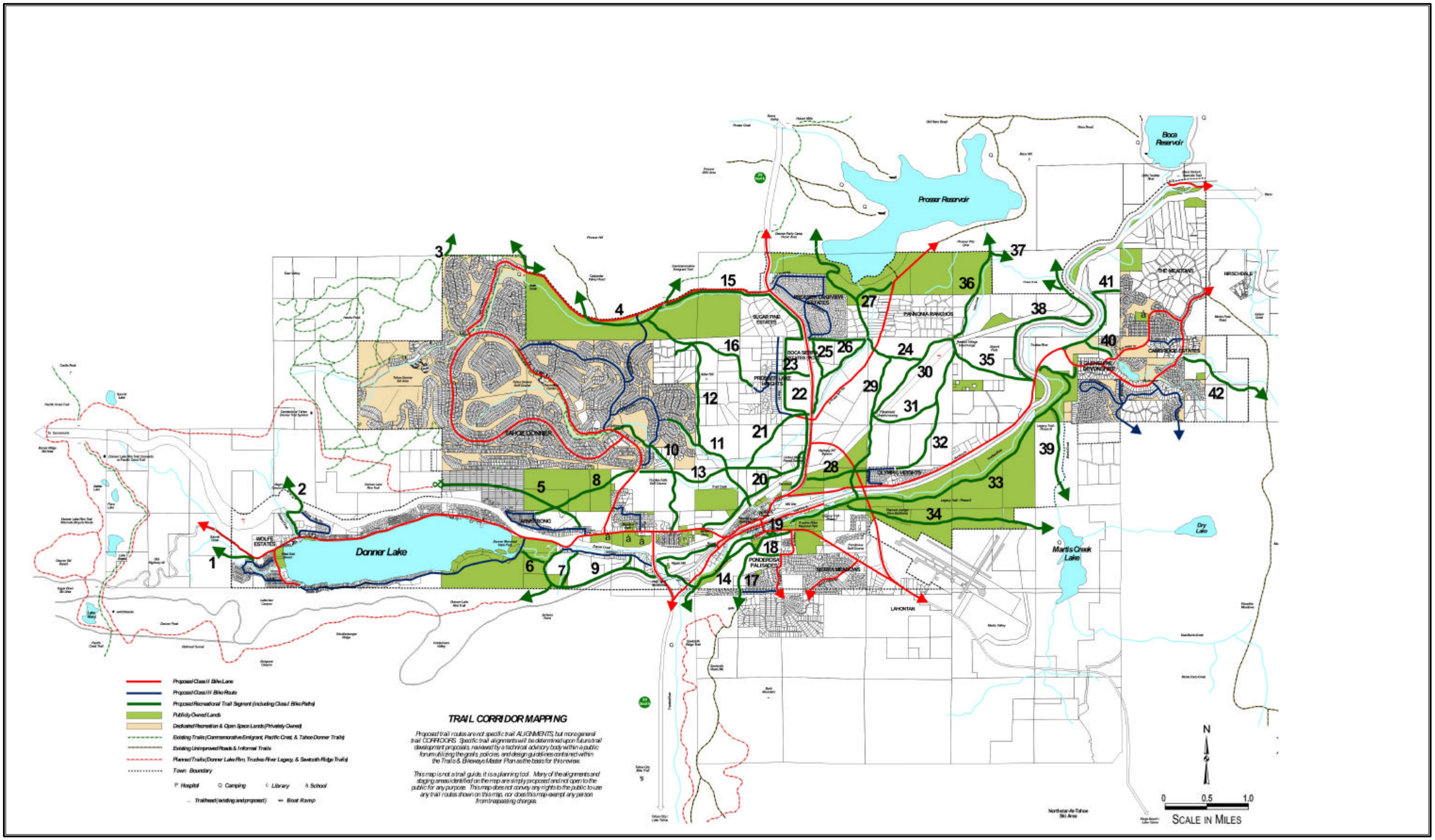
The existing Martis Valley General Plan incorporates policies that pertain to outdoor recreation. These polices include the following:

Environment Resource

Policy 14 Retention and enhancement of the area's outstanding outdoor recreation potential should be carried on.

Community Development and Transportation

Policy 5 Encourage the expansion of public park and recreation facilities for local primary residents and to compliment private recreational amenities.



PMC
PACIFIC MUNICIPAL CONSULTANTS

SOURCE: TRUCKEE PLANNING DEPARTMENT, 2001

FIGURE 4.11-2
TRUCKEE TRAILS AND BIKEWAYS MASTER PLAN
DRAFT LOCAL MAP

Placer County General Plan

While the Placer County General Plan states the eastern county subregion contains "the most abundant and heavily used recreation facilities in the County," the Plan notes only two recreational facilities within the Plan area, the Martis Creek Lake Recreation Area and the Northstar-at-Tahoe ski areas and golf course. All typical active recreation facilities (typical parks, sports fields, etc.) are located at Lake Tahoe. The Placer County General Plan policies establish park and park facility standards and require new development to dedicate land or funding to meet these standards. These policies also provide for the location of these facilities where they are needed while minimizing environmental impacts and conflicts with other uses. The policies and programs call for the creation of new recreation districts and county service areas where needed to provide and maintain recreational facilities. Policies and programs promote a countywide trail system and require new development to contribute to a trail system.

Placer County General Plan Policies

The following Placer County General Plan policies pertain to recreation and parks.

Policy 5.A.1 The County shall strive to achieve and maintain a standard of 5 acres of improved parkland and 5 acres of passive recreation area or open space per 1,000 population.

Policy 5.A.2 The County shall strive to achieve the following park facility standards:

a. 1 tot lot per 1,000 residents
b. 1 playground per 3,000 residents
c. 1 tennis court per 6,000 residents
d. 1 basketball court per 6,000 residents
e. 1 hardball diamond per 3,000 residents
f. 1 softball/little league diamond per 3,000 residents
g. 1 mile of recreational trail per 1,000 residents
h. 1 youth soccer field per 2,000 residents
i. 1 adult field per 2,000 residents
j. 1 golf course per 50,000 residents

Policy 5.A.3 The County shall require new development to provide a minimum of 5 acres of improved parkland and 5 acres of passive recreation area for every 1,000 new residents of the area covered by the development.

Policy 5.A.4 The County shall consider the use of the following open space areas as passive parks to be applied to the requirement of 5 acres of passive park area for every 1,000 residents.

a. Floodways
b. Protected riparian corridors
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.)

Policy 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.

Policy 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.

Policy 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.

Policy 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.

Policy 5.C.1 The County shall support development of a countywide trail system designed to achieve the following objectives:

a. Provide safe, pleasant, and convenient travel by foot, horse, or bicycle;
b. Link residential areas, schools, community buildings, parks, and other community facilities within residential developments. Whenever possible, trails should connect to the countywide trail system, regional trails, and the trail or bikeways plans of cities;
c. Provide access to recreation areas, major waterways, and vista points;
d. Provide for multiple uses (i.e., pedestrian, equestrian, bicycle);
e. Use public utility corridors such as power transmission line easements, railroad rights-of-way, irrigation district easements, and roadways;
f. Whenever feasible, be designed to separate equestrian trails from cycling paths, and to separate trails from the roadway by the use of curbs, fences, landscape buffering, and/or spatial distance;
g. Connect commercial areas, major employment centers, institutional uses, public facilities, and recreational areas.

The proposed Martis Valley Community Plan policy document contains goals, policies and implementation programs that are generally consistent with the policy provisions of the Placer County General Plan.

4.11.8.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A public services or utilities impact is considered significant if implementation of the project would result in any of the following:

1) Increased demand for additional personnel, equipment, or facilities, and/or results in a negative effect that impairs the ability of the service provider to maintain an acceptable level of service for maintenance of public facilities that results in a physical impact on the environment.

METHODOLOGY

The 3 alternatives were evaluated for their impacts parks and recreational services based on consultation with Placer County, the Truckee Donner Recreation and Park District, review of the Martis Valley Parks and Recreation Evaluation and Park Dedication Fee Expenditure Plan, the Placer County General Plan, existing Martis Valley General Plan, and the proposed Martis Valley Community Plan.

Impact 4.11.8.1 Parks and Recreation Facilities

PP Implementation of the Proposed Land Use Diagram would increase the demand for parks and recreation facilities. This would be a **potentially significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would increase the demand for parks and recreation facilities. This would be a **potentially significant** impact.

AB Implementation of the Alternative 1 Land Use Map would increase the demand for parks and recreation facilities. This would be a **potentially significant** impact.

AC Implementation of the Alternative 2 Land Use Map would increase the demand for parks and recreation facilities. This would be a **potentially significant** impact.

PP Proposed Land Use Diagram

Assuming a worst-case scenario, implementation of the Proposed Land Use Diagram, at full buildout, would result in a population of approximately 24,249. The population with a 20 percent full-time occupancy rate would result in approximately 4,850 residents, which would result in an increased demand for parks and recreational facilities, personnel and equipment. Although there are currently large recreation areas within the vicinity of the Plan area, a public trail system connecting the Plan area with the Town of Truckee's trail system and the public trails within the Northstar-at-Tahoe resort community, and winter sports at nearby ski areas, the project would require additional parks and recreation facilities to accommodate the increased population. Using the Placer County parkland standard of five acres of improved and passive parkland or open space per 1,000 persons, the proposed Land Use Diagram would require approximately 121 acres of parkland and recreational facilities (24 acres assuming a 20 percent full-time occupancy). The Proposed Land Use Diagram proposes 3,704 acres of open space, which does not specify the acreage of recreational uses. However, as shown in **Figure 3.0-9**, the County has conceptually identified three future park site options within the Plan area.

The proposed Martis Valley Community Plan policies specify that land be dedicated or fees paid to provide public recreation facilities. The proposed Martis Valley Community Plan policies also specify that new subdivisions would be included in financing districts to pay for the operation and maintenance of new park facilities in the area. Currently the Truckee Donner Recreation and Park District is coordinating with Placer County to receive funding as part of the Martis Valley Parks and Recreation Evaluation and Park Dedication Fee Expenditure Plan. The Proposed Land Use Diagram would increase the population and thus increase the need for additional parkland, recreational equipment and personnel. However, development associated with the Proposed Land Use Diagram may be required to pay recreation impact fees and/or dedicate parkland. Additionally, the TDRPD receives property tax revenue from development within its service area.

There are several funding mechanisms in place to fund parks and recreation facilities in the Plan area. TDRPD receives funding from property taxes, fees, charges, special assessments, grants and mitigation fees. There are two mitigation funding mechanisms to address growth, including the Quimby Act fee, which provides the District with $1,375 for each newly created parcel, and AB 1600 fee, which is a building square footage fee of $0.42 per square foot for all new construction. Additionally, TDRPD receives park dedication fees from some developments located within the Plan area. In 1996, the Martis Valley Parks and Recreation Evaluation and Park Dedication Fee Expenditure Plan was approved and adopted. The proposed Martis Valley Community Plan is the basis for allocating Park Dedication Fees collected from development within the Placer County portion of the Martis Valley. Therefore, impacts on parks and recreation facilities in the Plan area would be paid for by existing funding mechanisms. However, there is there is currently no mechanism in place that would solidify the transfer of parkland from the developments to the TDRPD.

AA Existing Martis Valley General Plan Land Use Map

Assuming a worst-case scenario, implementation of the Existing Martis Valley General Plan Land Use Map, at full buildout, would result in a population of approximately 30,739 residents. The population, assuming a 20 percent full-time occupancy, would be 6,148, which would result in an increased demand for parks and recreational facilities, personnel and equipment. Using the Placer County parkland standard of five acres of improved and passive parkland or open space per 1,000 persons, this alternative would require approximately 154 acres of parkland and recreational facilities (31 acres assuming 20 percent full-time occupancy). The Existing Martis Valley General Plan Land Use Map includes 130 acres of recreation. Development associated with this Alternative may be required to pay recreation impact fees and/or dedicate parkland. This alternative would have similar impacts on parks and recreation as the Proposed Land Use Diagram. Existing funding mechanisms would mitigate impacts on parks and recreation facilities within the Plan area. Additionally, there is there is currently no mechanism in place that would solidify the transfer of parkland from the developments to the TDRPD.

AB Alternative 1 Land Use Map

Assuming a worst-case scenario, implementation of the Alternative 1 Land Use Map, at full buildout, would result in a population of approximately 27,118 residents. Assuming a 20 percent full-time occupancy, the population would be approximately 5,424, which would result in an increased demand for parks and recreational facilities, personnel and equipment. Using the Placer County parkland standard of five acres of improved and passive parkland or open space per 1,000 persons, this alternative would require approximately 135 acres of parkland and recreational facilities (27 acres assuming 20 percent full-time occupancy). The Alternative 1 Land Use Map includes 6,584 acres of open space, which does not identify the acreage of recreational uses. Development associated with the Alternative 1 Land Use Map may be required to pay recreation impact fees and/or dedicate parkland. This alternative would have similar impacts on parks and recreation as the Proposed Land Use Diagram. Additionally, there is there is currently no mechanism in place that would solidify the transfer of parkland from the developments to the TDRPD.

AC Alternative 2 Land Use Map

Assuming a worst-case scenario, implementation of the Alternative 2 Land Use Map, at full buildout, would result in a population of approximately 20,924 residents. Assuming a 20 percent full-time occupancy, this alternative would result in 4,185 residents, which would result in an increased demand for parks and recreational facilities, personnel and equipment. Using the

Placer County parkland standard of five acres of improved and passive parkland or open space per 1,000 persons, this alternative would require approximately 105 acres of parkland and recreational facilities (21 acres assuming 20 percent full-time occupancy). The Alternative 2 Land Use Map includes 3,370 acres of open space, which does not identify the acreage of recreational uses. Development associated with the Alternative 2 Land Use Map may be required to pay recreation impact fees and/or dedicate parkland. This alternative would have similar impacts on parks and recreation as the Proposed Land Use Diagram. Additionally, there is there is currently no mechanism in place that would solidify the transfer of parkland from the developments to the TDRPD.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs in Section VII (Recreation and Trails) would provide mitigation for the potential impacts on parks and recreation facilities.

Policy 7.A.1 *The County and TDRPD shall strive to achieve and maintain a standard of 5 acres of improved parkland and 5 acres of passive recreation area or open space per 1,000 population. Such parkland shall be suitable to generally meet the following standards as well.*

a. 1 tennis court per 6,000 residents
b. 1 tot lot per 1,000 residents
c. 1 playground per 3,000 residents
d. 1 softball/little league field per 3,000 residents
e. 1 hardball field per 3,000 residents
f. 1 basketball court per 6,000 residents
g. 1 mile of recreation trail per 1,000 residents
h. 1 youth soccer field per 2,000 residents
i. 1 adult soccer field per 2,000 residents
j. 1 golf course per 50,000 residents

It is recognized that the area will continue to have a large percentage of second homes and the above standards may be modified, or added to, in order to reflect local conditions and needs.

Policy 7.A.2 *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.*

Policy 7.A.3 *The County and TDRPD shall ensure that park design is appropriate to the recreation needs, and, where feasible, provides access capabilities to all residents and visitors of Placer County.*

Policy 7.A.4 *The County shall not become involved in the operation of organized, activity-oriented recreation programs especially where TDRPD provides those services.*

Policy 7.A.5 *The County shall require the inclusion of new subdivision lands in a type of financing district (such as a County Service Area or a Landscape and Lighting District) to generate sufficient funds to operate and maintain new public park facilities provided in the area.*

Policy 7.B.1 *Provide future park facilities in accordance with park standards and location guidelines as set forth in this Plan and the Countywide General Plan. The County shall work with developers and TDRPD to identify community park sites. Factors, which should be considered in evaluating sites for acquisition, are:*

a. The highest priority shall be the acquisition of 1 large 30-acre parcel within the Plan area that can serve as an active community park site.
b. Higher priority shall be given to sites that are more centrally located to existing and proposed developments.
c. The site shall be easily accessible.
d. The site should allow for multi-purpose use.
e. The site should be within the TDRPD annexed area.
f. The site should be located so as to minimize potential conflicts between neighboring uses and park activities.
g. Where possible, park(s) should be located adjacent to other open space, or public facilities.
h. The park(s) should be usable as trail staging areas and provide connections to regional trails.

Policy 7.B.2 *The County shall work with TDRPD to provide community park facilities that do not duplicate existing facilities. The TDRPD has existing and planned facilities that will serve the Plan area residents. Placer County shall confer with TDRPD to determine a "needs analysis" for the area.*

Policy 7.B.3 *The County shall cooperate with TDRPD, volunteer groups, and organizations that can assist with providing recreation.*

Policy 7.B.4 *The County shall encourage the formation of an agreement for TDRPD to operate County facilities in the Plan area.*

Policy 7.B.5 *In addition to traditional recreation activities, the County shall encourage the development of indoor recreation and winter oriented activities at the community park site. When evaluating sites for the location of high-density recreation activities, the County shall take into account the Truckee/Tahoe Airport Comprehensive Land Use Plan.*

Policy 7.C.1 *The County and TDRPD shall encourage development of private recreation facilities to reduce the demands on public agencies.*

Implementation Programs

1. *Review development projects for compliance with the goals, policies, and specific discussions contained in the Recreation Element and throughout the Plan.*

Responsible Agency/Department: Parks Department, TDRPD, North Tahoe Region Advisory Council, Planning Commission, & Board of Supervisors
Time Frame: Ongoing
Funding: Application fees

2. *The County shall work with local, state, and federal agencies to maintain a comprehensive inventory of all parks and recreation areas and services in the County and to identify other areas suitable for park acquisition and development. A 1994 inventory of existing parks and recreation areas is contained in the Placer County General Plan background report Volume II.*

   Responsible Agency/Department: Parks Department
   Time Frame: Ongoing
   Funding: General Fund

3. *The potential park sites shown on the Plan map will serve as the most desirable sites to meet the future needs of the Martis Valley Community Plan area. As development occurs acquisition of these sites will be considered. This policy does not preclude the acceptance/acquisition of other worthy sites that may become available.*

   Responsible Agency/Department: Parks Department
   Time Frame: Ongoing
   Funding: Various

Mitigation Measure

The following mitigation measure would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC. Mitigation measure MM 4.11.8.1 shall be incorporated into the Community Plan as a policy in Section VII (Recreation and Trails) under Goal 7A.

MM 4.11.8.1 Placer County and the Tahoe Donner Recreation and Park District shall establish a mechanism for transferring parkland and recreational facilities within the Plan area to TDRPD.

Implementation of the above mitigation measure would mitigate potential impacts on park and recreation facilities to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

4.11.8.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

SETTING

The TDRPD and Placer County would continue to provide public recreation areas and facilities in the Plan area. Many future developments would be required to provide parkland and/or recreation facilities to meet the needs of the population in cumulative conditions. TDRPD's fee program and tax revenue and Placer County's Park Dedication Fees would pay for much of the improvements and additions to the existing facilities and parks in the Plan area.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.8.2 Cumulative Impact on Parks and Recreational Facilities

PP Under cumulative conditions, implementation of the Proposed Land Use Diagram would increase the demand for parks and recreation facilities. This would be a **cumulative significant** impact.

AA Under cumulative conditions, implementation of the Existing Martis Valley General Plan Land Use Map would increase the demand for parks and recreation facilities. This would be a **cumulative significant** impact.

AB Under cumulative conditions, implementation of the Alternative 1 Land Use Map would increase the demand for parks and recreation facilities. This would be a **cumulative significant** impact.

AC Under cumulative conditions, implementation of the Alternative 2 Land Use Map would increase the demand for parks and recreation facilities. This would be a **cumulative significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Implementation of the Proposed Land Use Diagram and Alternatives AA, AB and AC in cumulative conditions in the Plan area would result in an increased need for additional parks and recreational facilities to serve the area's population. The Proposed Land Use Diagram and the 3 alternatives would provide some recreational facilities and open space, which would help meet the demand for additional parks and recreation facilities. However, the Placer County standard of 5 acres of parkland for every 1,000 persons would be applied to development associated with the Proposed Land Use Diagram and Alternatives AA, AB and AC. Future development would be required to pay park dedication fees to pay for additional parks and recreational facilities. TDRPD would continue to receive funding from property taxes, charges, special assessments, and grants as well. Therefore, impacts on parks and recreation facilities in the Plan area would be paid for by existing funding mechanisms.

Policies and Implementation Programs

New development projects in the Plan area would be required to adhere to policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation for impacts on parks and recreation facilities. The reader is referred to the Impact 4.11.8.1 regarding applicable proposed policies and implementation programs.

Mitigation Measure

Implementation of mitigation measure MM 4.11.8.1 would mitigate cumulative impacts on park and recreation facilities to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

4.11.9 ROADWAY MAINTENANCE AND SNOW REMOVAL

4.11.9.1 EXISTING CONDITIONS

Placer County maintains the majority of public roadways within Zone 4 (State Route 267 corridor), which includes the subdivisions of Kings Beach, Brockway and Ponderosa, the Plan area, Northstar-at-Tahoe (under contract with Northstar CSD), and all Kingswood subdivisions (Compton, 2001). The County also provides snow removal services for County-maintained roads in the North Lake Tahoe region. Road maintenance is paid for through the County's Road Maintenance Budget, which is currently $13.6 million. Of the $13.6 million, more than $3 million comes from the general fund, $1.6 million came from a one-time general fund in the year 2000, and the rest comes from state and federal sources such as gas taxes (Placer County, 2001). In addition to repair and maintenance of 1,000 miles of County roads, this budget pays for roadside tree and vegetation control, repair and maintenance of 125 bridges, repair and maintenance of 200 miles of guardrail, issuance of encroachment permits (to do work on County roads), issuance of transportation permits (oversize loads, etc.), maintenance of signs, striping, and traffic signals, and snow removal on 235 miles of roadway in established zones (Placer County, 2001).

However, some property owners have entered into maintenance agreements with Placer County to maintain their private roads in the Plan area. In such cases, the County bills the property owners to provide road maintenance, snow removal, street lighting, etc. Some roads within the Plan area are maintained by individual developments. The Lahontan Home Owners Association currently maintains Schaffer Mill Road (Compton, 2001).

The California Department of Transportation (Caltrans) provides road maintenance and snow removal services on all state highways including State Route 267. As part of the California Spending Plan 2000-2001, a total of $2 billion is available for the Traffic Congestion Relief Program, which includes roadway maintenance. This $2 billion figure includes $1.5 billion from the General Fund and $500 million in state gasoline sales tax revenues. Local governments will receive $400 million, based on a specified formula, for street and road maintenance and rehabilitation. The second largest support category under the State's Spending Plan is for the highway maintenance program, for which the budget appropriates $768 million (Legislative Analyst's Office, 2001).

4.11.9.2 REGULATORY FRAMEWORK FOR ROAD MAINTENANCE AND SNOW REMOVAL

LOCAL

Existing Martis Valley General Plan

The existing Martis Valley General Plan incorporates one policy that pertain to roadway maintenance and snow removal.

<u>Community Development and Transportation</u>

Policy 6 Develop a bi-county plan or agreement which indicates who will provide services as police protection, snow removal, and road maintenance before allowing further, major developments.

Placer County General Plan

The Placer County General Plan includes the following policies pertaining to the long-range planning and development of the county's roadway system to ensure the safe and efficient movement of people and goods.

Placer County General Plan Policies

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. Such improvements may include a fair share of improvements that provide benefits to others.

Policy 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.

4.11.9.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A public services or utilities impact is considered significant if implementation of the project would result in any of the following:

1) Increased demand for additional personnel, equipment, or facilities, and/or results in a negative effect that impairs the ability of the service provider to maintain an acceptable level of service for maintenance of roads.

METHODOLOGY

Evaluation of potential impacts on roadway maintenance and snow removal was based on consultation with Placer County Planning Department and Public Works Department staff, review of the State's Legislative Analyst's Office website for funding information on state roadways, and County policies.

Impact 4.11.9.1 Road Maintenance and Snow Removal

PP Implementation of the Proposed Land Use Diagram would require additional roadways within the plan area, thus requiring roadway maintenance and snow removal services. This would be a **less than significant** impact.

AA Implementation of the Existing Martis Valley would require additional roadways within the plan area, thus requiring roadway maintenance and snow removal services. This would be a **less than significant** impact.

AB Implementation of Alternative 1 Land Use Map would require additional roadways within the plan area, thus requiring roadway maintenance and snow removal services. This would be a **less than significant** impact.

AC Implementation of Alternative 2 Land Use Map would require additional roadways within the plan area, thus requiring roadway maintenance and snow removal services. This would be a **less than significant** impact.

PP Proposed Land Use Diagram

Implementation of the Proposed Land Use Diagram would result in 9,220 residential units, six acres of office uses and 39 acres of general commercial. At buildout this alternative would require additional roadways within the plan area, thus requiring roadway maintenance and snow removal services. The roadways within the Plan area are primarily owned by Placer County. Placer County provides roadway maintenance and snow removal services for County roads within Zone 4 (State Route 267 corridor), which includes the Plan area. The County also provides maintenance and snow removal services for many private roads, as part of a reimbursement agreement between the road owner and Placer County. Caltrans provides road maintenance and snow removal for all state highways, including State Route 267. Placer County receives funding from the County's General Fund and from state and federal gas taxes to provide roadway maintenance and snow removal services. Caltrans receives funding from the state's General Fund and state gasoline sales tax revenues. Additionally, the increased population would pay for such services through gas, property and sales taxes. Existing funding mechanisms and the increased funding sources due to a larger population size would pay for roadway impacts in the Plan area resulting from the Proposed Land Use Diagram.

AA Existing Martis Valley General Plan Land Use Map

Implementation of the Alternative 1 Land Use Map would result in 11,688 residential units, and 26 acres of commercial uses, which would require additional roadways within the plan area. This alternative would result in similar impacts as the Proposed Land Use Diagram. Existing funding mechanisms and the increased funding sources due to a larger population size would pay for roadway impacts in the Plan area resulting from the Existing Martis Valley General Plan Land Use Map.

AB Alternative 1 Land Use Map

Implementation of the Alternative 1 Land Use Map would result in 10,311 residential units, one acre of office and 22 acres of general commercial uses, which would require additional roadways within the plan area. This alternative would result in similar impacts as the Proposed Land Use Diagram. Existing funding mechanisms and the increased funding sources due to a larger population size would pay for roadway impacts in the Plan area resulting from the Alternative 1 Land Use Diagram.

AC Alternative 2 Land Use Map

Implementation of the Alternative 2 Land Use Map would result in 7,956 residential units, 12 acres of office and 29 acres of general commercial uses, which would require additional roadways within the plan area. This alternative would result in similar impacts as the Proposed Land Use Diagram. Existing funding mechanisms and the increased funding sources due to a larger population size would pay for roadway impacts in the Plan area resulting from the Alternative 2 Land Use Diagram.

Policies and Implementation Programs

The Martis Valley Community Plan does not contain any policies regarding roadway maintenance and snow removal.

Mitigation Measures

None required.

4.11.9.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

SETTING

Under cumulative conditions, the Plan area would contain additional public and private roadways. Placer County would continue to maintain the majority of public roads in the area, with Caltrans providing maintenance and snow removal services on State highways. Some of the private roads would continue to contract road maintenance services from Placer County.

IMPACTS AND MITIGATION MEASURES

Impact 4.11.9.2 Cumulative Road Maintenance and Snow Removal

PP Under cumulative conditions, implementation of the Proposed Land Use Diagram would require additional roadways within the plan area, thus requiring roadway maintenance and snow removal services. This would be a **less than significant** impact.

AA Under cumulative conditions, implementation of the Existing Martis Valley General Plan Land Use Map would require additional roadways within the plan area, thus requiring roadway maintenance and snow removal services. This would be a **less than significant** impact.

AB Under cumulative conditions, implementation of Alternative 1 Land Use Map would require additional roadways within the plan area, thus requiring roadway maintenance and snow removal services. This would be a **less than significant** impact.

AC Under cumulative conditions, implementation of Alternative 2 Land Use Map would require additional roadways within the plan area, thus requiring roadway maintenance and snow removal services. This would be a **less than significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Implementation of the Proposed Land Use Diagram and Alternatives AA, AB and AC in combination with approved and proposed projects in the Plan area would result in an increased need for increased road maintenance and snow removal to serve the area. Under cumulative conditions, Placer County would continue to receive funding from the County's General Fund and from state and federal gas taxes to provide roadway maintenance and snow removal services. Caltrans would continue to receive funding from the state's General Fund and state gasoline sales tax revenues. Additionally, the increased population would pay for such services through gas, property and sales taxes. Existing funding mechanisms and the increased funding sources due to a larger population size would pay for roadway impacts in the Plan area resulting from the Proposed Land Use Diagram and Alternatives AA, AB and AC.

Policies and Implementation Programs

The Martis Valley Community Plan does not contain any policies regarding roadway maintenance and snow removal.

Mitigation Measure

None required.

REFERENCES

Antonucci, 2001. Antonucci, David, Civil and Environmental Engineer. *Technical Memorandum on Water Demand and Net Depletion for Martis Valley Groundwater Basin*. May 22, 2001.

Barker, 2001. Barker, Chuck. Placer County Sheriff's Department. Telephone conversation. August 17, 2001.

Bartolini, 2001. Bartolini, Julie, Northstar Fire Department. Telephone conversation. August 6, 2001.

Beals, 2001. Beals, Marcia. Tahoe-Truckee Sanitation Agency. Personal communication. November 5, 2001.

Beals, 2002. Beals, Marcia. Tahoe-Truckee Sanitation Agency. Personal communication. January 22, 2002 and January 31, 2002.

Boon, 2001. Boon, Dan, Police Chief. Truckee Police Department. Telephone conversation. September 5, 2001.

Britto, 2001. Britto, John, Director of Facilities. Tahoe Truckee Unified School District. Written correspondence. September 18, 2001.

Engler, 2001. Engler, Joyce, Truckee Fire Protection District. Telephone conversation. August 7, 2001.

California Integrated Waste Management Board, 2001. http://www/ciwmb.ca.gov/wastechar/wastegenrates. September 20, 2001.

CBEDS Report, 2001. California Basic Education Data System (CBEDS) Report for the Tahoe Truckee Unified School District. November 14, 2001.

CH2MHill. *Tahoe-Truckee Sanitation Agency Water Reclamation Plant Expansion Project. Volume 1: Draft Environmental Impact Report*, SCH #98052005. April 1999.

City of Reno, 2002. Http://www.cityofreno.com/news/1012260618.html. May 10, 2002.

Clemetson, Jeff. Sierra Sun. "NCSO officers say goodbye." August 20, 2001.

Compton, 2001. Compton, Ken. Placer County Public Works, Roads Division. Personal communication, July and September, 2001.

DeLong, 2002. DeLong, Jeff. Reno Gazzette Journal. "Settlement Reached in Truckee Sewer Plan Expansion." January 29, 2002.

Folsum, 2001. Folsum, Monty, Project Manager, Measure A. Tahoe Truckee Unified School District. Telephone conversation. September 5, 2001.

Gemma, 2001. Gemma, Pat, Superintendent. Tahoe Truckee Unified School District. Sierra Sun. "Un Mensaje del Superintendente." August 23, 2001.

Hawthorne, 2001. Hawthorne, Kent, Captain, Placer County Sheriffs Department. Telephone conversation. August 21, 2001.

Holzmeister, 2001. Holzmeister, Peter, General Manager. TDPUD. Personal Communication. September 2001.

Hosler, 2001. Hosler, Marty. Sierra Pacific Power Company. Personal communication. November 2001.

Kaufman, 2001. Kaufman, Neil, Water Engineer. Truckee Donner Public Utility District. Telephone conversation. September 18, 2001.

Kirschenstein, 2001. Kirschenstein, Joel, Dr., on behalf of the Tahoe-Truckee Unified School District. Written response to the N.O.P. August 20, 2001.

Koster, 2001. Koster, Rob, Project Manager, Measure C. Tahoe Truckee Unified School District. Telephone conversation. September 5, 2001.

Legislative Analysts Office, August 2000. "California Spending Plan 2000-01, Chapter 3, Part 3." Transportation. September 22, 2001. http://www.lao.ca.gov/2000_reports/spend_plan/0800_spend_plan_chap_3c.html.

MacKenzie, 2001. MacKenzie, Matt; Senior Utilities Service Worker. Northstar Community Services District. Telephone conversation. November 23, 2001.

Martinson, Jim, Lieutenant. Placer County Sheriff's Department. Telephone conversation. May 16, 2001.

Mitchell, 2001. Mitchell, Sue. Truckee Donner Recreation and Park District. Telephone correspondence. September 17, 2001.

Nimbus, 2001. Nimbus Engineers. Groundwater Availability in the Martis Valley Groundwater Basin, Nevada and Placer Counties, California; Final Report. June 2001.

O'Gorman, 2001. O'Gorman, Rosemary. Tahoe Truckee Unified School District. Telephone conversation. August 22, 2001, September 10, 2001, and November 8, 2001.

PCWA, 2001. Placer County Water Agency. Draft Water System Facilities Plan for Martis Valley. Brian C. Martin, P.E. April 2001.

Placer County Water Agency. *Technical Memorandum Regarding Surface Water Availability in Martis Valley*. June 11, 2001.

Placer County Water Agency. *Technical Memorandum Regarding Future Buildout Water Demand in Martis Valley*. June 12, 2001.

Perea, 2001. Perea, Ron, Sergeant. Nevada County Sheriff's Department. Telephone conversation. September 5, 2001.

Pew, 2001. Pew, Marilyn, Tahoe-Truckee Unified School District. Telephone conversation. August 7, 2001.

Pinelli, 2001. Pinelli, Francisco, librarian. Truckee Library. Telephone conversation. September 10, 2001.

Placer County. Martis Valley General Plan. 1974.

Placer County Government. Placer County. May 2000. http://www.placer.ca.gov.

Placer County Road Maintenance Budget. Placer County. August 2000. http://www.placer.ca.gov/news/2000/8-10-00-roads-budget.htm.

Placer County. *Gooseneck Ranch FEIR: Volume I*. September 1993.

Placer County. *General Plan Background Report: Volume II*. August 1994.

Placer County. *Lahontan II Final Environmental Impact Report*. September 1999.

Placer County and Nevada County. *Martis Valley General Plan Technical Supplement and Environmental Impact Report*. August 1974.

Placer County. *Countywide General Plan Final Environmental Impact Report: Volume I*. July 1994.

Placer County Water Agency. *Martis Valley Groundwater Management Plan*. October 1998.

Ratto, 2001. Ratto, Ron. President, Eastern Regional Landfill. Vice President, Tahoe-Truckee Disposal. Telephone conversation. September 12, 2001.

Reed, 2001. Reed, Elaine, Director of Library Services. Telephone conversation. September 19, 2001.

Sierra Sun. "TTUSD School Construction Update." August 23, 2001.

Sommer, Eric. Sierra Sun. "Settlement may be near in Reno suit against sanitation agency." August 23, 2001.

Sommer, Eric. Sierra Sun. "Truckee's first police force is sworn in." August 20, 2001.

Tahoe-Truckee Sanitation Agency. *Tahoe-Truckee Sanitation Agency Water Reclamation Plant Expansion Project, Volume I: Draft Environmental Impact Report*. April 1999.

Tahoe-Truckee Unified School District. May 2000 <www.placercoe.k12.ca.us/ttusd>.

TTUSD, 2001. Tahoe-Truckee Unified School District. *Developer Fee Justification Study and School Facilities Needs Analysis; Update to District's Master Plan and Developer Fee Justification Study*. May 2001.

Terwilliger, 2001. Truckee Fire Protection District. Michael S. Terwilliger, Fire Chief. Written response to the NOP. July 17, 2001.

Town of Truckee Government. Town of Truckee. May 2000 <Tahoe.ceres.ca.gov/truckee/>.

Town of Truckee. Planned Community – 2 Specific Plan. April 2000.

Toy, 2001. Toy, Mal. Placer County Water Agency. Telephone conversation. August, 2001.

Truckee Donner Public Utility District. May 2000 <www.tdpud.org>.

Truckee Donner Public Utility District. *Water System Masterplan 1995-2015*. Adopted March 19, 1997.

Truckee River Operating Agreement, Draft, December 2000. December 22, 2000.

Woods, 2001. Woods, Craig, General Manager, Chief Engineer. Tahoe-Truckee Sanitation Agency. Written correspondence. September 6, 2001.

SECTION 4.12
VISUAL RESOURCES/LIGHT AND GLARE

This section of the EIR describes the existing visual resources of the Martis Valley Community Plan Area (Plan area), summarizes the landscape characteristics of the surrounding area, describes current planning activities in the area, and discusses the impacts associated with implementation of the three land use plan options. The analysis focuses on the anticipated alteration of the landscape characteristics of the Plan area.

4.12.1. EXISTING SETTING

VISUAL CHARACTERISTICS OF THE AREA

Located in the north central Sierra Nevada mountain range, the Plan area consists of a combination of publicly and privately held lands. Martis Valley itself encompasses approximately 70 square miles that fall within Placer and Nevada Counties. The Plan area includes the portion of Martis Valley located in Placer County. The terrain of Martis Valley in the Plan area ranges from gently sloping within the Valley center to steep ridges to the south, east and west.

The visual character of Martis Valley may be characterized into three primary landform types: 1) mountains (mountainsides, slopes, ridges and peaks); 2) forests (gently sloping forestlands); and, 3) valley (open meadow within the valley floor). Both the mountain and the valley classifications are visually sensitive areas with regard to development potential. The forest portions of the Martis Valley have significant potential to accommodate hidden development.

The ability to "hide" development within forested areas is affected by the proximity of viewing locations (areas where the public will have views such as overlooks, recreation areas, and roadways), and the density of the trees within the forest. Density of the forest tends to increase with distance from Valley floor and is generally greatest in the southern portion of the Plan area in the vicinity of Northstar.

Photo 4.12-1 – Northstar development viewed from an adjacent hillside.

While the Martis Valley is a highly scenic area, with vistas of open meadows and surrounding ridges and peaks, there are no designated scenic routes within the planning area. State Route 267 (SR 267) has been considered for designation as a Scenic Corridor, but Placer County has not implemented such a designation.

In addition to SR 267, Schaffer Mill Road is generally considered a scenic corridor with expansive views of the open valley area. This road provides access to the Lahontan project and will ultimately serve additional projects in the vicinity of Lahontan. Schaffer Mill Road is currently a

private road, however, it is anticipated this road will be dedicated to the County. Both SR 267 and Schaffer Mill Road merit consideration for scenic corridor status.

Photo 4.12-2 – Forests along Schaffer Mill Road

In general, the dominant scenic/visual features within Martis Valley are the open valley floor and the surrounding ridges and peaks. Views of these resources are most available from roads located low in the valley where there are no trees or where forest growth is more open. Within the open valley, small streams and perennial creeks are among the most significant visual features. Mt. Pluto within Northstar and the peaks above Donner Lake are among the most striking mountain features viewed from within the valley.

Photo 4.12-3 – Northstar ski area (left), Donner Summit (right) in background and the Martis Valley floor

Photo 4.12-4 – Dry Lake, in the northeast portion of Martis Valley

The 1974 Martis Valley General Plan – Visual Analysis

An analysis of the visual resources within Martis Valley was prepared in conjunction with the 1974 Martis Valley General Plan. This analysis considered resources within both Nevada and Placer Counties and is valid for the Placer County area of the Martis Valley. The 1974 analysis categorized land within the Valley on a basis of visual sensitivity. The determination of an areas visual sensitivity is based on a variety of factors, including whether scenic features such as lakes, streams, or mountain peaks are present; whether unique vegetation, rock outcroppings, or similar resources exist; and the number of people that are typically within view of the visual resource.

The previous analysis appears to have been both thorough and relatively accurate. The analysis was prepared utilizing USGS map for topographic data and field analysis from 32 viewing locations within the Valley. Since the preparation of the 1974 visual analysis, the visual character of the Plan area has been largely preserved and the analysis remains valid today.

Among the products of the 1974 study was a Visual Quality Standards map that designated the level of visual modification that should be allowed within the Valley. The categories applied to Martis Valley on this map include Retention, Partial Retention, Modification, and Maximum Modification. The designations of the 1974 map have been overlayed on the current Martis Valley base map and is presented as **Figure 4.12-1**. The categories of Modification and Maximum Modification have been combined on **Figure 4.12-1**. The 1974 visual analysis proposed that uses within each of these designations should be limited as follows:

Retention: Activities should blend completely into the natural environment. Development or changes to the natural environment should generally not be apparent to the average viewer.

Partial Retention: Development may be evident to the average viewer. However, landscape modifications should be few in number and small in scale. Landscape modifications resulting from development should be rehabilitated within two years.

Modification: Land use developments may be visible to the average viewer and may become visually dominant in the landscape. Landscape modifications should not overwhelm or eliminate the natural character of the landscape.

The intent of the above classifications has generally been maintained by development within Martis Valley. The development associated with Northstar effectively blends into the natural setting, with the exception of the blue metal roofs installed on some earlier structures. The Lahontan development has been integrated within the natural setting and generally does not detract from public views of the Plan area.

Visual Resource Capability

The 1974 Martis Valley visual analysis summarizes the physical circumstances that affect the visual sensitivity of an area. These guidelines on the ability of a site to accommodate development without impacting the visual character of Martis Valley remain valid.

Existing levels of modification: Visual impacts of development are cumulative and the existing development in a natural setting should not be considered a valid reason for further visual impacts.

Perceptual sensitivity: Visual modifications to the foreground of a scenic vista result in greater impacts than more distant modifications.

Visual absorptive capacity: The impact of landscape modifications increases with slope due to the greater visibility of high ground and the inability of tree and vegetation to provide screening. Slope of 50 percent or greater are highly sensitive to visual impacts. Visual absorptive capacity is greatest in areas of dense vegetation such as coniferous forests. Open meadows and sagebrush flats have very low capacity and the visual character of such areas is easily impacted.

Nighttime Lighting Conditions

At nighttime, the Plan area has two areas with distinct lighting. The northwestern portion of the Plan area has a generally low ambient light level, consistent with a rural residential area, and high ambient brightness at the Truckee-Tahoe Airport site. Lighting at the airport site also causes upward lighting, illuminating the night sky above the airport site, and spill light immediately adjacent the airport. South of the Shaffer Mill Road and the airport, nighttime views of the Plan area are largely of intrinsically dark landscape. The Martis Creek Lake Area is unlit at night and the Northstar-at-Tahoe residential areas have resulted in minimal outdoor lighting. The entrance to Northstar-at-Tahoe is well lit, but the lighting effects are local and do not result in significant light pollution to the surrounding area.

4.12.2. REGULATORY FRAMEWORK

LOCAL

Martis Valley General Plan

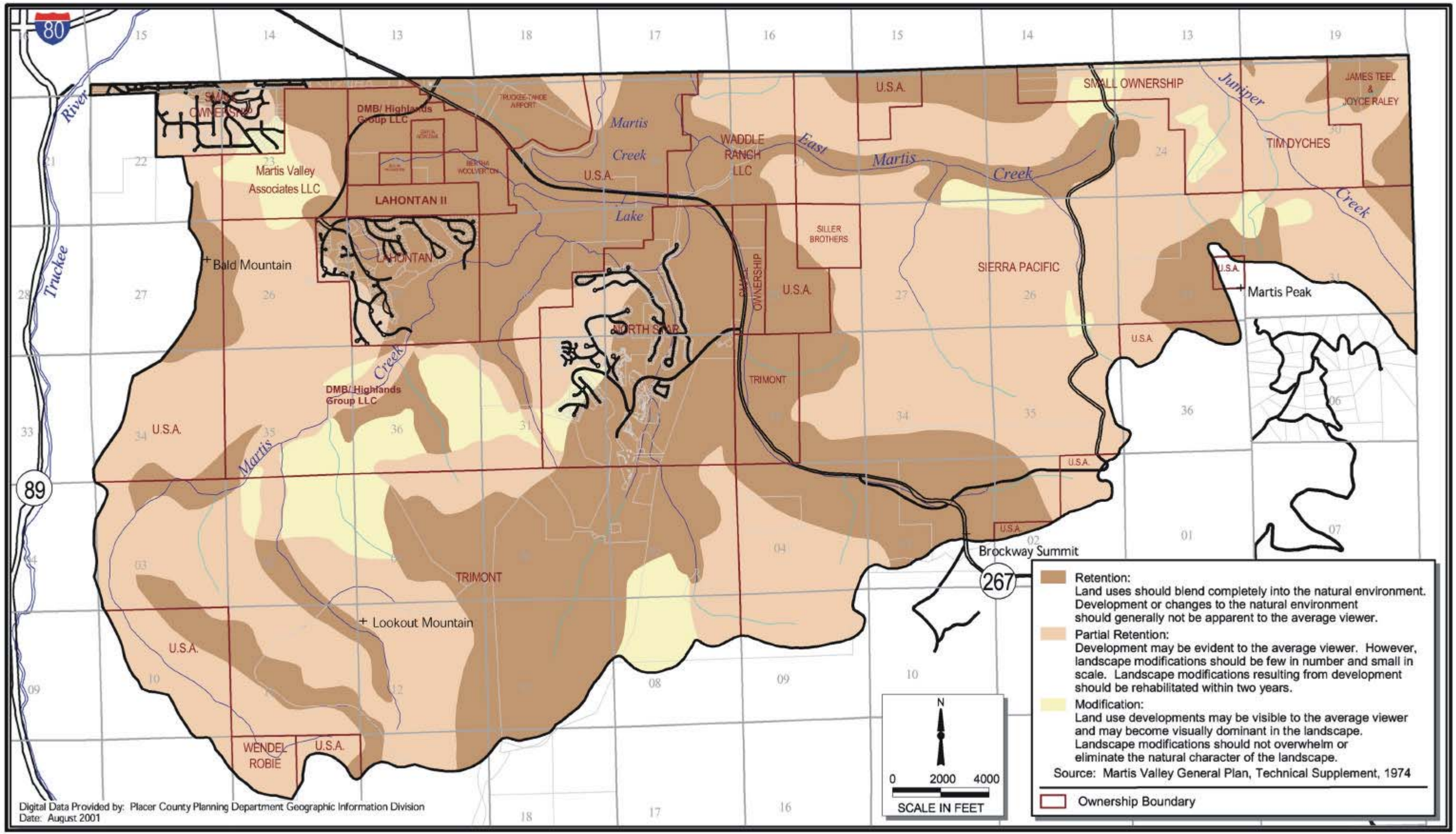
The Martis Valley General Plan states that the visual resources and scenic values of Martis Valley "are of utmost importance in maintaining the quality of life there." Given the reliance of the local economy on tourism, an industry based on the natural resources, and scenic beauty of the area, visual resources also play a fundamental role in the region's economy.

The Martis Valley General Plan notes that a visual analysis was performed by the staff of the Tahoe National Forest. It appears that the results of the National Forest visual analysis provided the basis for the discussion of visual resources contained within the Martis Valley General Plan Technical Supplement and EIR that is discussed above.

The existing Martis Valley General Plan incorporates the following policy that pertains to visual resources:

<u>Environmental Resource</u>

Policy 12 Retention of high quality open space and visual resources is of utmost importance to the future quality of life in Martis Valley.



PMC

FIGURE 4.12-1
VISUAL QUALITY STANDARDS

Placer County General Plan

The Placer County General Plan land use designations within the Martis Valley planning area are predominantly Agriculture/Timberland and Open Space, with nearly 75 percent of the planning area designated for these uses.

Placer County General Plan Policies

The Placer County General Plan includes the following policies regarding visual resources, light and glare:

Policy 1.K.1 The County shall require that new development in scenic areas (e.g., river canyons, lake watersheds, scenic highway corridors, ridgelines, and steep slopes) is planned and designed in a manner which employs design, construction, and maintenance techniques that;

a. Avoids locating structures along ridgelines and steep slopes;

b. Incorporates design and screening measure to minimize the visibility of structures and graded areas;

c. Maintains the character and visual quality of the area.

Policy 1.K.2 The County shall require that new development in scenic areas be designed to utilize natural landforms and vegetation for screening structures, access roads, building foundations, and cut and fill slopes.

Policy 1.K.3 The County shall require that new development in rural areas incorporates landscaping that provides a transition between the vegetation in developed areas and adjacent open space or undeveloped areas.

Policy 1.K.4 The County shall require that new development incorporates sound soil conservation practices and minimizes land alterations. Land alterations should comply with the following guidelines:

a. Limit cuts and fills;

b. Limit grading to the smallest practical area of land;

c. Limit land exposure to the shortest practical amount of time;

d. Replant graded areas to ensure establishment of plant cover before the next rainy season; and

e. Create grading contours that blend with the natural contours on site or with contours on property immediately adjacent to the area of development.

Policy 1.K.5 The County shall require that new roads, paring, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.

Policy 1.K.6 The County shall require that new development on hillsides employ design, construction, and maintenance techniques that;

a. Ensure that development near or on portions of hillsides doe not cause or worsen natural hazards such as erosion, sedimentation, fire, or water quality concerns;

b. Include erosion and sediment control measures including temporary vegetation sufficient to stabilize disturbed areas;

c. Minimize risk to life and property from slope failure, landslides, and flooding; and

d. Maintain the character and visual quality of the hillside.

Policy 1.L.1 The County shall designate scenic routes within the county in order to preserve outstanding scenic quality within the different geographical settings.

Policy 1.L.3 The County shall protect and enhance scenic corridors through such means as design review, sign control, underground utilities, scenic setbacks, density limitations, planned unit developments, grading and tree removal standards, open space easements, and land conservation contracts.

Policy 1.L.4 The County shall provide for landscaping and/or landscaped mounding along designated scenic corridors where desirable to maintain and improve scenic qualities and screen unsightly views.

Policy 1.L.5 The County shall encourage the development of trails, picnicking, observation points, parks, and roadside rests along scenic highways.

Policy 1.L.8 The County shall include aesthetic design considerations in road construction, reconstruction, or maintenance for all scenic routes under County jurisdiction.

The proposed Martis Valley Community Plan policy document contains goals, policies, and implementation programs that are generally consistent with the policy provisions of the Placer County General Plan.

Placer County Rural Design Guidelines

The Placer County Rural Design Guidelines were adopted in 1997 with the goals to 1) identify and document the area's rural characteristics, 2) establish the guidelines for any future development, and 3) preserve and protect the unique rural qualities of the area for future generations. These guidelines have goals and implementation programs directed at open space, planned residential developments (PDs), lighting, lot design, preservation of scenic areas, fences, subdivision entrance features, rural roadways, agriculture, and recreation facilities.

4.12.3. IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

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

- Substantially affect scenic resources or scenic views, including trees, rock outcroppings, or historic buildings within a State Scenic Highway, designated County Scenic Roadway, Scenic River Corridor, roadway eligible for listing as a scenic roadway/highway or other public vantage point locally known for its scenic qualities.
- Substantial or demonstrable negative aesthetic alteration to the existing character of the area. A substantial alteration is characterized by a negative "sense of loss" of character or unique resources or a change that is an obvious and disharmonious modification of the overall scene, to the extent that it clearly dominates the view.
- Introduction of physical features that are substantially out of character with the area.
- Create adverse daytime glare or nighttime light effects.
- Inconsistency with adopted Placer County visual policies.

METHODOLOGY

The visual resource analysis is based on field review of the Plan area; review of topographic conditions; and review of the Martis Valley Community Plan Update and land use map options. The visual quality standards of the Martis Valley General Plan are compared to the 3 land use plans and the acreage of development types in each visual quality area is estimated. PMC staff performed a visual field study of the project area and surrounding roadways from several vantage points within the Plan area and public view areas outside of the Plan area. This analysis is based on anticipated changes in landform from implementation of the four land use map options as well as other anticipated development in the Plan area.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 4.12.1 Alteration of Views from Highways Outside the Plan Area

PP Implementation of the Proposed Land Use Diagram would not result in an alteration of views from highways outside of the Plan area. This would be a **less than significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map would not result in an alteration of views from highways outside of the Plan area. This would be a **less than significant** impact.

AB Implementation of the Alternative 1 Land Use Map would not result in an alteration of views from highways outside of the Plan area. This would be a **less than significant** impact.

AC Implementation of the Alternative 2 Land Use Map would not result in an alteration of views from highways outside of the Plan area. This would be a **less than significant** impact.

PP Proposed Land Use Diagram

Development patterns associated with the Proposed Land Use Diagram would not result in an alteration of views from highways located outside of the Martis Valley Community Plan area. Views of the Plan area from scenic and other highways in the vicinity are limited by intervening topography, vegetation and existing development located outside of the Plan area. A field reconnaissance of views of Martis Valley from nearby scenic highways, including the Yuba Donner Scenic Byway portion of Interstate 80 and State Route 89 (SR 89), was conducted on September 17, 2001. The field reconnaissance found that only a small portion of the eastern Plan area, designated Forest, was viewable from Interstate 80 or SR 89 and that the areas proposed for substantial development were not visible from any of the viewing locations. The Martis Valley is shielded from view by the mountains on its west border and slopes outside of the Plan area obscure views into the Plan area from the north. The portion of SR 267 located within Truckee has limited views of the Plan area, including existing development along SR 267 and the undeveloped lands on the valley floor. Development associated with the Proposed Land Use Diagram would not result in significant impacts from this viewing area. Additionally, development associated with the Proposed Land Use Diagram would result in no impact to the Yuba Donner Scenic Bypass.

AA Existing Martis Valley General Plan Land Use Map

Development patterns associated with the Existing Martis Valley General Plan Land Use Map would not result in an alteration of views from highways located outside of the Martis Valley Community Plan area, including Interstate 80, State Route 89, and the small portion of State Route 267 north of the Plan area in Truckee, similar to the Proposed Land Use Diagram. Additionally, development associated with the Existing Martis Valley General Plan Land Use Map would result in no impact to the Yuba Donner Scenic Bypass.

AB Alternative 1 Land Use Map

Development patterns associated with the Alternative 1 Land Use Map would not result in an alteration of views from highways located outside of the Martis Valley Community Plan area, including Interstate 80, State Route 89, and the small portion of State Route 267 north of the Plan area in Truckee, similar to the Proposed Land Use Diagram. Additionally, development associated with the Alternative 1 Land Use Map would result in no impact to the Yuba Donner Scenic Bypass.

AC Alternative 2 Land Use Map

Development patterns associated with the Alternative 2 Land Use Map would not result in an alteration of views from highways located outside of the Martis Valley Community Plan area, including Interstate 80, State Route 89, and the small portion of State Route 267 north of the Plan area in Truckee, similar to the Proposed Land Use Diagram. Additionally, development associated with the Alternative 2 Land Use Map would result in no impact to the Yuba Donner Scenic Bypass.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs in Section IV (Community Design) would assist in reducing any potential impacts on highways located outside of the Plan area. Additionally, the design guidelines and development standards contained in

the Martis Valley Community Plan would reduce potential impacts on highways located outside of the Plan area.

Policy 2.B.1 *The County shall require that new development in scenic areas (e.g., riparian corridors, lake watersheds, scenic highway corridors, ridge lines and steep slopes) is planned and designed in a manner which employs design, construction, and maintenance techniques that:*

a. Incorporate design and screening measures to minimize the visibility of structures and graded areas;

b. Maintain the character and visual quality of the area.

Policy 2.B.2 *The County shall require that new development in scenic areas be designed to use natural landforms and vegetation for screening structures, access roads, building foundations, and cut and fill slopes.*

Policy 2.B.4 *The County shall require that new development incorporates sound soil conservation practices and minimizes land alterations. Land alterations should comply with the following guidelines:*

a. Limit cuts and fills;

b. Limit grading to the smallest practical area required by the development;

c. Limit land exposure to the shortest practical amount of time;

d. Replant graded areas to ensure establishment of plant cover before the next rainy season; and

e. Create grading contours that blend with the natural contours on site or with contours on property immediately adjacent to the area of development.

Policy 2.B.5 *The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.*

Policy 2.B.6 *The County shall require that new development on hillsides employ design, construction, and maintenance techniques that:*

a. Ensure that development near or on portions of hillsides do not cause or worsen natural hazards such as erosion, sedimentation, fire, or water quality concerns;

b. Include erosion and sediment control measures, including temporary vegetation, sufficient to stabilize disturbed areas;

c. Minimize risk to life and property from slope failure, landslides, avalanches, and flooding; and

d. Maintain the character and visual quality of the hillside.

Policy 2.B.8 *The County shall require that roads, trails, and paths be designed and constructed to minimize erosion and other disturbances to the natural terrain and vegetation. Such facilities shall be designed for economical maintenance.*

Policy 2.B.9 *Each community or major development area should have a well-defined edge, such as agricultural greenbelts or wildlife corridors, permanently protected from development.*

Implementation Program

1. New development projects shall be reviewed for consistency with the Community Design Section goals and policies contained herein, the Design/Development Standards, and the County's Design and Landscape Design Guidelines available under separate cover at the Planning Department.

Responsible Agency/Department: Principally the Planning Department, but may involve other Land Development Departments
Time frame: Ongoing
Funding: General Fund

Mitigation Measure

None required.

Impact 4.12.2 Alteration of Public and Private Views

PP As viewed from viewpoints in and surrounding the Plan area, implementation of the Proposed Land Use Diagram would substantially alter the existing landscape characteristics in the Plan area and result in impacts to both public and private views. This would be a **significant** impact.

AA As viewed from viewpoints in and surrounding the Plan area, implementation of the Existing Martis Valley General Plan Land Use Map would substantially alter the existing landscape characteristics in the Plan area and result in impacts to both public and private views. This would be a **significant** impact.

AB As viewed from viewpoints in and surrounding the Plan area, implementation of the Alternative 1 Land Use Map would substantially alter the existing landscape characteristics in the Plan area and result in impacts to both public and private views. This would be a **significant** impact.

AC As viewed from viewpoints in and surrounding the Plan area, implementation of the Alternative 2 Land Use Map would substantially alter the existing landscape characteristics in the Plan area and result in impacts to both public and private views. This would be a **significant** impact.

Public Views

PP Proposed Land Use Diagram

Development of the Plan area under the Proposed Land Use Diagram would result in the alteration of existing landscape features, as viewed from SR 267 (within the Plan area), the Martis Creek Lake Recreation Area, public roads and trails, to rural and urban features resulting in a reduction of scenic resources. Most notably, development of the Plan area would result in the addition of structures, including residential dwellings and commercial buildings, along with roads and road improvements, golf courses, and recreational trails to areas that are currently forested or within the open valley. The addition of structures and the loss of vegetation would result in visual impacts when viewed from public places within the Plan area.

Much of the Plan area is covered with dense forest canopy. Future development associated with this land use map option would primarily occur within the forested portions of the Plan area and not in the open valley. However, some development and associated facilities (e.g., golf courses, infrastructure facilities, recreation trails) may be placed in the open valley.

Since there are no designated scenic routes within the Plan area, views from SR 267, Shaffer Mill Road, and Northstar Drive are not currently afforded the protection associated with the scenic corridor designation. However, the proposed Martis Valley Community Plan includes a policy (2.C.1) regarding the designation of SR 267, Schaffer Mill Road, and Northstar Drive as scenic routes, and the possible future designation of the Waddle Ranch access road. If designated as scenic routes, SR 267, Schaffer Mill Road and Northstar Drive would be afforded protection from development impacts through implementation of the design review process, regulation of the design and placement of signs, undergrounding of utilities, maintenance of scenic setbacks, and other such measures, as identified in proposed Policies 2.C.2 through 2.C.7 of the Community Plan. In addition, the majority of the open valley is designated open space from the airport to the Martis Creek Lake Recreation area ending just to the north of Northstar-at-Tahoe. This open space designation would protect much of the area identified on **Figure 4.12-2** for retention or partial retention. Areas that would be impacted by the Proposed Land Use Diagram are shown on **Figure 4.12-2**.

The proposed Eaglewood and Hopkins Ranch project sites have some trees that would serve to shield development, but are not heavily forested and may result in a significant alteration to public views from SR 267 when developed. The Waddle Ranch property may include a small component of residential uses visible from SR 267, however the majority of its development, including residential and commercial is not expected to be visible from SR 267 but may be visible from the Martis Creek Lake Recreation Area. The Waddle Ranch property includes large stands of trees, except for the portion in the valley adjacent SR 267, that could be preserved to shield the majority of the development allowed under the Plan. Development on the Martis Ranch site would be visible from SR 267, however this site is heavily forested and has moderately sloping hillsides adjacent SR 267 with moderate to steep slopes within its site; this site could be designed to avoid much visibility. Development of the proposed Siller Ranch site would be largely shielded by forest canopy. In densely forested areas, development may be located closer to a road without being visually prominent. In areas where forest growth is thin, development may need to be setback 300 to 400 feet or more to avoid visual impacts.

Development proposed within the residential and commercial land use categories of the Proposed Land Use Diagram could result in the disturbance of up to approximately 4,300 acres of land in the Plan area.

Other potential activities in the Plan area would contribute to visual impacts on the public that are not part of the Martis Valley Community Plan Update. These activities include the widening of SR 267, development of additional ski areas at the proposed Siller Ranch, conceptual Northstar-at-Tahoe ski terrain expansions, future golf courses (proposed and conceptual), and development of recreation trails.

AA Existing Martis Valley General Plan Land Use Map

Development of the Plan area under the Existing Martis Valley General Plan Land Use Map would result in the alteration of existing landscape features, as viewed from SR 267, the Martis Creek Lake Recreation Area, public roads and trails, to rural and urban features resulting in a reduction of scenic resources. Most notably, development of the Plan area would result in the addition of structures, including residential dwellings and commercial buildings, along with roads and road improvements, golf courses, and recreational trails to areas that are currently forested or within the open valley. The addition of structures and the loss of vegetation would result in visual impacts when viewed from public places within the Plan area. Development proposed within the residential and commercial land use categories of the Existing Martis Valley General Plan Land Use Map could result in the disturbance of up to approximately 4,900 acres of land in the Plan area. This open space designation would protect much of the area identified on **Figure 4.12-3** for retention or partial retention. The Existing Martis Valley General Land Use Map would impact more land area than the Proposed Land Use Diagram, potentially resulting in more impacts on visual resources as well (see **Figure 4.12-3**).

Other potential activities in the Plan area would contribute to visual impacts on the public that are not directly included in the Martis Valley Community Plan Update. These activities include the widening of SR 267, development of additional ski areas at the proposed Siller Ranch, conceptual Northstar-at-Tahoe ski terrain expansions, future golf courses (proposed and conceptual), and development of recreation trails.

AB Alternative 1 Land Use Map

While development under the Alternative 1 Land Use Map would be less intense than development under the Existing Martis Valley General Land Use Map, it would result in a development pattern similar to Alternative AA and thus have a comparable impact on public views. Similar to Alternative AA, this alternative would place the majority of development in forested areas with uses such as golf courses, infrastructure facilities, and recreational trails potentially occurring in the open valley. Under this alternative, the Martis Ranch site would not be designated for residential or commercial development resulting in less of an impact to views east of SR 267. Development proposed within the residential and commercial land use categories under the Alternative 1 Land Use Map could result in the disturbance of approximately 3,700 acres of land. The Alternative 1 Land Use Map would impact slightly less land area than the Proposed Land Use Diagram, potentially resulting in similar impacts on visual resources (see **Figure 4.12-4**).

Other potential activities in the Plan area would contribute to visual impacts on the public that are not directly included in the Martis Valley Community Plan Update. These activities include the widening of SR 267, development of ski trails associated with the proposed Siller Ranch, conceptual Northstar-at-Tahoe ski terrain expansions, future golf courses (proposed and conceptual), and development of recreation trails.

AC Alternative 2 Land Use Map

Development under the Alternative 2 Land Use Map would result in more open space corridors than the Proposed Land Use Diagram and Alternatives AA and AB. Similar to Alternative AA, this alternative would place the majority of development in forested areas with uses such as golf courses, infrastructure facilities, and recreational trails potentially occurring in the open valley. However, the development pattern would be similar to the Proposed Land Use Diagram with the exception of the Martis Ranch site, the Siller Ranch property, and the Northstar-at-Tahoe site. The Martis Ranch site would be designated forest under this alternative and would have less of an impact on public views east of SR 267. The Northstar-at-Tahoe site would include a high-density residential component located southwest of the intersection of Northstar Drive and SR 267. This development would be visible from SR 267. The Siller Ranch property proposed additional development under this scenario, and would include rural residential, low density residential, tourist/resort commercial, and open space; Siller Ranch is not expected to be very visible from public viewing areas such as SR 267 and trails in the vicinity of the SR, however it may be visible from the terminus of Shaffer Mill Road. This site contains trees that could be used to shield some of the development from public view.

Development proposed within the residential and commercial land use categories of AC would result in the disturbance of an estimated 3,500 acres of land as depicted on **Figure 4.12-5**. The Alternative 2 Land Use Map would impact less land area than the Proposed Land Use Diagram and the other two alternatives, potentially resulting in similar impacts on visual resources (see **Figure 4.12-5**).

Other potential activities in the Plan area would contribute to visual impacts on the public that are not directly included in the Martis Valley Community Plan Update. These activities include the widening of SR 267, development of ski trails associated with the proposed Siller Ranch, conceptual Northstar-at-Tahoe ski terrain expansions, future golf courses (proposed and conceptual), and development of recreation trails.

Private Views

PP Proposed Land Use Diagram

Development under the Proposed Land Use Diagram would result in the alteration of existing landscape features, as viewed from existing subdivisions and private developments within and adjacent to the Plan area, to rural and urban features resulting in a reduction of scenic resources. Most notably, development of the Plan area would result in the addition of structures, including residential dwellings and commercial buildings, roads, golf courses, and recreational trails to the Plan area. These structures would impact private views, primarily from residential areas, that currently look out on forested places or open valley. Areas that would be impacted by the Proposed Land Use Diagram are shown on **Figure 4.12-2**.

Views from the Town of Truckee would not be significantly impacted, as the Plan area bordering Truckee is currently developed. Views from the Nevada County portion of the Plan area (northeast corner) would be altered by development in the Plan area. This Plan area contains sufficient trees to shield development from private view, if designed appropriately.

Within the Plan area, the existing residences in the northwest portion and Lahontan that border the proposed developments of Eaglewood and Hopkins Ranch would have a change in view from an open space with some trees to residential. Some of the residences along the northern

edge of Northstar-at-Tahoe may experience an alteration of views changing from open space and forest areas to residential and commercial development. Residences in the southern portion of Lahontan would experience an alteration of their view of the Siller Ranch property that would be developed with residential uses.

Other potential activities in the Plan area would contribute to impacts on private views that are not directly included in the Martis Valley Community Plan Update. These activities include the widening of SR 267, development of additional ski areas at the proposed Siller Ranch, conceptual Northstar-at-Tahoe ski terrain expansions, future golf courses (proposed and conceptual), and development of recreation trails.

AA Existing Martis Valley General Plan Land Use Map

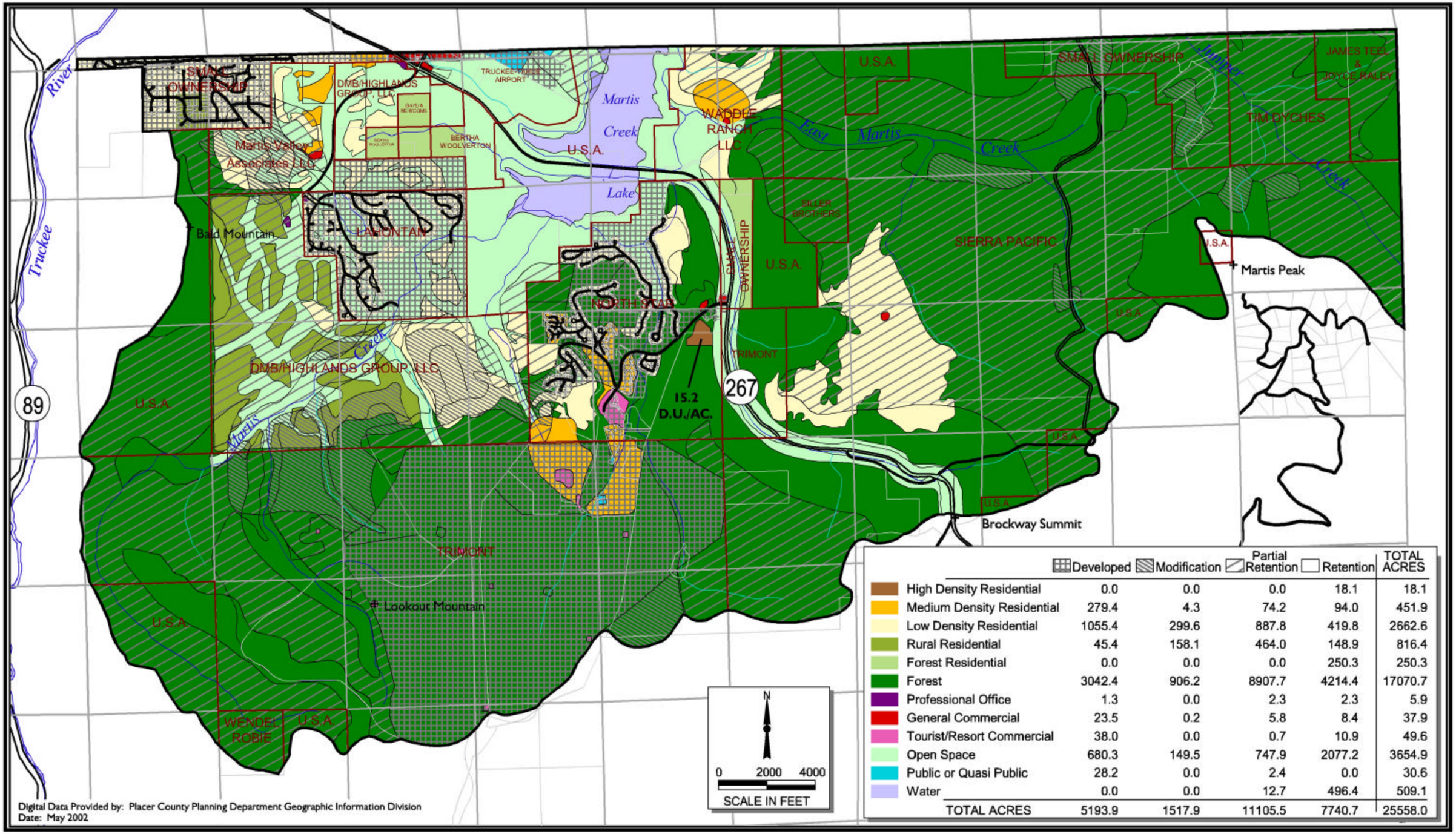
Development proposed within the residential and commercial land use categories of the Existing Martis Valley General Plan Land Use Map could result in the disturbance of up to approximately 4,900 acres of land in the Plan area, which would impact the views from existing subdivisions and private developments within and adjacent to the Plan area, to rural and urban features resulting in a reduction of scenic resources. Most notably, development of the Plan area would result in the addition of structures, including residential dwellings and commercial buildings, roads, golf courses, and recreational trails to the Plan area. These structures would impact private views, primarily from residential areas, that currently look out on forested places or open valley. The Existing Martis Valley General Plan Land Use Map would result in a more intense land use pattern than the Proposed Land Use Diagram, which would translate to increased potential for impacts on private views. The Existing Martis Valley General Land Use Map would impact more land area than the Proposed Land Use Diagram, potentially resulting in more impacts on visual resources as well (see **Figure 4.12-3**).

Other potential activities in the Plan area would contribute to impacts on private views that are not directly included in the Martis Valley Community Plan Update. These activities include the widening of SR 267, development of additional ski areas at the proposed Siller Ranch, conceptual Northstar-at-Tahoe ski terrain expansions, future golf courses (proposed and conceptual), and development of recreation trails.

AB Alternative 1 Land Use Map

Development of the Plan area under the Alternative 1 Land Use Map would result in similar impacts to private views as would occur under the other three alternatives.

Other potential activities in the Plan area would contribute to impacts on private views that are not directly included in the Martis Valley Community Plan Update. These activities include the widening of SR 267, development of additional ski areas at the proposed Siller Ranch, conceptual Northstar-at-Tahoe ski terrain expansions, future golf courses (proposed and conceptual), and development of recreation trails. The Alternative 1 Land Use Map would impact many of the same areas as the Proposed Land Use Diagram, potentially resulting in similar impacts on visual resources as well (see **Figure 4.12-4**).

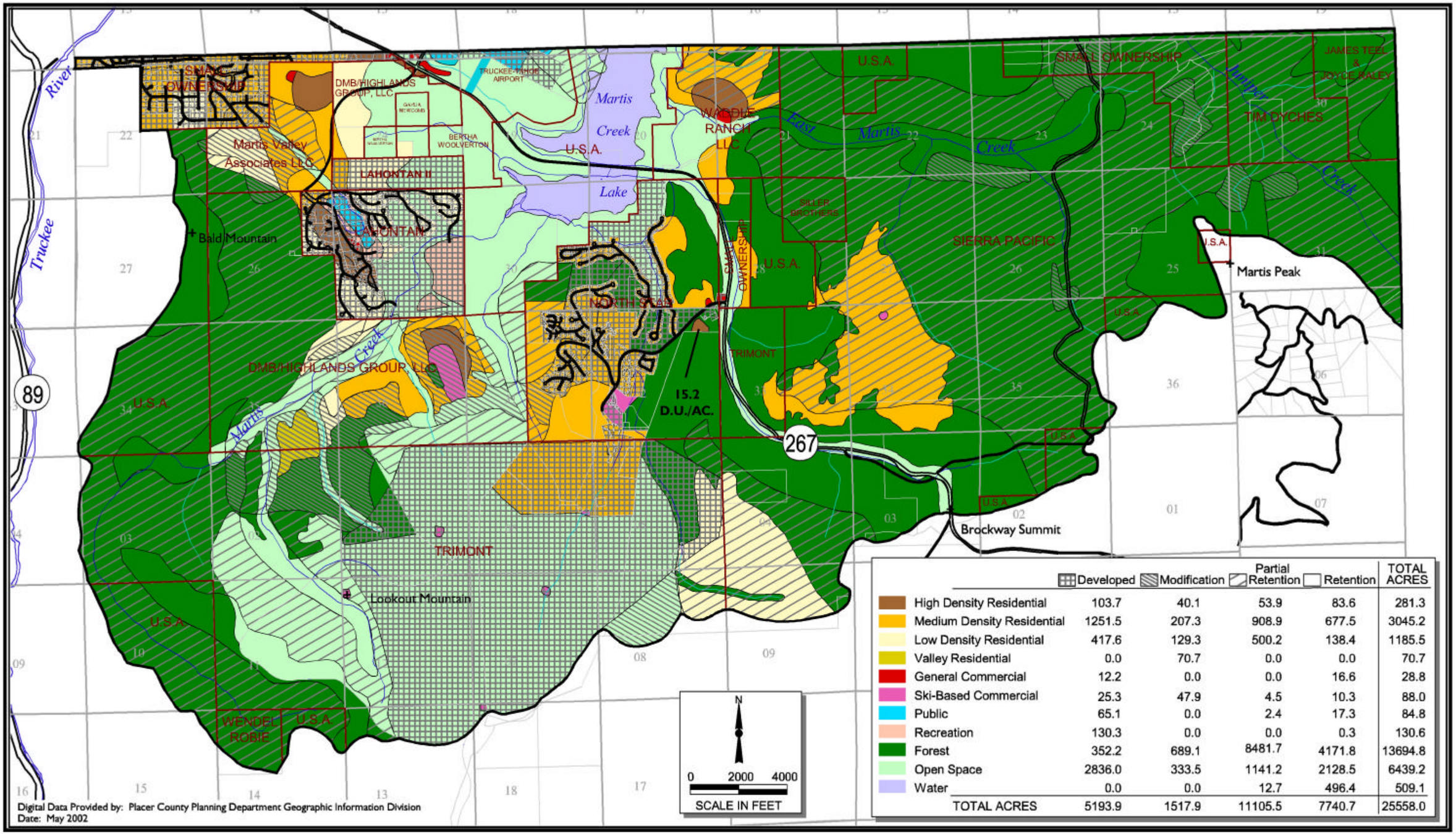


Digital Data Provided by: Placer County Planning Department Geographic Information Division
Date: May 2002

	Developed	Modification	Partial Retention	Retention	TOTAL ACRES
High Density Residential	0.0	0.0	0.0	18.1	18.1
Medium Density Residential	279.4	4.3	74.2	94.0	451.9
Low Density Residential	1055.4	299.6	887.8	419.8	2662.6
Rural Residential	45.4	158.1	464.0	148.9	816.4
Forest Residential	0.0	0.0	0.0	250.3	250.3
Forest	3042.4	906.2	8907.7	4214.4	17070.7
Professional Office	1.3	0.0	2.3	2.3	5.9
General Commercial	23.5	0.2	5.8	8.4	37.9
Tourist/Resort Commercial	38.0	0.0	0.7	10.9	49.6
Open Space	680.3	149.5	747.9	2077.2	3654.9
Public or Quasi Public	28.2	0.0	2.4	0.0	30.6
Water	0.0	0.0	12.7	496.4	509.1
TOTAL ACRES	5193.9	1517.9	11105.5	7740.7	25558.0

PMC

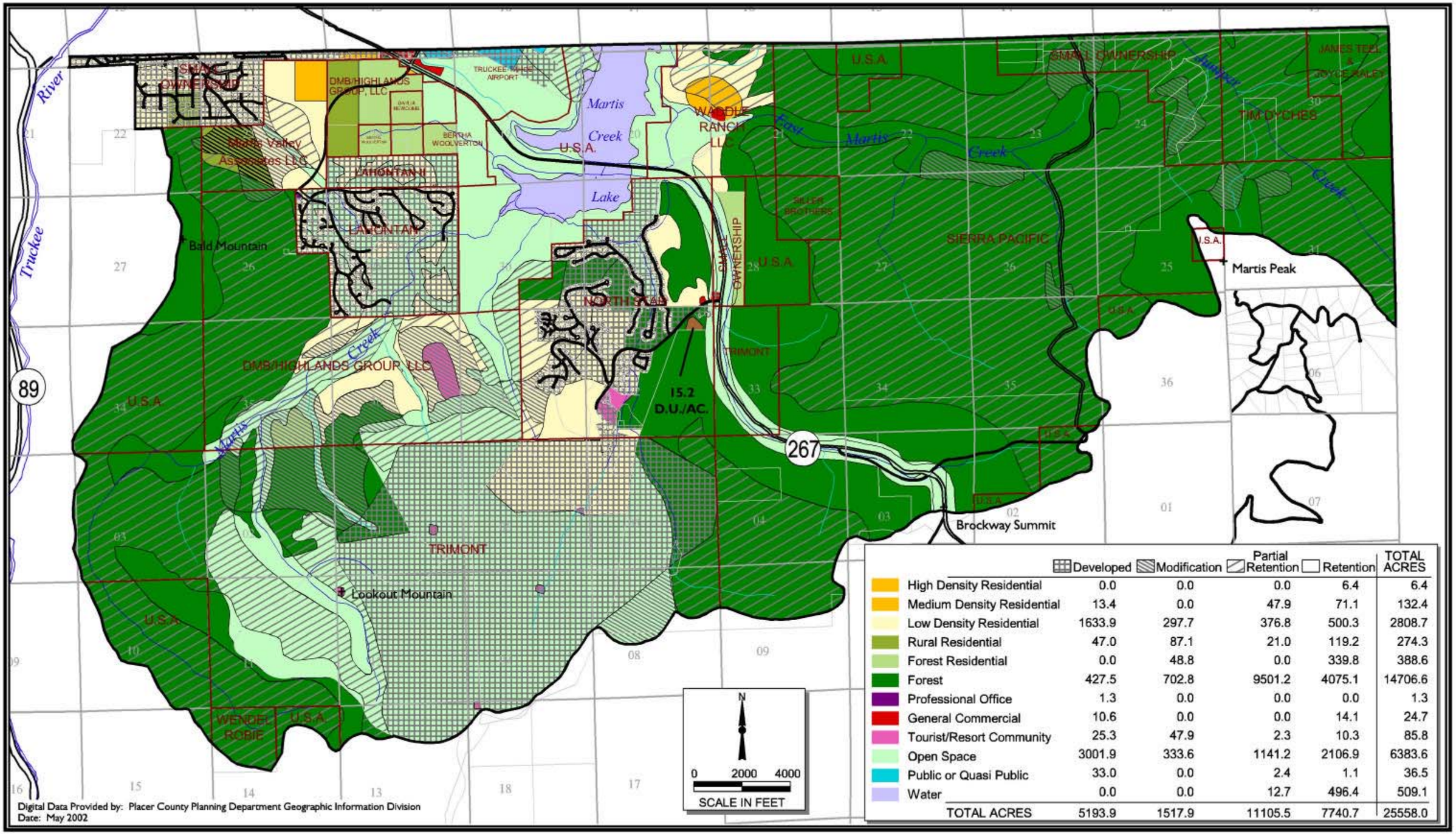
FIGURE 4.12-2
VISUAL IMPACTS OF PROPOSED LAND USE



	Developed	Modification	Partial Retention	Retention	TOTAL ACRES
High Density Residential	103.7	40.1	53.9	83.6	281.3
Medium Density Residential	1251.5	207.3	908.9	677.5	3045.2
Low Density Residential	417.6	129.3	500.2	138.4	1185.5
Valley Residential	0.0	70.7	0.0	0.0	70.7
General Commercial	12.2	0.0	0.0	16.6	28.8
Ski-Based Commercial	25.3	47.9	4.5	10.3	88.0
Public	65.1	0.0	2.4	17.3	84.8
Recreation	130.3	0.0	0.0	0.3	130.6
Forest	352.2	689.1	8481.7	4171.8	13694.8
Open Space	2836.0	333.5	1141.2	2128.5	6439.2
Water	0.0	0.0	12.7	496.4	509.1
TOTAL ACRES	5193.9	1517.9	11105.5	7740.7	25558.0

PMC

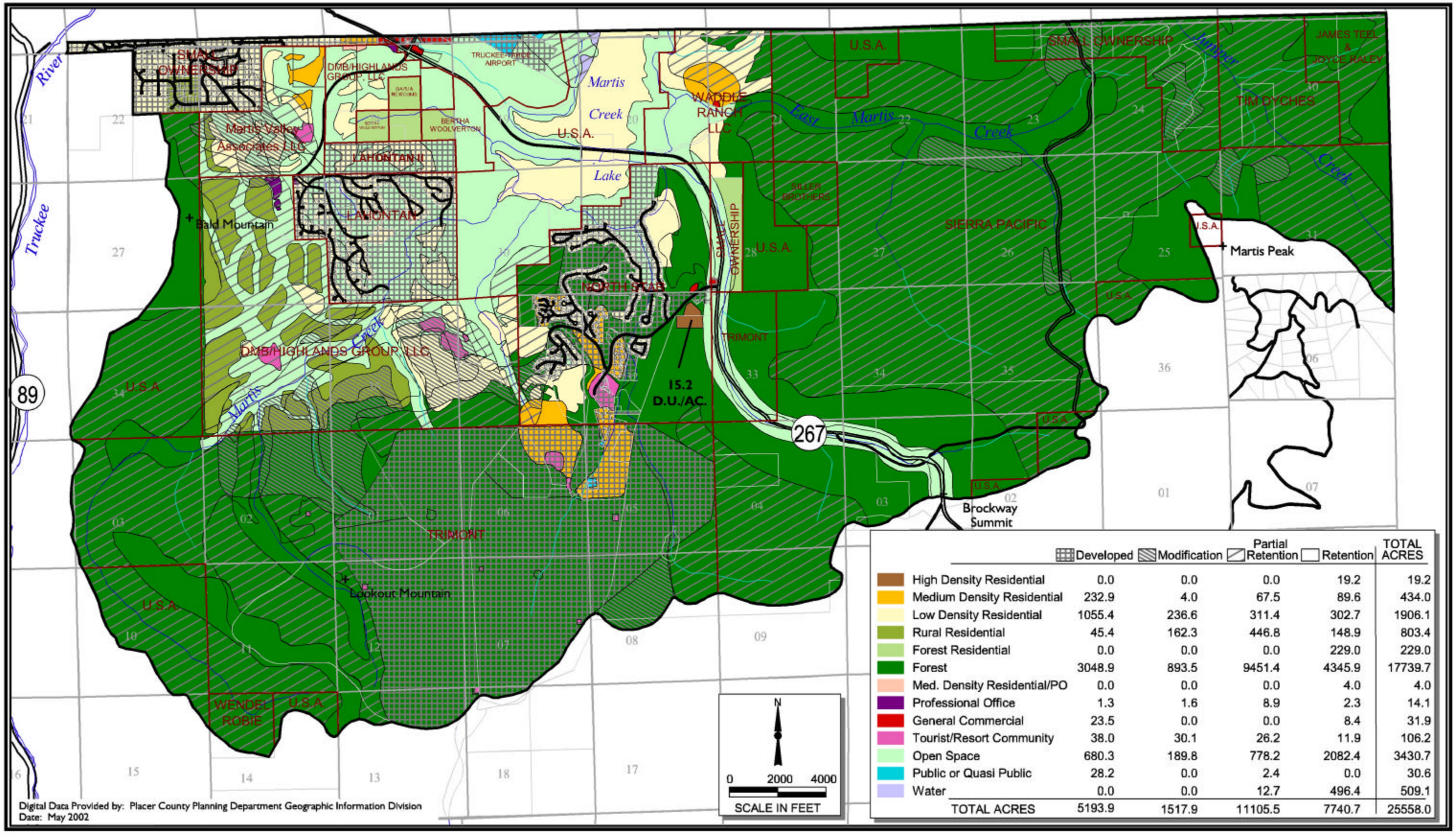
FIGURE 4.12-3
VISUAL IMPACTS OF EXISTING COMMUNITY PLAN



	Developed	Modification	Partial Retention	Retention	TOTAL ACRES
High Density Residential	0.0	0.0	0.0	6.4	6.4
Medium Density Residential	13.4	0.0	47.9	71.1	132.4
Low Density Residential	1633.9	297.7	376.8	500.3	2808.7
Rural Residential	47.0	87.1	21.0	119.2	274.3
Forest Residential	0.0	48.8	0.0	339.8	388.6
Forest	427.5	702.8	9501.2	4075.1	14706.6
Professional Office	1.3	0.0	0.0	0.0	1.3
General Commercial	10.6	0.0	0.0	14.1	24.7
Tourist/Resort Community	25.3	47.9	2.3	10.3	85.8
Open Space	3001.9	333.6	1141.2	2106.9	6383.6
Public or Quasi Public	33.0	0.0	2.4	1.1	36.5
Water	0.0	0.0	12.7	496.4	509.1
TOTAL ACRES	5193.9	1517.9	11105.5	7740.7	25558.0

PMC

FIGURE 4.12-4
VISUAL IMPACTS OF LANDUSE ALTERNATIVE 1



	Developed	Modification	Partial Retention	Retention	TOTAL ACRES
High Density Residential	0.0	0.0	0.0	19.2	19.2
Medium Density Residential	232.9	4.0	67.5	89.6	434.0
Low Density Residential	1055.4	236.6	311.4	302.7	1906.1
Rural Residential	45.4	162.3	446.8	148.9	803.4
Forest Residential	0.0	0.0	0.0	229.0	229.0
Forest	3048.9	893.5	9451.4	4345.9	17739.7
Med. Density Residential/PO	0.0	0.0	0.0	4.0	4.0
Professional Office	1.3	1.6	8.9	2.3	14.1
General Commercial	23.5	0.0	0.0	8.4	31.9
Tourist/Resort Community	38.0	30.1	26.2	11.9	106.2
Open Space	680.3	189.8	778.2	2082.4	3430.7
Public or Quasi Public	28.2	0.0	2.4	0.0	30.6
Water	0.0	0.0	12.7	496.4	509.1
TOTAL ACRES	5193.9	1517.9	11105.5	7740.7	25558.0

PMC

FIGURE 4.12-5
VISUAL IMPACTS OF LAND USE ALTERNATIVE 2

AC Alternative 2 Land Use Map

Under the Alternative 2 Land Use Plan, impacts to private views would be similar to the other three alternatives. However, the Alternative 2 Land Use Map proposes additional residential development on the Siller Ranch site that would border residential units on the west side of the proposed Eaglewood project. This site is well forested and could be shielded from the view of adjacent residences. The Alternative 2 Land Use Map would impact less land area than the Proposed Land Use Diagram and the other two alternatives, potentially resulting in similar impacts on visual resources (see **Figure 4.12-5**).

Other potential activities in the Plan area would contribute to impacts on private views that are not directly included in the Martis Valley Community Plan Update. These activities include the widening of SR 267, development of additional ski areas at the proposed Siller Ranch, conceptual Northstar-at-Tahoe ski terrain expansions, future golf courses (proposed and conceptual), and development of recreation trails.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs in Section IV (Community Design) would assist in reducing potential impacts on highways located outside of the Plan area. Additionally, the design guidelines and development standards contained in the Martis Valley Community Plan would reduce potential impacts on public and private views.

Policy 2.A.1 *The County shall require all new development (including major remodeling, reconstruction and redevelopment) to be designed in compliance with applicable provisions of the Placer County Design Guidelines Manual, and the Design/Development Standards contained herein.*

Policy 2.A.2 *The County shall require that specific plans include design guidelines for all types of development within the area covered by the plan.*

Policy 2.A.3 *The County shall require that commercial and residential site layouts be designed with the intent to encourage human interaction and to be compatible with the surrounding environment.*

Policy 2.A.4 *The County shall require that all new development be designed to be compatible with the scale and character of the area. Structures, especially those outside commercial centers, should be designed and located so that:*

a. They do not silhouette against the sky above the ridgelines or hilltops;

b. Roof lines and vertical architectural features blend and do not detract from the natural background;

c. They fit the natural terrain, and;

d. They use building materials, colors, and textures that blend with the natural landscape, thereby avoiding high contrasts.

Policy 2.A.5 *Materials and methods of construction should be specific to the region, exhibiting continuity of history and culture and compatibility with the climate to encourage the development of local character and community identity.*

Policy 2.A.6 *The County shall require that new rural development be designed to preserve and maintain the rural character and quality of the area.*

Policy 2.A.7 *The County shall require that mixed-use areas include focal points to serve as gathering and/or destination points. Examples of focal points include parks, fountains, monuments, and street vistas. On-site natural features, such as wetlands and streams, can also function as focal points.*

Policy 2.A.8 *Landscaping, whether done for decoration or functional purposes, shall be properly maintained at all times and shall emphasize the use of native plants. Use of non-native plant materials is strongly discouraged.*

Policy 2.A.9 *The County shall prohibit the use of outdoor lighting that shines unnecessarily onto adjacent properties or into the night sky.*

Policy 2.B.1 *The County shall require that new development in scenic areas (e.g., riparian corridors, lake watersheds, scenic highway corridors, ridge lines and steep slopes) is planned and designed in a manner which employs design, construction, and maintenance techniques that:*

a. Incorporate design and screening measures to minimize the visibility of structures and graded areas;

b. Maintain the character and visual quality of the area.

Policy 2.B.2 *The County shall require that new development in scenic areas be designed to use natural landforms and vegetation for screening structures, access roads, building foundations, and cut and fill slopes.*

Policy 2.B.3 *The County shall require that new development incorporates landscaping that provides a transition between vegetation in developed areas and adjacent open space or undeveloped areas.*

Policy 2.B.4 *The County shall require that new development incorporates sound soil conservation practices and minimizes land alterations. Land alterations should comply with the following guidelines:*

a. Limit cuts and fills;

b. Limit grading to the smallest practical area required by the development;

c. Limit land exposure to the shortest practical amount of time;

d. Replant graded areas to ensure establishment of plant cover before the next rainy season; and

e. Create grading contours that blend with the natural contours on site or with contours on property immediately adjacent to the area of development.

Policy 2.B.5 *The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.*

Policy 2.B.6 *The County shall require that new development on hillsides employ design, construction, and maintenance techniques that:*

a. Ensure that development near or on portions of hillsides do not cause or worsen natural hazards such as erosion, sedimentation, fire, or water quality concerns;

b. Include erosion and sediment control measures, including temporary vegetation, sufficient to stabilize disturbed areas;

c. Minimize risk to life and property from slope failure, landslides, avalanches, and flooding; and

d. Maintain the character and visual quality of the hillside.

Policy 2.B.7 *The County shall require the number and extent of roadway cuts and fills required in construction, reconstruction, and road maintenance be kept to a minimum consistent with standard design practices.*

Policy 2.B.8 *The County shall require that roads, trails, and paths be designed and constructed to minimize erosion and other disturbances to the natural terrain and vegetation. Such facilities shall be designed for economical maintenance.*

Policy 2.B.9 *Each community or major development area should have a well-defined edge, such as agricultural greenbelts or wildlife corridors, permanently protected from development.*

Policy 2.C.1 *Scenic routes designated in the Plan area shall include SR 267, Schaffer Mill Road, and Northstar Drive. Future designations may occur with future development such as the access road into the Waddle Ranch site.*

Policy 2.C.2 *The County shall protect and enhance scenic corridors through such means as implementation of the design review process, regulation of the design and placement of signs, undergrounding of utilities, maintenance of scenic setbacks, density limitations, vegetative screening, clustering developments, grading and tree removal standards, open space easements, and land conservation contracts.*

Policy 2.C.3 *The County shall provide for landscaping and/or landscaped mounding along designated scenic corridors where desirable to maintain and improve scenic qualities and screen unsightly views.*

Policy 2.C.4 *The County shall include aesthetic design considerations in road construction, reconstruction, or maintenance for all scenic routes under County jurisdiction.*

Policy 2.C.5 *The County shall support anti-litter, beautification and cleanup programs along scenic routes.*

Policy 2.C.6 *The County shall coordinate scenic route programs among local, regional, and state jurisdictions, recognizing that scenic routes are a resource of more than local importance.*

Policy 2.C.7 *Along scenic routes designated in the Plan area, ski runs will be visible. The visual impact of the tree removal required for such uses shall be minimized through the use of an approved re-vegetated cover and other available mitigation measures.*

Implementation Programs

Population and Housing

7. *Placer County will continue to implement the policies and requirements of the Placer County Design Guidelines Manual and community design elements of the Martis Valley Community Plan.*

   Responsible Agency/Department: Planning Department
   Time frame: Ongoing
   Funding: General Fund

Community Design

1. *New development projects shall be reviewed for consistency with the Community Design Section goals and policies contained herein, the Design/Development Standards, and the County's Design and Landscape Design Guidelines available under separate cover at the Planning Department.*

   Responsible Agency/Department: Principally the Planning Department, but may involve other Land Development Departments
   Time frame: Ongoing
   Funding: General Fund

2. *The County shall identify and formally designate through the adoption of this Plan, a system of scenic routes in Martis Valley to include SR 267, Schaffer Mill Road, and Northstar Drive.*

   Responsible Agency/Department: Planning Department
   Time frame: [FY 02]: With Plan adoption
   Funding: General Fund

Mitigation Measures

The following mitigation measures would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC as new policies in Section IV (Community Design) under Goals 2A, 2B, and 2C.

MM 4.12.2a New hardscape features, such as parking lots and ball courts, and new non-native softscape features, such as golf courses, turf areas, and trails, shall be screened from public views from the open valley, SR 267, and public roadways.

MM 4.12.2b All public and private subsequent projects shall be required to submit detailed architectural renderings, site plans, landscaping plans, and visual simulations demonstrating project consistency with the applicable Martis Valley Community Plan policies and other applicable design guidelines, development standards and policies.

MM 4.12.2c Plans for fences/walls shall be submitted to the Placer County Planning Department for review during project application processing. Fencing within the Plan area shall follow these guidelines:

a. All fencing shall be open fencing that provides adequate spacing for wildlife passage, in consultation with California Department of Fish and Game;

b. Use of retaining walls shall be limited to the maximum extent possible and shall be screened with native vegetation;

c. Walls and fences shall not be visible along the open valley, SR 267, or other public roadways.

Mitigation measures MM 4.12.2a-c, in combination with the proposed policies and implementation programs of the Martis Valley Community Plan, would partially mitigate visual impacts on public and private viewsheds for the Proposed Land Use Diagram and Alternatives AA, AB, and AC. However, implementation of the Proposed Community Plan under the Proposed Land Use Diagram and Alternatives AA, AB, and AC would still result in substantial alteration of the landscape characteristics, of the views from the open valley, and designated scenic corridors (SR 267, Schaffer Mill Road, and Northstar Drive) from development of residential and recreational land uses as well as widening of SR 267 to 4 lanes. This would be a **significant and unavoidable** impact of the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.12.3 Daytime Glare

PP Implementation of the Proposed Land Use Diagram could introduce new sources of daytime glare into the Plan area. This would be a **significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map could introduce new sources of daytime glare into the Plan area. This would be a **significant** impact.

AB Implementation of the Alternative 1 Land Use Map could introduce new sources of daytime glare into the Plan area. This would be a **significant** impact.

AC Implementation of the Alternative 2 Land Use Map could introduce new sources of daytime glare into the Plan area. This would be a **significant** impact.

PP Proposed Land Use Diagram

Development under the Proposed Land Use Diagram could result in the development of approximately 4,300 acres within the Plan area. Associated with this development would be elements of improvements that could create daytime glare by reflecting sunlight to heavily traveled vantage points on SR 267 and public roadways and to area views.

AA Existing Martis Valley General Plan Land Use Map

Development under the Existing Martis Valley General Plan Land Use Map could result in the development of approximately 4,900 acres within the Plan area. The Existing Martis Valley General Plan Land Use Map has the potential to result in more daytime glare than the Proposed Land Use Diagram due to its more intense land use patterns and development area.

AB Alternative 1 Land Use Map

Development under the Alternative 1 Land Use Map could result in the development of approximately 3,700 acres within the Plan area. This alternative would result in comparable impacts to daytime light and glare as the Proposed Land Use Diagram.

AC Alternative 2 Land Use Plan

Development under the Alternative 2 Land Use Map could result in the development of approximately 3,500 acres within the Plan area. This alternative would result in comparable impacts to daytime light and glare as the Proposed Land Use Diagram.

Policies and Implementation Programs

The following Martis Valley Community Plan policies and implementation programs in Section IV (Community Design) would assist in reducing potential impacts discussed regarding daytime glare. Additionally, the design guidelines and development standards contained in the Martis Valley Community Plan would reduce potential impacts regarding daytime glare.

Policy 2.A.1 *The County shall require all new development (including major remodeling, reconstruction and redevelopment) to be designed in compliance with applicable provisions of the Placer County Design Guidelines Manual, and the Design/Development Standards contained herein.*

Policy 2.A.2 *The County shall require that specific plans include design guidelines for all types of development within the area covered by the plan.*

Policy 2.A.8 *Landscaping, whether done for decoration or functional purposes, shall be properly maintained at all times and shall emphasize the use of native plants. Use of non-native plant materials is strongly discouraged.*

Policy 2.B.1 *The County shall require that new development in scenic areas (e.g., riparian corridors, lake watersheds, scenic highway corridors, ridge*

lines and steep slopes) is planned and designed in a manner which employs design, construction, and maintenance techniques that:

a. Incorporate design and screening measures to minimize the visibility of structures and graded areas;

b. Maintain the character and visual quality of the area.

Policy 2.B.2 *The County shall require that new development in scenic areas be designed to use natural landforms and vegetation for screening structures, access roads, building foundations, and cut and fill slopes.*

Policy 2.B.3 *The County shall require that new development incorporates landscaping that provides a transition between vegetation in developed areas and adjacent open space or undeveloped areas.*

Policy 2.B.5 *The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.*

Policy 2.B.9 *Each community or major development area should have a well-defined edge, such as agricultural greenbelts or wildlife corridors, permanently protected from development.*

Policy 2.C.2 *The County shall protect and enhance scenic corridors through such means as implementation of the design review process, regulation of the design and placement of signs, undergrounding of utilities, maintenance of scenic setbacks, density limitations, vegetative screening, clustering developments, grading and tree removal standards, open space easements, and land conservation contracts.*

Policy 2.C.3 *The County shall provide for landscaping and/or landscaped mounding along designated scenic corridors where desirable to maintain and improve scenic qualities and screen unsightly views.*

Implementation Programs

Population and Housing

7. Placer County will continue to implement the policies and requirements of the Placer County Design Guidelines Manual and community design elements of the Martis Valley Community Plan.

Responsible Agency/Department: Planning Department
Time frame: Ongoing
Funding: General Fund

Community Design

1. New development projects shall be reviewed for consistency with the Community Design Section goals and policies contained herein, the Design/Development

Standards, and the County's Design and Landscape Design Guidelines available under separate cover at the Planning Department.

Responsible Agency/Department: Principally the Planning Department, but may involve other Land Development Departments
Time frame: Ongoing
Funding: General Fund

2. *The County shall identify and formally designate through the adoption of this Plan, a system of scenic routes in Martis Valley to include SR 267, Schaffer Mill Road, and Northstar Drive.*

Responsible Agency/Department: Planning Department
Time frame: [FY 02]: With Plan adoption
Funding: General Fund

Mitigation Measure

The following mitigation measure would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC as an additional policy under Section IV (Community Design) under Goal 2.A in the Martis Valley Community Plan.

MM 4.12.3 Development within the Plan area shall use non-reflective surfaces on the exterior of structures.

Implementation of the above mitigation measure in combination with the Community Plan policies and implementation programs identified above would ensure that glare impacts would be mitigated to **less than significant** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

Impact 4.12.4 Increase Nighttime Lighting

PP Implementation of the Proposed Land Use Diagram could introduce sources of nighttime light into the Plan area. This would be a **significant** impact.

AA Implementation of the Existing Martis Valley General Plan Land Use Map could introduce sources of nighttime light into the Plan area. This would be a **significant** impact.

AB Implementation of the Alternative 1 Land Use Map could introduce sources of nighttime light into the Plan area. This would be a **significant** impact.

AC Implementation of the Alternative 2 Land Use Map could introduce sources of nighttime light into the Plan area. This would be a **significant** impact.

PP Proposed Land Use Diagram

Development under the Proposed Land Use Diagram could result in the development of approximately 4,230 acres within the Plan area. Lighting would be added for safety and security around proposed development. Potential light sources would include street lighting, lighting of residences, commercial areas, and parking lots, lit sport parks, golf course driving ranges with evening hours, and nighttime ski areas. Such light sources have the potential to create lighting of the night sky creating a glow over the area and glare at nearby uses. As previously identified,

the Plan area currently minimal and is limited to the Truckee-Tahoe Airport and minor lighting associated with existing rural residential uses.

AA Existing Martis Valley General Plan Land Use Map

Development under the Existing Martis Valley General Plan Land Use Map could result in the development of approximately 4,900 acres within the Plan area. Lighting would be added for safety and security around proposed development. Potential light sources would include street lighting, lighting of residences, commercial areas, and parking lots, lit sport parks, golf course driving ranges with evening hours, and nighttime ski areas. Such light sources have the potential to create lighting of the night sky creating a glow over the area and glare at nearby uses. The Existing Martis Valley General Plan has the potential to create the most nighttime lighting due to its intense land use patterns and increased development areas, as compared to the Proposed Land Use Diagram and Alternatives AB and AC.

AB Alternative 1 Land Use Map

Development under the Alternative 1 Land Use Map could result in the development of approximately 3,700 acres in the Plan area. Lighting would be added for safety and security around proposed development. Potential light sources would include street lighting, lighting of residences, commercial areas, and parking lots, lit sport parks, golf course driving ranges with evening hours, and nighttime ski areas. Such light sources have the potential to create lighting of the night sky creating a glow over the area and glare at nearby uses. This alternative would result in similar nighttime lighting impacts as the Proposed Land Use Diagram, due to their similar land use pattern and intensity.

AC Alternative 2 Land Use Plan

Development under the Alternative 2 Land Use Map could result in the development of approximately 3,500 acres in the Plan area. Lighting would be added for safety and security around proposed development. Potential light sources would include street lighting, lighting of residences, commercial areas, and parking lots, lit sport parks, golf course driving ranges with evening hours, and nighttime ski areas. Such light sources have the potential to create lighting of the night sky creating a glow over the area and glare at nearby uses. This alternative would result in similar nighttime lighting impacts as the Proposed Land Use Diagram, due to their similar land use pattern and intensity.

<u>Policies and Implementation Programs</u>

The following Martis Valley Community Plan policies and implementation programs in Section IV (Community Design) would assist in reducing potential impacts of nighttime lighting.

Policy 2.A.1 *The County shall require all new development (including major remodeling, reconstruction and redevelopment) to be designed in compliance with applicable provisions of the Placer County Design Guidelines Manual, and the Design/Development Standards contained herein.*

Policy 2.A.2 *The County shall require that specific plans include design guidelines for all types of development within the area covered by the plan.*

Policy 2.A.3 *The County shall require that commercial and residential site layouts be designed with the intent to encourage human interaction and to be compatible with the surrounding environment.*

Policy 2.A.9 *The County shall prohibit the use of outdoor lighting that shines unnecessarily onto adjacent properties or into the night sky.*

Policy 2.B.5 *The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.*

Policy 2.C.2 *The County shall protect and enhance scenic corridors through such means as implementation of the design review process, regulation of the design and placement of signs, undergrounding of utilities, maintenance of scenic setbacks, density limitations, vegetative screening, clustering developments, grading and tree removal standards, open space easements, and land conservation contracts.*

Implementation Programs

Population and Housing

7. *Placer County will continue to implement the policies and requirements of the Placer County Design Guidelines Manual and community design elements of the Martis Valley Community Plan.*

   Responsible Agency/Department: Planning Department
   Time frame: Ongoing
   Funding: General Fund

Community Design

1. *New development projects shall be reviewed for consistency with the Community Design Section goals and policies contained herein, the Design/Development Standards, and the County's Design and Landscape Design Guidelines available under separate cover at the Planning Department.*

   Responsible Agency/Department: Principally the Planning Department, but may involve other Land Development Departments
   Time frame: Ongoing
   Funding: General Fund

2. *The County shall identify and formally designate through the adoption of this Plan, a system of scenic routes in Martis Valley to include SR 267, Schaffer Mill Road, and Northstar Drive.*

   Responsible Agency/Department: Planning Department
   Time frame: [FY 02]: With Plan adoption
   Funding: General Fund

Mitigation Measures

Mitigation measures MM 4.12.4a through MM 4.12.4e would apply to the Proposed Land Use Diagram and AA, AB, and AC as additional policies in Section IV (Community Design) of the Martis Valley Community Plan. Mitigation measure MM 4.12.4f would apply to the Proposed Land Use Diagram and Alternatives AA, AB, and AC as an implementation program in the Section IV (Community Design) under Goal 2.A of the Martis Valley Community Plan.

MM 4.12.4a Outdoor light fixtures for subsequent non-residential areas (such as commercial and recreation areas) shall be low-intensity, shielded and/or directed away from residential areas and the night sky. All light fixtures shall be limited in height and shall be installed and shielded in such a manner that no light rays are emitted from the fixture at angles above the horizontal plane. High-intensity discharge lamps, such as mercury, metal halide and high-pressure sodium lamps shall be prohibited. Lighting plans shall be provided as part of improvement plans to the County with supporting documentation that adjacent residential areas will not be adversely affected and that offsite illumination will not exceed 1-foot candles from project sources.

MM 4.12.4b Outdoor light fixtures shall be designed to be turned off when not in use where security and safety is not a concern. This requirement shall be included in lighting plans submitted to the County as part of improvement plans.

MM 4.12.4c Street light fixtures shall be restricted to roadway intersections and shall be installed and shielded in such a manner that no light rays are emitted from the fixture at angles above the horizontal plane. High-intensity discharge lamps, such as mercury, metal halide and high-pressure sodium lamps shall be prohibited. Offsite illumination shall not exceed 1-foot candles due to lighting sources.

MM 4.12.4d The County shall require that subsequent residential project design guidelines and/or project CC&Rs shall restrict residences from utilizing flood and/or spot lighting fixtures. All resident light fixtures shall use low-pressure sodium lamps or other similar lighting fixture and shall be shielded away from adjoining residents and the night sky.

MM 4.12.4e Nighttime lighting shall not be allowed for golf course driving ranges, sports fields, and ski terrain.

MM 4.12.4f Project design guidelines and/or project CC&Rs shall be submitted by each project applicant to the Placer County Planning Department for review and approval to verify that lighting standards are in place.

Responsible Agency/Department: Planning Department
Time frame: Ongoing
Funding: Permit fees

Implementation of the above mitigation measures in combination with the proposed policies and implementation programs in the Martis Valley Community Plan would reduce the project's adverse light and glare effects on existing and planned uses in the Plan area. However, nighttime lighting impacts would be **significant and unavoidable** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

4.12.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative area for visual impacts is the entire Martis Valley, which includes both Placer County and Nevada County portions of the valley and the Town of Truckee. The northern portion of Martis Valley can be viewed from segments of Interstate 80, while portions of SR 267 has views of the western and southern areas in Martis Valley.

Approved and pending development projects listed in Section 3.0 (Project Description), along with development anticipated under the Martis Valley Community Plan Update, Town of Truckee General Plan and Nevada County General Plan, would contribute to visual impacts.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.12.5 Cumulative Visual Impacts

PP Under cumulative conditions, implementation of the Proposed Land Use Diagram could result in visual impacts, including alteration of viewsheds, increased daytime glare and nighttime lighting. This would be a **cumulative significant** impact.

AA Under cumulative conditions, implementation of the Existing Martis Valley General Plan Land Use Map could result in visual impacts, including alteration of viewsheds, increased daytime glare and nighttime lighting. This would be a **cumulative significant** impact.

AB Under cumulative conditions, implementation of the Alternative 1 Land Use Map could result in visual impacts, including alteration of viewsheds, increased daytime glare and nighttime lighting. This would be a **cumulative significant** impact.

AC Under cumulative conditions, implementation of the Alternative 2 Land Use Map could result in visual impacts, including alteration of viewsheds, increased daytime glare and nighttime lighting. This would be a **cumulative significant** impact.

PP-AC Proposed Land Use Diagram and Alternatives AA through AC

Implementation of the Proposed Land Use Diagram, Alternative AA, AB or AC in combination with other reasonably foreseeable projects in the vicinity would introduce new development projects into a largely undeveloped area that is mostly open space and forested area. Cumulative impacts from these projects would include the conversion of vacant to urban or rural uses, increased land use intensity, additional light sources, and building materials, which may cause daytime glare. Under cumulative conditions, the loss of vacant undeveloped land as viewed from the public roadways and private views would result in impacts to existing viewsheds. Additionally, The amount of visible natural vegetation would also be reduced as a result of development within the Plan area. Nighttime illumination and daytime glare would also be increased in the plan area as a result of cumulative project development. Primarily, residents and visitors to the Plan area would be impacted by the cumulative visual impacts associated with the implementation of the Proposed Land Use Diagram and Alternatives AA, AB and AC.

Although the proposed Martis Valley Community Plan includes policies and implementation programs related to visual resources, the Placer County General Plan considered the development of the Plan area at a level similar to that proposed by the four land use map options, and mitigation measures contained in this section would reduce some cumulative

impacts on visual resources, the impacts on public and private views in the area, increased light and glare during the daytime, and nighttime lighting would remain.

Policies and Implementation Programs

New development projects in the Plan area would be required to comply with policies and implementation programs of the Martis Valley Community Plan. Compliance with these Plan policies and implementation programs would provide some mitigation to visual impacts. The reader is referred to Impacts 4.12.1, 4.12.2, 4.12.3, and 4.12.4 regarding applicable proposed policies and implementation programs.

Mitigation Measures

Mitigation measures MM 4.12.2a through c, MM 4.12.3, and MM 4.12.4a through f would help reduce cumulative impacts on visual resources, light and glare, and nighttime lighting; however, the impacts would be **significant and unavoidable** for the Proposed Land Use Diagram and Alternatives AA, AB, and AC.

REFERENCES

Pacific Municipal Consultants. *Martis Valley Community Plan Background Report*. June, 2000.

Placer County. *Placer County General Plan*. 1975.

Placer County. *Rural Design Guidelines*. July 1997.

Placer and Nevada County Planning Departments. *Environmental Impact Report and Technical Supplement for the Martis Valley General Plan*. August 1974.