



**2003 KIRKWOOD SPECIFIC PLAN**

**AMADOR COUNTY RESOLUTION**

**No. 03-319 and ORDINANCE No. 1569**

**EXHIBIT A**

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# **CHAPTER 1 – HISTORY OF KIRKWOOD**

## **1.1 HISTORY OF KIRKWOOD DEVELOPMENT**

Kirkwood opened to the public for skiing in December of 1972, with four chair lifts, a surface lift and lodge. The opening of the ski area culminated many years of study by private entities and the United States Forest Service (USFS) as to the suitability of Kirkwood for ski resort development.

In 1972, the Sierra Club sued the USFS in an effort to stop development of the Kirkwood project. The resulting court action required preparation of a comprehensive Environmental Impact Statement (EIS) in compliance with the National Environmental Policy Act and an Environmental Impact Report (EIR) in compliance with the California Environmental Quality Act. The EIS was prepared under the guidance of the USFS while the EIR was prepared with Alpine County Planning Department acting as lead agency. The resulting documents established definitive development parameters for the project. The EIS was completed in 1973 and the EIR was certified in 1974. Both of these documents are available for review at the Alpine County Planning Department located at 17300 State Route 89, Markleeville, California.

Since 1972, Kirkwood Mountain Resort has constructed six additional ski lifts for an existing total of 10 lifts and three surface lifts (rope tows). Commercial development resulted in the two current day lodges, which include restaurants, bars, ski sales/rental shops and related services. Other commercial development at the south end of the resort includes a small General Store/Post Office, Kirkwood Lodging Services, a real estate office, several food service outlets and a retail sports apparel shop. A ski-touring (cross-country) facility was developed at the north end of the resort in the early 1980's. Other facilities include a service station and a bar/restaurant in the old Kirkwood Inn located on the north side of SR 88.

## **1.2 HISTORY OF KIRKWOOD MASTER PLANS**

The original Master Plan was prepared in 1971, for which an Environmental Impact Statement was prepared in 1973 (USFS) and accompanied by an Environmental Impact Report certified in 1974 (Alpine County 1974). The Kirkwood Master Plan was last amended in 1988 and previously amended in 1978 and 1981. The 1988 Master Plan, approved by Alpine, Amador and El Dorado Counties, made revisions that shifted land use locations and densities within the resort.

## **CHAPTER 2 - SUMMARY**

### **2.1 PURPOSE**

The Kirkwood Specific Plan has been prepared to illustrate the ultimate development of private lands within the Kirkwood community (hereinafter referred to as Kirkwood). This Specific Plan is the principal document which establishes goals, objectives and policies of the Kirkwood development and identifies land use zoning designations (i.e., residential, commercial, recreational) and densities. This Specific Plan also addresses circulation patterns and the provision of services and utilities to serve future development and the skiing operations. Development standards, regulations and implementation measures are included in this Kirkwood Specific Plan to guide the orderly development of Kirkwood.

This Kirkwood Specific Plan (hereinafter referred to as “the Plan”) is a fine tuning (amendment) of previous plans to provide a more pedestrian-oriented and environmentally sensitive development. The Plan represents no proposed change to the maximum population as shown in the amended 1988 Master Plan. The Plan does address a possible increase in the allowable total square feet of commercial space within the Kirkwood Valley.

The overall development concept for Kirkwood is to build a year-round destination resort while protecting the surrounding natural environment and ensuring Kirkwood’s unique mountain community remains unspoiled. Skiing is the major winter recreational use while non-winter uses include hiking, biking, running, tennis, equestrian activities and other outdoor sports.

### **2.2 PROJECT LOCATION**

Kirkwood is located within Alpine, Amador, and El Dorado counties about 35 miles southwest of Lake Tahoe. Access is provided via State Route 88 which is an east-west route at the north end of Kirkwood. State Route 88 provides access to Jackson, California to the west, the Lake Tahoe area, Gardnerville and Carson City, Nevada to the northeast and east, respectively.

### **2.3 PROJECT ACREAGE**

The Kirkwood Winter and Summer Resort includes private lands and public lands. The ski lifts and related facilities are located on private and National Forest Lands (Eldorado National Forest). Operations on National Forest Lands operate under a Special Use Permit issued by the USFS.

The Plan covers the 732 acres of privately held land in the counties of Alpine, Amador and El Dorado. As of July 2001, approximately 69% (506 acres) of the total private land at Kirkwood is owned, in fee simple, by KMR (the master developers of Kirkwood and operators of Kirkwood ski area) with the remaining 31% (226 acres) owned by other persons or entities.

## **2 .4 PREPARATION PROCESS**

Kirkwood Mountain Resort is the principal author of the Kirkwood Specific Plan. There were many contributors to the development of this Plan. Outside engineering, surveying, and many other various environmental consultants were contracted for various studies that were incorporated into and used to devise and in support of the planned development areas within Kirkwood.

The members of Tri-TAC, the USFS (Amador Ranger District), the KMPUD and Mountain Utilities were also significant contributors to this Plan.

Through the identification of environmentally sensitive areas, real estate market research, resort development concepts and experience, KMR has developed this Plan. It was prepared in such a manner as to harmonize, recognize and delineate those areas within the private lands of Kirkwood that are most physically suitable for residential, commercial, infrastructural and recreational development, given the challenging climate, location and existing levels of development.

## **CHAPTER 3 - INTRODUCTION**

### **3.1 SPECIFIC PLAN INITIATION**

The Specific Plan for Kirkwood was drafted by Kirkwood Mountain Resort, (KMR), at the request of Alpine, Amador and El Dorado counties, for the long-range development of Kirkwood. The former 1988 Master Plan controlling Kirkwood development was adopted by relying upon the original 1973/74 EIS and EIR, respectively. Due to development applications made by KMR beginning in 1995, in addition to the age of the environmental analyses referenced above, Alpine County, in consultation with El Dorado and Amador counties, believed that a new Specific Plan and EIR analysis was necessary.

### **3.2 OBJECTIVE OF THE KIRKWOOD SPECIFIC PLAN**

The Plan has been prepared to illustrate the ultimate development of private lands within the Kirkwood community. The Plan is the principal document which establishes goals, objectives and policies of the Kirkwood development and identifies land use designations (i.e., residential, commercial, recreational) and densities. The Plan also addresses circulation patterns and the provision of services and utilities to serve future development.

The Plan's objectives are to expand overnight facilities and to develop a variety of commercial uses in keeping with the recreational nature of Kirkwood. The Plan represents no proposed change to the maximum population as approved in the amended 1988 Master Plan. The Plan does address an increase in the allowable total square feet of commercial space within the Kirkwood Valley.

#### **3.2.1 Objectives**

1. To create a year-round destination resort with a diversity of residential, commercial, recreational, and cultural activities.
2. To balance Kirkwood development with the skiing capacity of the mountain while protecting the environmental and visual quality of the area.
3. To develop a full-service resort with lodging, restaurants, shops and attendant services to accommodate the summer and winter visitor, while paying particular attention to preservation of the natural beauty and mountain atmosphere that makes Kirkwood unique.
4. To develop Kirkwood in such a way as to emphasize the quality of the visitor/resident experience by the types and designs of buildings, the types of services offered and the protection of valuable open space.
5. To concentrate development at Kirkwood in the Village Center where residential, commercial and recreational uses are closely intermixed promoting a strong pedestrian-

oriented community.

6. To enhance the quality of the skier experience by maintaining and improving mountain support facilities.

### **3.3 RANGE OF DEVELOPMENT AND CONSERVATION ISSUES**

The Plan includes the following development and conservation issues:

1. A map and description of the distribution, location and extent of land uses, including open space, within the area covered by the Plan;
2. The existing and proposed location and extent of essential facilities such as public and private transportation, sewage, water, drainage, solid waste disposal, energy and other similar facilities;
3. Standards and criteria by which development will proceed and standards for the conservation, development and utilization of natural resources, where applicable;
4. A program of implementation measures including: regulations, public works projects and financing measures for infrastructure;
5. The relationship of the Kirkwood Specific Plan with the General Plans of Alpine, Amador and El Dorado counties, the Mountain Master Plan and the special use permit on which the Mountain Plan is applied.
6. The relationship of the Kirkwood Specific Plan with the neighboring jurisdictions, regional agencies and the State of California.

### **3.4 PROJECT LOCATION**

Kirkwood is located near the headwaters of the Silver Fork of the South Fork American River on Kirkwood Creek, tributary to Caples Creek and the South Fork. Kirkwood is located within Alpine, Amador and El Dorado counties near the point common to Alpine, Amador and El Dorado counties about 35 miles southwest of Lake Tahoe.

Access is provided via State Route 88, which is an east-west route at the north end of Kirkwood. State Route 88 provides access to Jackson, California to the west, the Lake Tahoe area, Gardnerville and Carson City, Nevada to the northeast and east, respectively (see Figure 3.1).

The private lands of Kirkwood are surrounded by National Forest Lands, and therefore, are controlled by the 1988 Eldorado National Forest Land and Resource Management Plan (LRMP) and the Sierra Nevada Framework Forest Plan Amendment of 2000. Other federal agencies that may exert their jurisdictional duties include the US Army Corps of Engineers, the US Environmental Protection Agency and the US Fish and Wildlife.

The California state resource management agencies which may also exert their jurisdictional obligations on development projects at Kirkwood include the Department of Fish and Game, the Central Valley Regional Water Quality Control Board (CVRWQCB), State Water Resources Board, California Department of Transportation (CalTrans), Great Basin Unified Air Pollution Control Board, Amador County Unified Air Pollution Control District, El Dorado County Unified Air Pollution Control District and the Department of Forestry and Fire Protection.

### **3.5 SPECIFIC PLAN AREA AND ENVIRONMENTAL DESCRIPTION**

The Kirkwood Winter and Summer Resort includes private lands and public lands. The ski lifts and related facilities are located primarily on National Forest Lands (Eldorado National Forest), with operations under a Special Use Permit issued by the USFS.

The Plan's jurisdiction covers all that real property situated in Sections 22 and 27, Township 10 North, Range 17 East of the Mount Diablo Meridian, Counties of Alpine, Amador and El Dorado, State of California, encompassing 732 acres, see Figure 3.2.

The Plan area is located in a generally steep and mountainous area near the crest of the Sierra Nevada range. The dominant landforms are the 9,000-10,000-foot ridges, which define the drainages of Kirkwood and Caples Creeks. A prominent feature of the topography is the Kirkwood Meadow, a glacially-derived alluvial valley surrounded by mountains on three sides. The mountain range represents an old subduction zone that is marked by the Foothills fault system on the west and the Sierra Nevada fault system to the east. The topography of the mountain range is gentle on the western slope and steep along the eastern escarpment.

The private lands of Kirkwood contain a mix of coniferous forest, sub-alpine meadow, open grass and shrub-covered slopes, and riparian corridors. The Kirkwood Meadow is bisected by Kirkwood Creek and includes wetlands and a variety of low-growing meadow and riparian plant species (i.e., willow, larkspur, columbine).

Upland open space areas include coniferous forests (i.e., pine, juniper, fir) and slopes covered with various grasses (i.e., wheat grass, melica, timothy) and low forbs such as yarrow, wandering daisy, lupine and sedges.

These areas are found primarily at the uphill side of existing residences and commercial development and abut National Forest Lands. Some areas have been disturbed due to prior logging, clearing and maintenance of ski runs and construction of facility service access roads.

Fishery resources in the immediate vicinity of Kirkwood are limited by minimal or absent summer flows in tributaries and the headwaters of Kirkwood Creek. Brook trout have been observed in isolated pools located within sections of Kirkwood Creek. Further downstream, Kirkwood Creek supports brook trout (Salvelinus fontinalis) and brown trout (Salmo trutta) populations that are self-propagating.

Other wildlife species considered non-sensitive but likely to be found at Kirkwood include mule deer, black bear and mountain quail. These are considered Management Indicator Species by the U. S. Forest Service, which represent the diversity of vegetation and special habitat components, required by all fish and wildlife species. At Kirkwood, the overall habitat capability for these species is medium (Simpson Environmental, 1995).

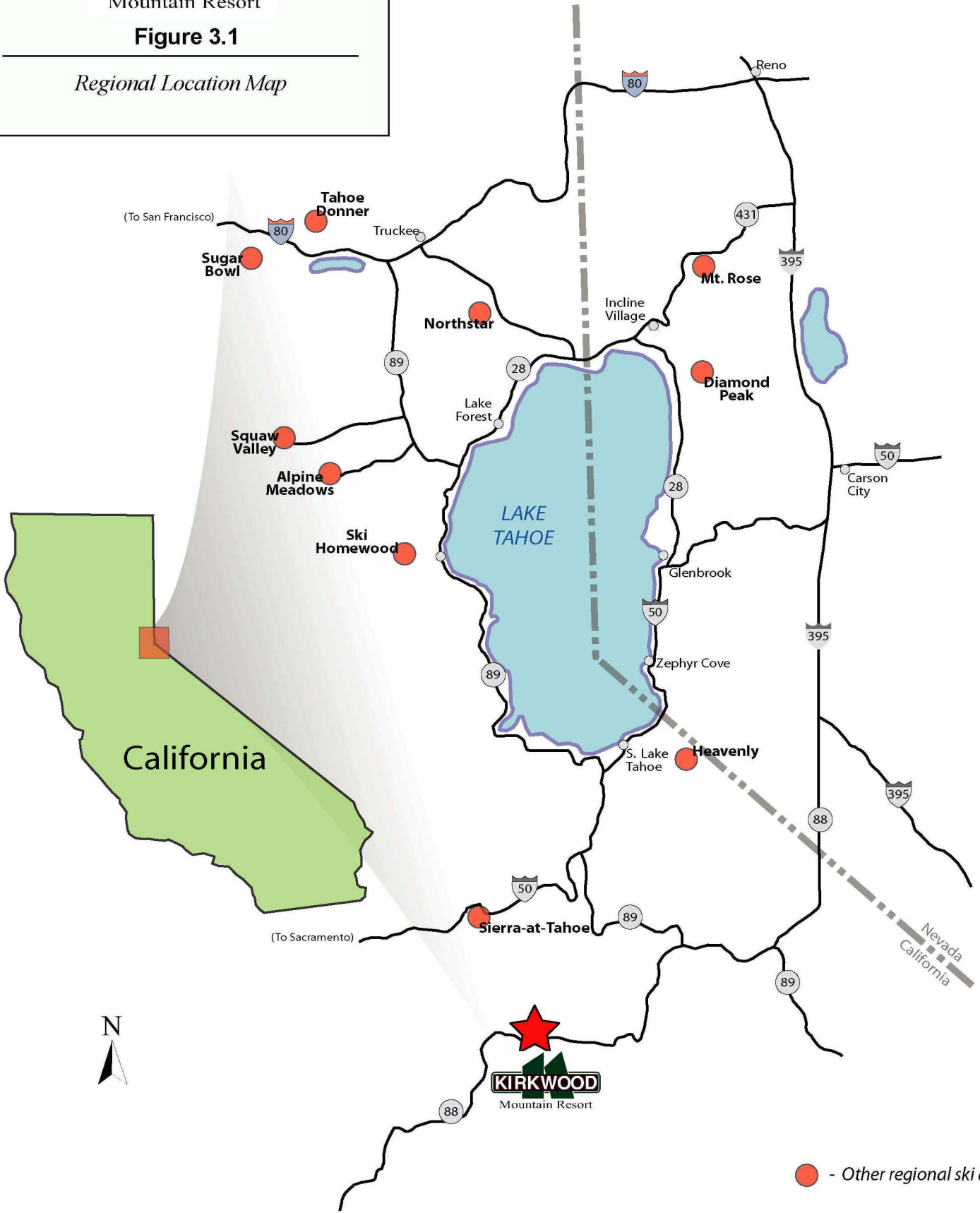




Mountain Resort

**Figure 3.1**

*Regional Location Map*



● - Other regional ski areas



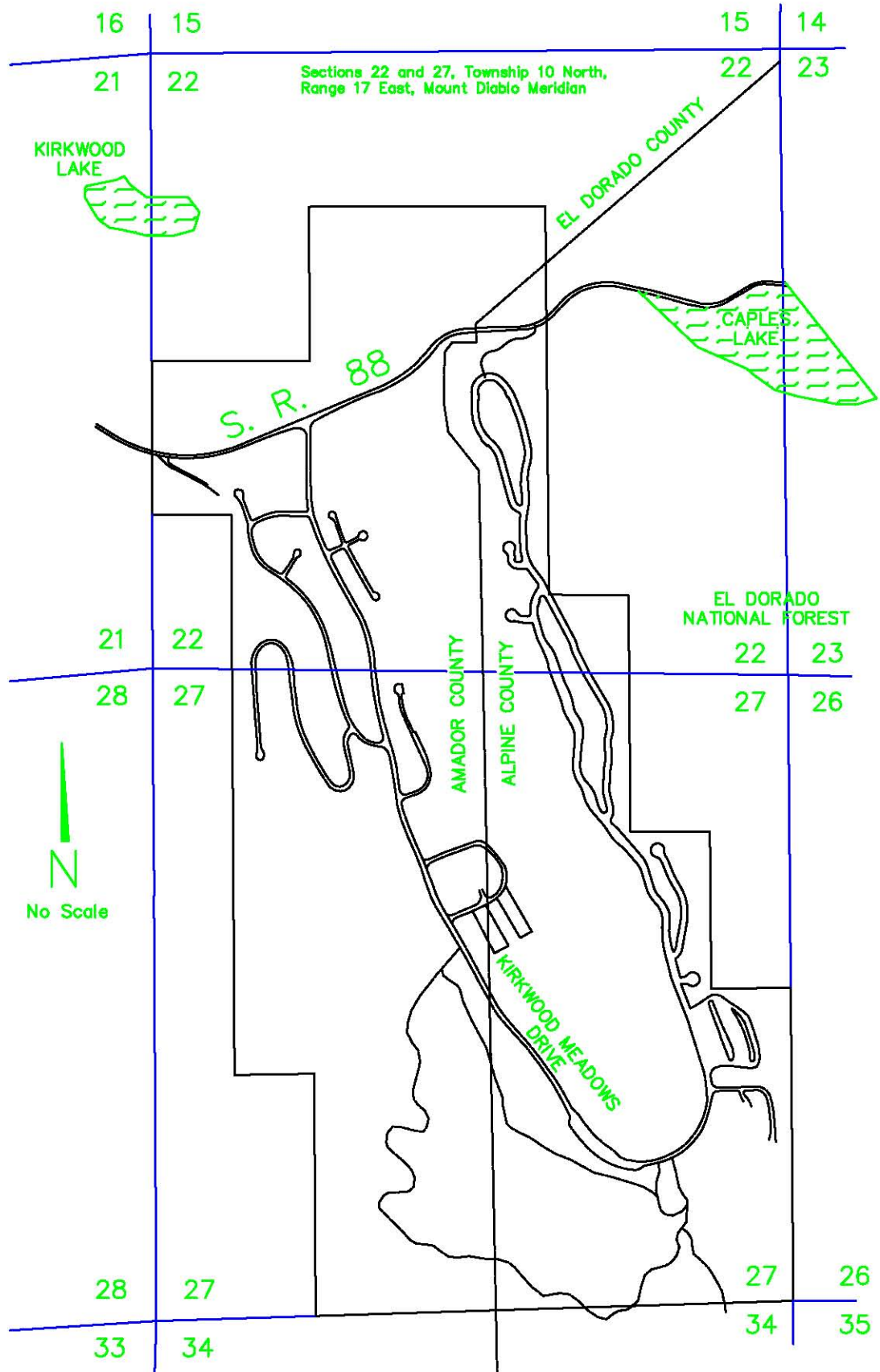


FIGURE 3.2  
SITE LOCATION MAP

### **3.6 POLICY, REGULATORY INTENT AND THEIR RELATIONSHIP**

The Plan is intended to be both a policy and regulatory document. It establishes the policies that are in-turn enforced through Ordinances approved by the individual Counties.

The goals, objectives and policies stated herein are intended to provide the rationale for the proposed development regulations/ordinances. The regulations included herein are the zoning regulations applicable to properties within the Plan boundary and are intended to supplement and in some cases replace the county regulations to address the uniqueness of Kirkwood.

The regulations set forth in this Plan are intended to be enforced by county ordinances as appropriate, by which the policy statements may be achieved within specific parameters.

### **3.7 KIRKWOOD SPECIFIC PLAN OBJECTIVES ACCOMPLISHED**

The objectives of the Plan are achievable through prudent policy research, formulation and implementation, coupled with equitable enforcement of the regulations (ordinances).

For example, height restrictions placed upon single-family/duplex homes and multi-family structures regulate the height to which a structure can be built. It is a Policy of this Plan to preserve the natural setting of Kirkwood by minimizing the visual effect of development. Height restriction regulations are one method of achieving this objective.

### **3.8 RELATIONSHIP TO COUNTY GENERAL PLANS**

Proposed development within Kirkwood is reviewed for conformance with the Plan and its accompanying documents. The reviewing bodies include the Tri-County Technical Advisory Committee (Tri-TAC) comprised of representatives of Alpine, Amador and El Dorado counties and the county building department of the county in which the project is proposed. Representatives of the U.S. Forest Service serve as ex-officio members of Tri-TAC. The county planning department may be involved if the project requires a use permit, tentative map or variance.

Private lands of Kirkwood fall within the jurisdiction of three counties - Amador, El Dorado and Alpine. Therefore, the three counties will be responsible for adopting the Plan and approving the regulating ordinances.

#### **3.8.1 Amador County General Plan**

The Amador County General Plan, which applies to land uses at the western edge of Kirkwood, designates Kirkwood as Special Planning (SP). This classification applies to land uses which have been or are proposed to be developed as planned developments or other carefully prepared or supervised plans. As stated in the Amador County

General Plan (page 11 of the Land Use Element): “Complex land development projects are acceptable, provided there are findings of conformity and subject to use permit or other appropriate controls.” The Amador County General Plan designates the public land surrounding Kirkwood as Open Forest (O-F) which applies to the National Forest Lands.

The Amador County General Plan also includes text related to the Scenic Highway status of State Route 88 (SR 88) and development in its proximity (page 35 of the Land Use Element).

“The Amador County Board of Supervisors has by resolution found that the portion of State Route 88 between what is known as the Dew Drop Fire Station and the Alpine County Line can be regulated in such a way as to meet the five criteria in Section 261 of the State Streets and Highway Code, thus is hereby designated and recognized by the State of California as a Scenic Highway.”

### **3.8.2 El Dorado County General Plan**

The El Dorado County General Plan, which applies to land uses north of State Route 88, designates private lands within Kirkwood as “Adopted Plan” (AP) which recognizes areas for which specific land use plans have been prepared and adopted. These plans are adopted and incorporated by reference into the County’s General Plan and the respective land use map associated with the Plan is adopted as the General Plan Map for that area. Thus, the Specific Plan Land Use Map is incorporated into the El Dorado County General Plan. The El Dorado County General Plan designates the National Forest Lands surrounding Kirkwood as “Natural Resource” (NR) which applies to areas that contain economically viable natural resources.

State Route 88 is shown in the El Dorado County General Plan as a State Scenic Highway. El Dorado County defines a Scenic Highway as follows: “a highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of exceptional beauty, or of historic or cultural interest. The aesthetic value of scenic routes often are protected and enhanced by regulations governing the development of property or the placement of outdoor advertising.”

It should be noted that the El Dorado County General Plan was invalidated by court order and is in the process of reformulation as of February 2003.

### **3.8.3 Alpine County General Plan**

The Alpine County General Plan, which applies to land uses at the eastern edge of Kirkwood, designates Kirkwood as Planned Development (PD). This designation allows “any residential, commercial, institutional, and recreational use or combination of uses arranged and/or designed to result in an integrated and organized development deemed acceptable by the County.” (Alpine County, 1982).

The Alpine County General Plan designates the public lands surrounding Kirkwood as

Recreational Site (RS) and lands around Caples Lake to the east of Kirkwood as Open Space (OS). The RS designation identifies areas which contain large “recreational facilities which may draw to the County significant numbers of persons”. The OS designation is intended to “protect and promote wise use of the county’s natural resources”.

State Route 88 is shown in the Alpine County General Plan as a Scenic Highway.

### **3.9 PLANS OF NEIGHBORING JURISDICTIONS**

#### **3.9.1 Eldorado National Forest**

National Forest Lands surrounding Kirkwood, (not addressed by the Plan) are under the jurisdiction of the U.S. Forest Service. Public lands surrounding Kirkwood are under the jurisdiction of the USFS and use of these lands is addressed in the Kirkwood Mountain Master Plan and the Special Term Use Permit between the USFS and KMR. Locally, the Eldorado National Forest is guided by the Eldorado National Forest Land and Resource Management Plan (LRMP) (USDA, 1988) and more recently the Sierra Nevada Framework Forest Plan Amendment of 2000.

A Special Use Permit from the United States Forest Service, Eldorado National Forest, covers 2,300 acres of skiable terrain and controls the ski mountain operations at Kirkwood. Not all of this terrain is currently accessible from chairlifts, thus expansion and upgrade of existing facilities is planned as proposed by the Mountain Master Development Plan Draft of August, 2001.

#### **3.9.2 Regional Plans**

There are no known regional plans in place at this time which directly influence the community of Kirkwood, that have not been taken into consideration with the development of this Plan.

#### **3.9.3 State Plans**

There are no known state plans in place at this time, which directly influence the community of Kirkwood, that have not been taken into consideration with the development of this Plan.

### **3.10 PROJECTS REQUIRED TO BE CONSISTENT WITH THE KIRKWOOD SPECIFIC PLAN**

Rezoning, Tentative and Final subdivision maps and public works projects within Kirkwood are required by law to be consistent with the Plan. All residential, commercial, mixed-use, public works, recreation and conservation projects must comply and be consistent with polices of the Plan and implementation of those projects must comply with the Ordinances of the Plan.

## **CHAPTER 4 – LAND USE AND REGULATORY PROVISIONS**

### **INTRODUCTION**

This chapter of the Plan focuses on the designated land uses for Kirkwood. These designations are intended to address potential changes in market conditions and provide updated environmental data. Each category of zoning is addressed, with accompanying objectives and policies used to guide development within that specific zoning category, and associated land use controls. The Specific Plan Land Use Map illustrates the general locations where development will occur, Figure 4.1.

### **4.1 OVERALL LAND USE PROGRAM**

Kirkwood includes a mixture of residential, commercial, public services and open space/recreational land use zones. No permanent industrial uses are proposed. Utilities such as the powerhouse and water/wastewater facilities are designated as “Service” uses. Sub-areas with the greatest concentration of new development are the Village Center, the expanded Ski In/Ski Out Subdivisions on the western slopes of Kirkwood.

A graphic representation of areas proposed for development is presented in Figure 4.1, the Specific Plan Land Use Map. A summary of acreages for each type of land use is included in Table 4.1. Density information is provided in Table 4.2. The following categories of land use zones have been used for the Specific Plan Land Use Map:

SR:	Single-Family/Duplex Residential Zone
MF:	Multi-Family Residential Zone
MF-C:	Multi-Family and Commercial Zone
S-P:	Service/Utilities and Parking Zone
OS:	Open Space
OS-R:	Open Space and Recreation Zone
M:	Meadow Zone

Following is a brief description of the zoning categories as presented on the land use map. Population, not the standard units per acre allocation, determines allowable densities for these areas.

#### **4.1.1 KIRKWOOD SUBAREA GENERAL DESCRIPTIONS**

##### **Mountain Village-East and West**

The Mountain Village is on the west and east sides of Kirkwood Creek, in the existing Village area at the head of Kirkwood Meadow. The Draft Plan zones the Mountain Village as MF/C, OS/R and S/P. The intent is to focus commercial development in this area and to intermix residential and commercial uses to create a strong pedestrian-oriented community. The entire Village Center (east and west) contains a mix of

residential units that include condominiums for individual owners, interval ownership units (whereby more than one owner shares the ownership of a unit to promote year-round use of the resort), and hotel/lodge units. Ground-floor commercial units will be created within the condominium buildings, centered around open air plazas that serve as public gathering places.

### **Timber Creek Area**

The Timber Creek area is an area containing a day skier lodge, parking and skier services. The area encompasses Loop Road, and the area west of Kirkwood Meadows Drive, including the existing Timber Creek Lodge. The Timber Creek area is occupied by surface parking lots, the KMPUD wastewater treatment plant facilities, the Kirkwood volunteer fire department and the KMPUD community building.

### **Ski-in Ski-out North and South**

The land north and south of Timber Creek Lodge is zoned under this Plan for a mix of residential and residential/commercial uses in addition to recreation. The sub area footprint is larger than that shown on the 1988 Master Plan, extending single family development into areas not slated for development under the 1988 Plan.

### **Kirkwood Meadows West**

Kirkwood Meadows West includes the Kirkwood Meadows Association, the original single family/duplex subdivision in the Kirkwood Valley. Areas both east and west of Kirkwood Meadows Drive are included.

### **Kirkwood North**

Kirkwood North encompasses all KMR lands north of Hwy 88. Existing Development is a gas station, the Kirkwood Inn, the riding stable and the cross country ski center. Future proposed development maintains the multi family-commercial zoning and includes 40 units comprising a bed and breakfast facility and a multi-family/commercial center approximately where the gas station is currently. At buildout there will be 32,000 square feet of commercial space under the Draft Plan, which includes the existing 6200 square feet in the Kirkwood Inn and cross country Ski Center.

### **East Meadows**

East Meadows, located east of Kirkwood Meadow includes the East Meadows I, II and III single family subdivisions. SR and OS zones are maintained under the Draft Plan.

### **Juniper Ridge**

The Juniper Ridge subdivision is located at the southeast end of the East Meadows sub-area. It includes ten single family and 9 duplex lots and maintains the existing SR and OS zoning classification under the Draft Plan.

## **Kirkwood Meadow**

Kirkwood Meadow is the open, central valley area that divides Kirkwood into east and west areas. The Meadow is protected from residential or commercial development, although infrastructure installation and certain non-disturbing recreation uses are allowed. The meadow is protected through a 1973 Scenic Agreement between KMR and the U.S. Forest Service, and a conservation easement entered between KMR and North American Land Trust in January 2003.

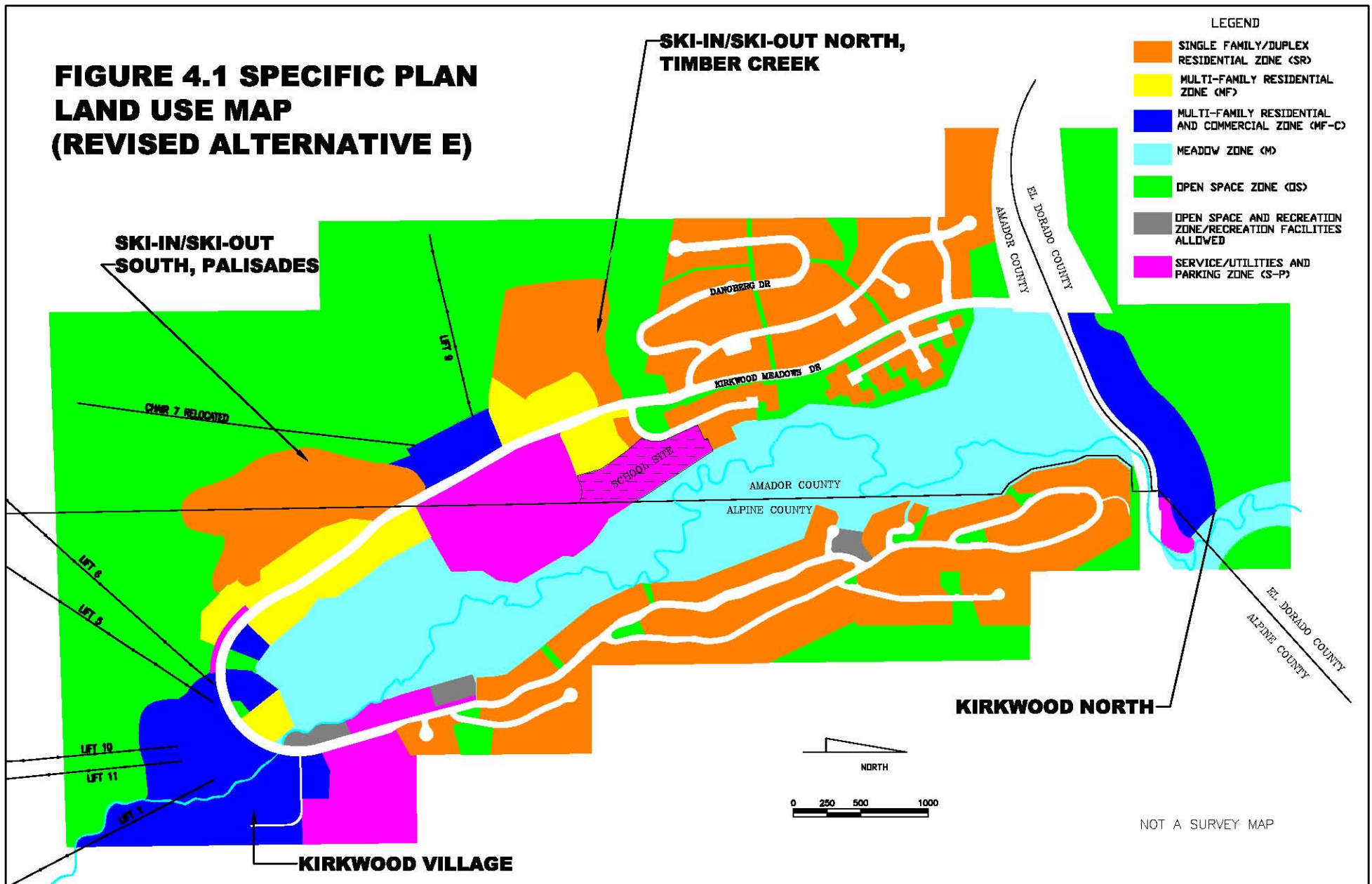
### **4.2 SINGLE-FAMILY/DUPLEX RESIDENTIAL (SR)**

#### **4.2.1. Objectives for Single-family/Duplex Residential Development**

1. Maintain a high level of design quality and product diversification.
2. Encourage passive solar and energy efficient design elements.
3. Encourage design elements promoting harmony with the environment.



**FIGURE 4.1 SPECIFIC PLAN  
LAND USE MAP  
(REVISED ALTERNATIVE E)**



#### **4.2.2 Polices for Single-family/Duplex Residential Development**

1. Require site specific building envelopes at development sites to avoid and minimize environmental degradation and unnecessary ground disturbance.
2. Create green belts in subdivisions to maximize recreational opportunities and preserve open space.
3. Allow for Employee units in single-family/duplex residential areas.

#### **4.2.3 Program for Single-family/Duplex Residential Development**

The SR zoning category is found throughout Kirkwood and represents those areas that are currently developed/subdivided, and also those areas that are intended to be developed as single-family and duplex residences.

The maximum density associated with the SR zoning designation is 24 persons per acre. This corresponds to the density allocation of 6 persons per single-family home, with an average lot size of one-quarter (1/4) acre. Duplex lots, which are designated and subdivided as duplex lots at the time of Tentative and Final Map, are allocated a maximum density of 48 persons per acre. Kirkwood Meadows West, East Meadows, Juniper Ridge, Kirkwood North and parts of Ski In/Ski Out are sub-areas of Kirkwood that are zoned for Single-family/duplex residential development.

#### **4.2.4 Employee Units Within Single-family/Duplex Residential Zones**

If the CC& R's of the appropriate and applicable owners association allow, employee units shall be permitted on lots or parcels in SR zone districts which are designated for single family homes in conjunction with the construction of the main dwelling unit, provided a use permit is obtained from the Planning Department of the county of concern. These units shall be designated as *Employee Units* and shall be consistent with the following criteria:

1. Payment of all impact and assessment fees and compliance with all ordinances applicable to the construction type;
2. Employee Units shall be attached and meet the following criteria:
  - A. Employee Units shall be sized at the lesser of 50% of the main structure or 1000 sq. feet;
  - B. Employee Units shall be attached to the main dwelling by a common roofline or structural feature which does not exceed a distance of 30 feet from the main dwelling. Employee Units shall be architecturally consistent with the main dwelling unit, such consistency shall be determined by Tri-TAC or the planning commission in the event the commission hears the matter.
3. Employee Units must be Deed restricted and meet the definitions of employee housing in accordance with the Employee Housing Ordinance as adopted.
5. Detached Employee Units are not allowed.

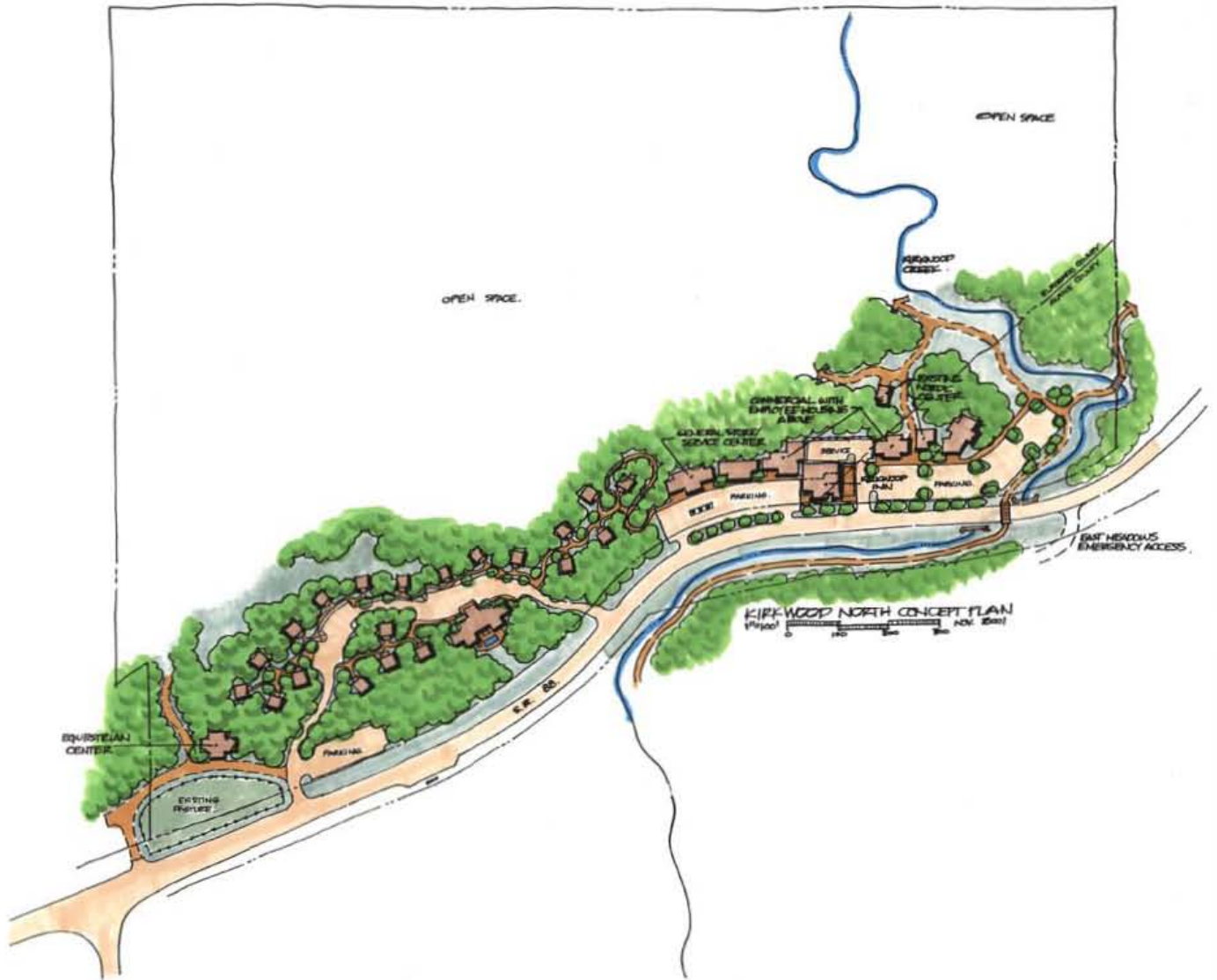
Any party desiring to construct a new structure or convert an existing structure to a Employee Unit shall meet all other provisions of the applicable county codes related to construction including, but not limited to, sewer, water, power and building permits and fees.

#### **4.2.5 Proposals for Single-family/Duplex Residential Development**

The Ski In/Ski Out - North and South areas are located on either side of the existing Timber Creek Lodge area (Timber Creek Village). The development plan for this area is a mixture of residential and recreational uses. Skier bridges are planned to be constructed (placement will depend on the final design) to allow for easy ski-lift access by residents. Lots are designed to border ski trails in and among tree clusters that define the trails. Some of the land included in this area is currently ski trails and will remain as such to the extent this is possible.

Additionally, 'ski paths' will allow access to most lots, encouraging the use of ski trails (winter) and bike/foot paths (summer) to travel about Kirkwood. This design affords the opportunity to minimize vehicle trips and maximize the use of commercial and day skier parking lots. Ski paths are not intended to transport large numbers of people and are intended primarily for use by the residents of that subdivision.

See Figure 4.3 and Figure 4.3a for a conceptual illustration.



**Figure 4.2**  
**Kirkwood North Illustrative Plan**

## **4.3 MULTI-FAMILY RESIDENTIAL (MF)**

### **4.3.1 Objectives for Multi-family Residential Development**

1. Create a diversification of product type.
2. Ensure aesthetic cohesion among multi-family projects.
3. Create a pedestrian oriented atmosphere.

### **4.3.2 Policies for Multi-family Residential Development**

1. Appropriately site multi-family projects according to physical and environmental constraints.
2. Limit the maximum height of multi-family structures to three stories/levels, plus loft space, from the backfilled side (if applicable) of the building.
3. Ensure that the design of buildings maximizes the safety of inhabitants and passersby.

### **4.3.3 Program for Multi-family Residential Development**

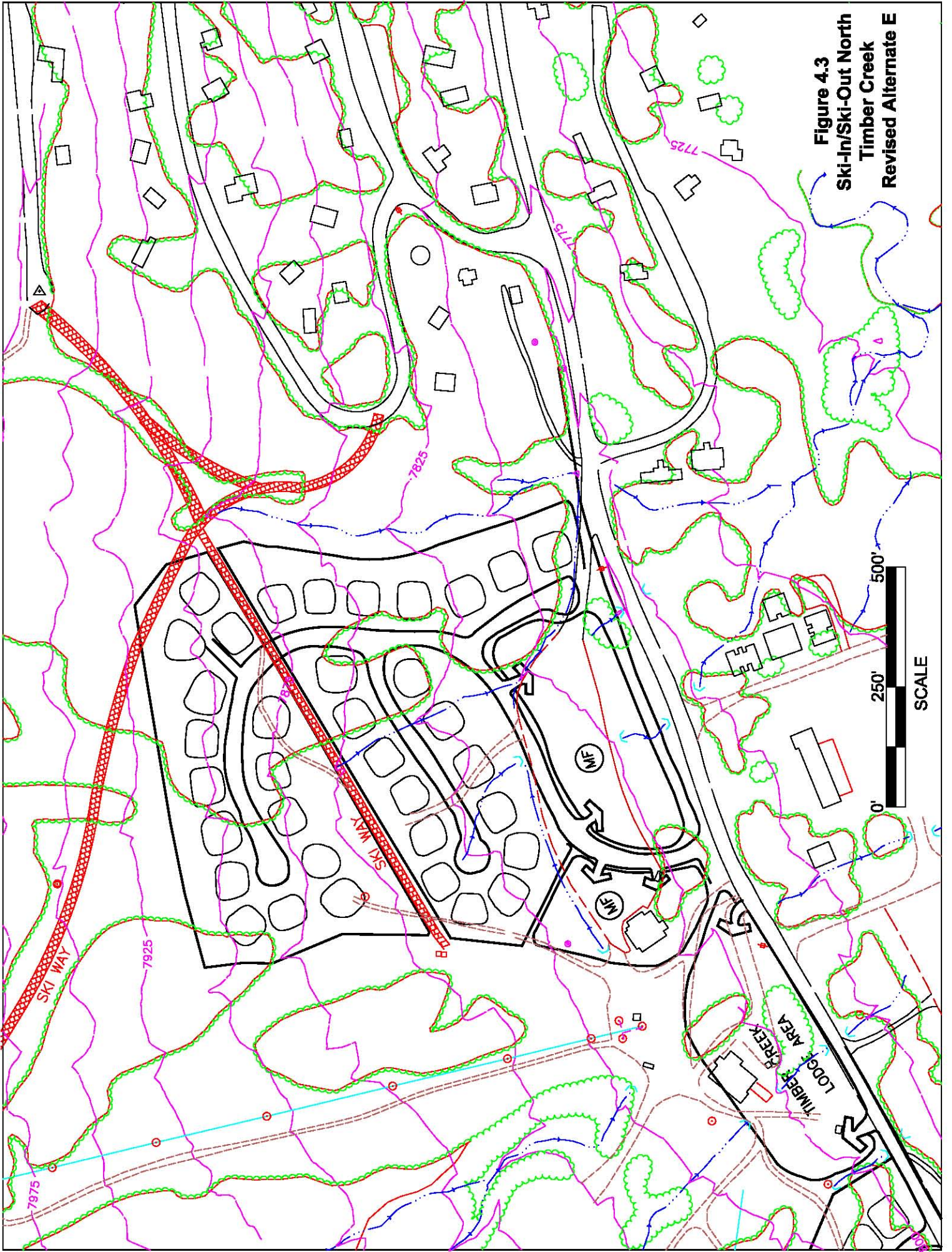
This zoning category (MF) is mainly found on the western side of the Kirkwood Valley and includes those existing condominium buildings such as The Meadows, Edelweiss, Thimblewood, Meadow Stone, Lost Cabin, Snowcrest and Base Camp. This zoning designation allows for the development of multi-family dwelling units, such as townhomes, condominiums, apartments, etc. Employee housing complexes may also be located within, but not restricted to, this designation.

The minimum density associated with this land use category is 20 persons per acre. The maximum density allowed within the MF Zone is 200 persons per acre. The objective is to provide for maximum flexibility in design, site planning and product mixture that could address the current market trends at the time of development.

### **4.3.4 Proposals for Multi-family Residential Development**

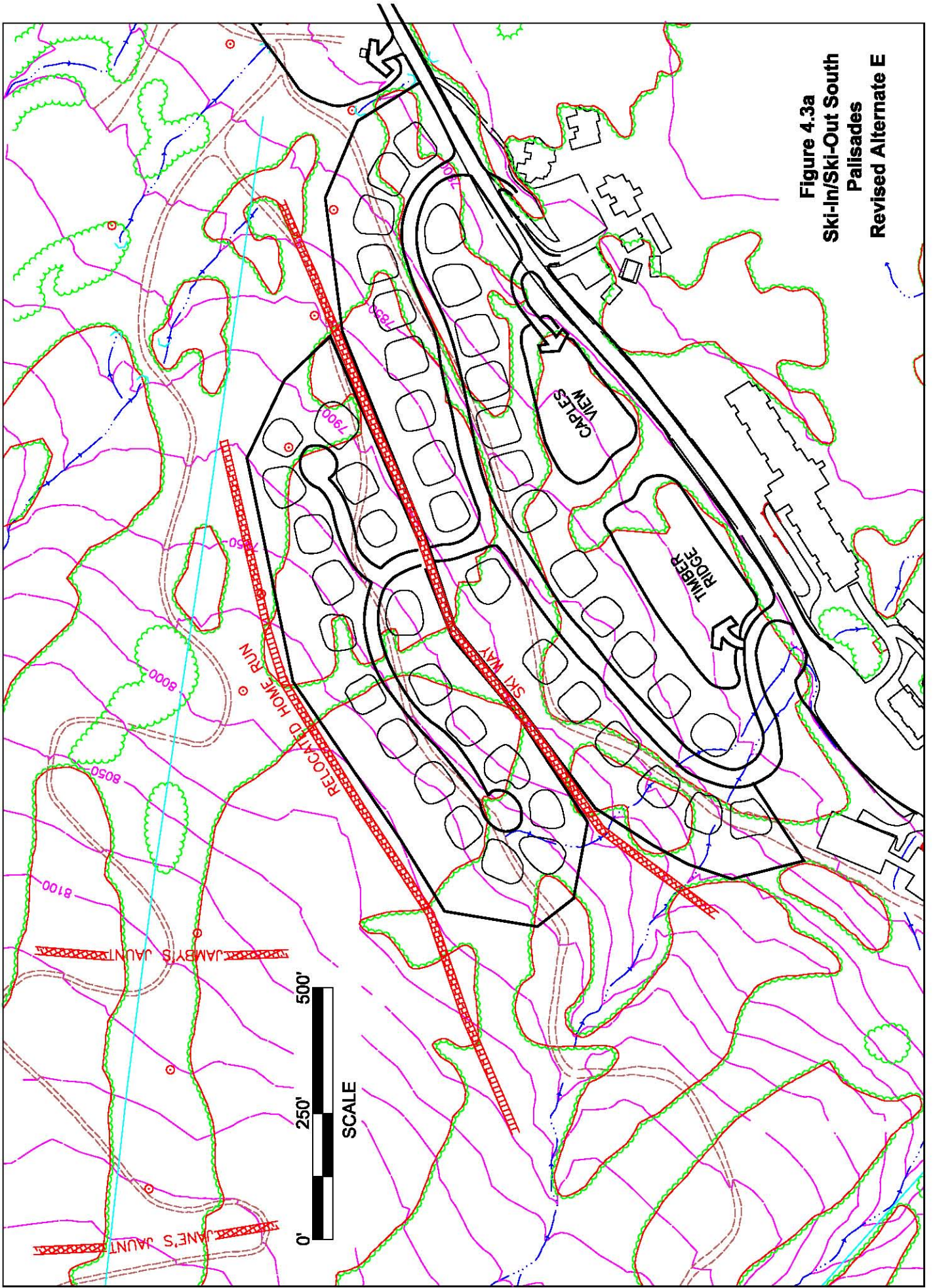
The majority of the existing condominiums at Kirkwood fall within this zoning category. However, Ski In/Ski Out North and South contain the MF designation in addition to SR as previously discussed, see Figure 4.3.





**Figure 4.3**  
**Ski-In/Ski-Out North**  
**Timber Creek**  
**Revised Alternate E**





**Figure 4.3a**  
**Ski-In/Ski-Out South**  
**Palisades**  
**Revised Alternate E**

## **4.4 MULTI-FAMILY RESIDENTIAL AND COMMERCIAL (MF-C)**

### **4.4.1 Objectives for Multi-Family and Commercial Use**

1. A variety of residential densities and unit types shall be constructed to meet market demand and to provide a variety of housing types in keeping with the nature of Kirkwood.
2. Ensure aesthetic cohesiveness among multi-family projects.
3. Create a pedestrian oriented atmosphere.
4. Develop a well-coordinated commercial center at the Village and support services throughout Kirkwood.

### **4.4.2 Policies for Multi-Family and Commercial Use**

1. Design of mixed-use structures shall ensure the safety of inhabitants and passersby from snowshed and ice.
2. Higher residential densities shall be mainly concentrated in Multi-Family and Commercial (MF-C) zones to promote pedestrian activity.
3. When residential uses are mixed with commercial uses, they shall be adequately protected from potential noise, security and safety problems through construction techniques, design methodology and use permit restrictions for some commercial uses.

### **4.4.3 Programs for Multi-family and Commercial Development**

By combining commercial and residential uses, two distinct needs of the community can be met without having to further disturb vacant land. Further, mixed-use zoning designations embrace and encourage a pedestrian environment.

The minimum density associated with this land use category is 20 persons per acre. The maximum density allowed within the MF-C Zone is 200 persons per acre.

The total amount of commercial square feet at Kirkwood under buildout conditions is expected to be up to 195,000 square feet. With 76,664 commercial square feet existing (February 2003), an additional 118,336 commercial square feet will be constructed. Under buildout conditions, it is anticipated that 65% of the commercial space will be located within the Village. Fourteen percent (14%) would be located within the Timber Creek Village, and nine percent (9%) at Kirkwood North. An additional nine percent (9%) of the total square footage remains as a contingency to be located in areas that will be determined as the demand for services arises.



#### **4.4.4 Proposals for Multi-family & Commercial Development**

This zoning category can be found in three separate areas at Kirkwood. The first and largest area is found at the Kirkwood Village located at the southern end of Kirkwood, where The Lodge at Kirkwood is located (see figure 4.4). The second area is at Timber Creek, where KMR proposes to develop a “mini village” with commercial and residential activity centered at the base of Chair Lifts 7 and 9. The third area can be found on the north side of State Route 88. A small highway oriented multi family-commercial center will border SR 88 with the potential for an expanded cross-country center, employee housing and a Bed & Breakfast facility located off of the highway.

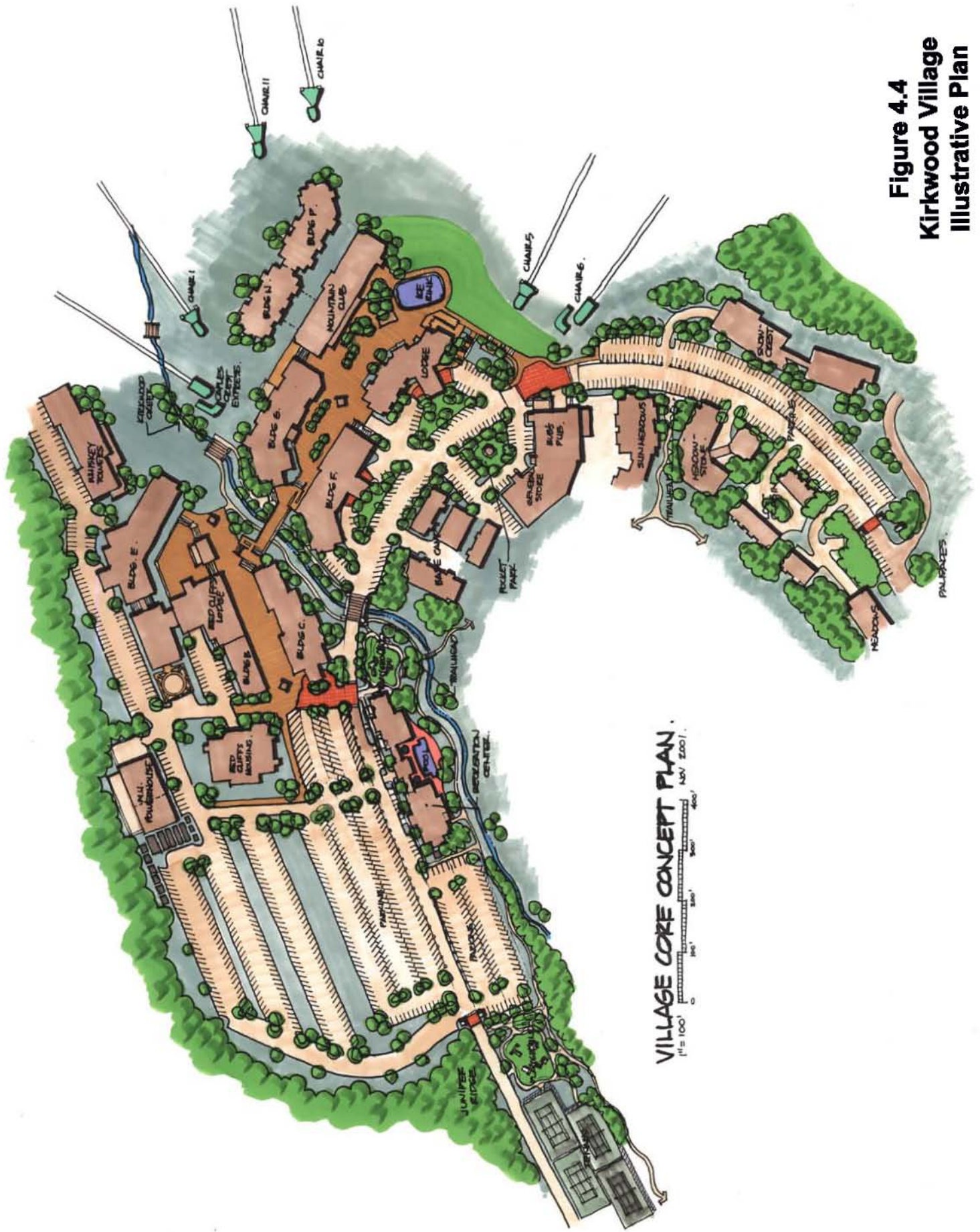
#### **4.5 SERVICE/PARKING (S-P)**

##### **4.5.1 Objectives for the Service Facilities/Parking Areas**

1. Maximize usage of land by allowing multiple activities to occur.
2. Maintain and expand parking facilities to meet demands.
3. Kirkwood Mountain Resort shall work closely with relevant agencies such as the KMPUD, Mountain Utilities, county sheriff’s departments, the Alpine County Unified School District, and other interested agencies to ensure adequate provision of services and utilities for Kirkwood visitors and residents.

##### **4.5.2 Policies for the Service Facilities/Parking Areas**

1. A systematic approach to safe, adequate, and cost-effective public utilities and services shall be provided to meet Kirkwood’s needs.
2. Utilize innovative designs to maximize usable space while limiting the need for expansive vegetation removal.
3. Wherever possible, use existing parking and roads for utility distribution lines.
4. Provide adequate parking for patrons, day skiers and employees.
5. Reduce in-valley traffic through planned shuttle stops, alternate transportation (i.e. golf carts, bicycles and rope tows), designated walkways and a pedestrian friendly development.



**Figure 4.4**  
**Kirkwood Village**  
**Illustrative Plan**

### **4.5.3 Program for Service Facilities/Parking Areas Development**

Service and parking areas can be found throughout the Valley. In order to maintain maximum flexibility in future utility/infrastructure expansion and parking needs, this land use has been combined. Typical uses would be a school facility, indoor recreation facilities, parking, (surface or parking garages), water and wastewater treatment and distribution facilities, power generation facilities, gas/propane storage and distribution facilities, effluent absorption beds and snow storage. Given the fact that existing infrastructural facilities are intermixed at the locations of the existing major surface parking lots, this service and parking development program is a sound methodology to facilitate future parking and infrastructural development.

### **4.5.4 Proposals for Service Facilities/Parking Areas Development**

Timber Creek day skier parking is proposed for surface parking expansion. The Timber Creek- Loop Road area currently contains the upper and lower Chair 7 parking lots, the ACUSD school site and the KMPUD parcel.

Although the Snowkirk/Red Cliffs parking lot located northeast of the Village is zoned so that expansion may take place, the topography of the site does not readily lend itself to surface parking expansion. However, a parking garage may be well suited to this area due to the topography and the ability to top-load the garage from parking bays higher on the slope. This garage could be designed so that it blends into the mountain. Such a structure may be used to satisfy the covered parking requirements for development in the Village and as day visitor parking. Refer to Chapter 5 for parking ratio requirements.

Parking areas in Kirkwood North serve the cross country ski center, the Kirkwood Inn and Gas Station.

## **4.6 OPEN SPACE (OS) AND OPEN SPACE RECREATION FACILITIES (OS-R)**

### **4.6.1 Objectives for Open Space**

1. Encourage a variety of recreational uses within the OS zone for year-round recreational activities at Kirkwood.
2. Promote recreational activities that do not require substantial ground disturbance or lead to ecological disruption.

### **4.6.2 Policies for Open Space**

1. Open space lands available for recreational use shall be used in such a way that avoids and minimizes damage to natural resources or scenic vistas.
2. Whenever possible, utility easements should be used to link OS areas throughout Kirkwood as part of developed pedestrian, bicycle, or equestrian trail systems.

3. Where appropriate, recreational facilities should take advantage of natural resources and features of scenic value such as stream corridors and scenic vista points.
4. Recreational facilities shall be set back appropriately from stream banks to minimize damage from erosion. Stream crossings shall be reviewed by the appropriate agencies to ensure adequate environmental protections.
5. Recreation facilities shall be developed with consideration for compatible adjacent uses, access and traffic flows

#### **4.6.3 Program for Open Space**

Open Space areas are designated as “OS” on the Specific Plan Land Use map. Basic use types to be expected in these areas are Nordic, Alpine and Cross Country skiing. During the summer months, hiking and mountain biking are the main uses. Other possibilities include grass skiing, hot air ballooning, equestrian use, fly-fishing, nature hikes, lectures and guided tours.

#### **4.6.4 Proposals for Open Space**

The Open Space areas (OS Zone) are meant to be large areas where minimal man-made installations are allowed. An example of an allowed installation is a chair lift and its support infrastructure.

Uses of the OS Zone will vary seasonally and are envisioned to include alpine and Nordic skiing, snowshoeing, rock climbing, grass skiing, disc golf, hang gliding, hot air ballooning, hiking, mountain biking, fishing, horseback riding and other similar activities which do not require particular permanent structures.

#### **4.6.5 Objectives for Open Space and Recreation (OS-R)**

Provide limited open space area where permanent facilities, parks, tennis courts and similar installations are allowed. These areas will be dispersed generally around the valley.

#### **4.6.6 Policies for Open Space and Recreation**

1. Provide dedicated areas interspersed throughout Kirkwood where permanent recreational facilities may be constructed.
2. Facilities should be appropriate for the individual site, considering type and density of adjacent planned development.
3. Facilities should be designed for minimal impact on the site.

#### **4.6.7 Program for Open Space and Recreation**

Provide dedicated, protected areas for recreational activities requiring installed equipment or special circumstances.

#### **4.6.8 Proposals for Open Space and Recreation**

The small areas proposed for Open Space/Facilities Allowed are planned to host the type of recreational activities, which require equipment or permanently installed facilities.

Multi-use recreation/community facilities are necessary in providing recreational opportunities at Kirkwood. Depending upon design, many different activities and uses could take place in such a facility. Administration offices, meeting/conference space, library, movie theater, non-denominational worship facility, exercise/weight room, gymnasium floor space for various sports, a pool, class space, post office, and lockers/showers/ restrooms are all possibilities. The building could also include a food preparation area for conferences, community potlucks, etc.

It should be noted that larger recreational facilities are also an allowed use in service/parking zones. Additional uses envisioned for OS-R Zones are tennis courts, basketball courts, skating facilities, playgrounds, picnic areas, other court sports, etc.

#### **4.7 KIRKWOOD MEADOW**

##### **4.7.1 Objectives For the Kirkwood Meadow**

1. Maintain the ecological integrity of the meadow.
2. Promote non-invasive recreational activities.
3. Balance the carrying capacity of the pastureland with the appropriate number of grazing animals.

##### **4.7.2 Policies For the Kirkwood Meadow**

1. The Kirkwood Meadow shall be retained as permanent open space in accordance with the 1971 agreement between Kirkwood Associates, Inc. and the U.S. Forest Service and the terms of the Conservation Easement entered with North American Land Trust in January 2003.
2. Maintenance of utility lines and construction of underground utilities in the Kirkwood Meadow shall include construction measures that minimize damage to meadow resources and Kirkwood Creek, as provided in erosion control, design and landscape guidelines in effect at the time of the project.
3. A grazing plan shall control the use of the meadows by livestock.

##### **4.7.3 Program for the Kirkwood Meadow**

The Kirkwood Meadow is designated as Meadow (M) on the Specific Plan Land Use

map. As shown in Table 4.3, no permanent aboveground structures shall be developed in this zone, except those necessary for utilities such as well pump enclosures or bridges to allow for east/west access across the Meadow by non-motorized vehicles. Primary Meadow uses shall be limited to cross-country skiing, horseback riding, grazing, hiking and other recreational uses provided they do not cause permanent damage to the meadow ecology.

Studies commissioned thus far by the KMPUD and KMR have indicated that the meadow is an area in which viable sources of subterranean water may be tapped, currently and in the future.

#### **4.7.4 Proposals for the Kirkwood Meadow**

To accommodate the safety of patrons and avoid unauthorized trail blazing, KMR and/or the KMPUD may construct temporary or permanent bridges across Kirkwood Creek at appropriate locations. It is expected that these bridges will keep hikers, bikers and horse-back riders on designated trails which cross the Creek at these bridged locations. During the winter months, these bridges may also offer a greater degree of safety to cross-country skiers. All bridges and other facilities will conform to permit restrictions from applicable agencies as they may be required from time to time.

Utilization of the meadow for nature hikes and educational seminars will be pursued as an avenue for expansion of recreational and educational activities at Kirkwood.

#### **4.8 LOCAL ROADS, STATE ROUTE 88 AND CAL-TRANS RIGHT-OF-WAY**

While indicated on the Land Use Map, this category is not intended to be a zoning designation, but rather is included for completeness. Known and existing roads have been classified and the total area has been calculated. As new projects are designed and constructed, the acreage associated with roads and rights-of-way will increase. Due to the manner by which single-family subdivisions are designed, they are anticipated to have the greatest increase in roads, whereas the multi-family areas will likely have a minimal increase to the overall acreage of roads in Kirkwood.

#### **4.9 LAND USE REGULATIONS**

Table 4.3 lists the allowable uses within each zoning category. Development controls are discussed in detail following Table 4.3 found at the end of this Plan and provide further regulatory authority and direction for the counties to enforce and ensure development proposals meet the criteria.

##### **4.9.1 Purpose**

The purpose of land use regulations is to ensure that land use designations are structured in such a manner that compatible uses are appropriately located and allowable uses are equitably enforced.

## 4.9.2 Applicability

All land use regulations contained herein are applicable to all land within the Kirkwood Specific Plan boundary (Figure 4.1).

## 4.9.3 Residential Unit Projections

Table 4.1 describes the acreage associated with all Land Use categories in the Plan. The number of units projected in Table 4.2 is based on a number of factors. The Plan must be at all times cognizant of the 6558 overnight population limit. The obvious way to achieve conformance is to devise a unit mix and total that will provide somewhere near the 6558 population limit but not exceed it.

The existing development was evaluated using the occupancy experience factors developed by RRC Associates (see Section 4.10.1), and projections made past that for unit count and types, (most probable case), to net the total estimated population. Table 4.2A estimates the mix of unit types and associated population at build out.

It should be noted that, generally, the approved density of development is rarely achieved in reality, therefore the likely outcome is that build out will have fewer units than approved; therefore, fewer overnight accommodations will result.

**TABLE 4.1  
ZONING AND ASSOCIATED ACREAGE**

<b>Zoning Designations</b>	<b>Acres</b>
Single Family/Duplex (SR)	176.7
Multi-Family Residential (MF)	30.3
Multi-Family Residential and Commercial (MF-C)	50.6
Open Space (OS) (1)	224.0
Open Space and Recreation (OS-R)	3.1
Meadow (M) (2)	130.0
Service/Parking (S-P)	45.6
Local Roads & State Route 88 & ROW (R/R-O-W) (3)	72.0
<b>TOTAL</b>	<b>732.3</b>

Notes for Table 4.1:

(1) Includes the Ski Mountain and undeveloped open space available for general recreation activities.

(2) Includes the Kirkwood Meadow as shown in Figure 4.1.

(3) At buildout, new internal roads may exceed the acreage shown in this table. These roads will be defined at the time of applications for subdivisions and are not shown in the Specific Plan Land Use map. This category is not intended to be a zoning designation, but is included in the acreage calculations for completeness for what is known today.

**TABLE 4.2  
DEVELOPMENT PROGRAM SUMMARY FOR RESIDENTIAL ZONES**

<b>Zoning Designation</b>	<b>Total Projected Units</b>
Single Family/Duplex	392
Multi-Family Residential	332
Multi-Family Residential and Commercial	689
<b>TOTALS</b>	<b>1413</b>

**TABLE 4.2A  
Kirkwood Specific Plan: Peak Overnight Population Estimate**

	Units (Est)	# BR's (Est)	Average Beds/ Bedroom	Average Pillows/ Bed	Peak Day Occupancy Rate	Population @ 100% pillow utiliz.	People per Occupied Unit @ 100% pillow utiliz.
Single family	392	3.2	1.0	1.8	95%	2258	5.8
Studio	111	1	1.2	1.8	95%	240	2.2
1BR condo	372	1	1.2	1.8	95%	804	2.2
2BR condo	349	2	1.2	1.8	95%	1508	4.3
3BR condo	142	3	1.2	1.8	95%	920	6.5
4BR condo	44	4	1.2	1.8	95%	380	8.6
service	3	1	1.2	1.8	95%	7	2.2
<b>Total</b>	<b>1,413</b>					<b>6117</b>	

Source: RRC Associates. Factors based on surveys and experience at western mountain resorts.

#### **4.9.4 Relationship of Regulation and Zoning**

Regulations found within the Plan are applicable to development within Kirkwood. Some of the regulations are applicable only to certain zoning categories, while others are more generic in nature and apply to all zoning categories. The approved final Specific Plan will be the defining document controlling land use in Kirkwood.



**TABLE 4.3  
ZONING DESIGNATIONS AND ALLOWABLE LAND USES**

<b>SYMBOL</b>	<b>ZONING DESIGNATION</b>	<b>ALLOWABLE LAND USES</b>
SR	Single-Family Duplex Residential	<ul style="list-style-type: none"> <li>* Single Family Dwelling</li> <li>* Duplex (when designated on Final Subdivision Map)</li> <li>* Home occupation (1)</li> <li>* Employee units (attached)</li> <li>* Ski lifts, cross-country ski trails and other recreational trails</li> <li>* Appropriately located effluent absorption beds</li> </ul>
MF	Multi-Family Residential	<ul style="list-style-type: none"> <li>* Condominium</li> <li>* Townhomes</li> <li>* Apartments</li> <li>* Employee Housing</li> <li>* Tri-plex and up</li> <li>* Appropriately located effluent absorption beds</li> </ul>

MF-C	Multi-Family Residential and Commercial	<p><u>Residential</u></p> <ul style="list-style-type: none"> <li>* Apartments</li> <li>* Townhomes</li> <li>* Condominiums</li> <li>* Tri-plex and up</li> </ul> <p><u>Office and Related Uses</u></p> <ul style="list-style-type: none"> <li>* Administrative, Clerical, Real Estate, Professional</li> <li>* Financial Institutions</li> <li>* Medical, Dental and related human services</li> <li>* Postal/Telegraph service offices</li> </ul> <p><u>General Commercial Uses</u></p> <ul style="list-style-type: none"> <li>* Food and Beverage Sales</li> <li>* Restaurant/Cocktail lounge/Night Club</li> <li>* Sale of Dry Goods</li> <li>* Catering establishments</li> <li>* Bakery</li> <li>* Delicatessen</li> <li>* Hardware/Sporting Goods/Equipment Sales/Rentals/Repairs</li> <li>* Drug Store/Pharmacy</li> <li>* Clothing Sales</li> <li>* Liquor Store</li> <li>* Ski School</li> <li>* Ski Rental</li> <li>* Barber or Salon Shops</li> <li>* Libraries/Civic Facilities</li> <li>* Conference Facilities</li> <li>* Day-care Facilities</li> <li>* Photo/Art Studio</li> <li>* Bowling Alley</li> <li>* Electronic Game Center</li> <li>* Theater/Movie House</li> <li>* Laundry</li> <li>* Gas Station/Auto Repair/Rental</li> <li>* Motel/hotel</li> <li>* Bed and Breakfast</li> </ul> <p><u>Other</u></p> <ul style="list-style-type: none"> <li>* Ski Mountain Operations</li> <li>* Appropriately located effluent absorption beds</li> <li>* Outdoor/Indoor Recreation Facilities</li> <li>* School/educational facilities</li> </ul>
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S-P	Service Facilities and parking	<ul style="list-style-type: none"> <li>* Sheriff Substation</li> <li>* Fire Station (with employee housing)</li> <li>* Day Care</li> <li>* Parks and Recreation Facilities</li> <li>* Wastewater Treatment and Distribution Facilities</li> <li>* Water Production, Treatment and Distribution Facilities</li> <li>* School (Amador Co APN# 026-270-018-000) (2)</li> <li>* Snow-making Facilities</li> <li>* Road and Slope (grooming) Maintenance Equipment and Facilities (ski mountain operations)</li> <li>* Telephone/Communication Facility</li> <li>* Power Generation/Conveyance Facilities</li> <li>* Construction-related Facility</li> <li>* Waste transit/storage</li> <li>* Library</li> <li>* Propane/Natural Gas Facilities</li> <li>* Cable Television Facilities</li> <li>* Transportation Facilities</li> <li>* Surface parking lots (does not include 6 acre school site)</li> <li>* Areas for Short Term recreational vehicle parking</li> <li>* Parking garages(does not include 6 acres school site)</li> <li>* Appropriately located effluent absorption beds</li> </ul>
M	Meadow	<ul style="list-style-type: none"> <li>* No development of permanent above-ground structures, excluding utility enclosures such as well pump enclosures and creek crossings (bridges)</li> <li>* Temporary structures on skids for winter activities</li> <li>* Maintenance of existing utility facilities</li> <li>* Maintenance of winter uses (trail grooming)</li> <li>* Trailhead markers</li> </ul>
OS-R	Open Space and Recreation	<ul style="list-style-type: none"> <li>* Outdoor recreational facilities (e.g., tennis courts, playing fields, playgrounds, park &amp; recreational facilities)</li> </ul>
OS	Open Space	<ul style="list-style-type: none"> <li>* Recreational trails</li> <li>* Trailhead Markers</li> <li>* Outdoor recreational activities that do not lead to the degradation of the environment</li> <li>* Recreational trail development and use</li> <li>* Ski mountain operations and equipment (i.e., ski lifts)</li> <li>* Appropriately located effluent absorption beds</li> </ul>

Notes to Table 4.3

(1) Typical "home occupations" are allowed. Should the occupation be a true 'business out of the home', such as a dentist's office, and not simply a telecommuter, then approval must be obtained from the appropriate County.

(2) Six (6) acre site deeded by KMR to Alpine County Unified School District for school use only. This does not preclude the use of the existing school located in Sun Meadows 4. In the event that a school is not constructed on the dedicated parcel and the area reverts to KMR or its successor, the parcel is restricted from any use or uses except parks and recreation facilities.

#### **4.10 DEVELOPMENT CONTROLS**

A variety of development controls are part of the Plan. First, a population estimate based on unit count and type and the associated land use designations, as shown in Table 4.2, is employed to control density. Second, mapped building envelopes are utilized to dictate the area suitable for development within a particular parcel. Third, to aid in minimizing negative visual effects, building heights are restricted for all structures. These items are reviewed for general architectural and site design elements by various design review and architectural control entities and other appropriate local, State, and Federal agencies. All controls are discussed in more detail below.

##### **4.10.1 Population Estimate By Unit Type and Land Use**

By the assignment of a population density by unit type, the developer will have flexibility to provide a mixture of residential unit types and sizes while staying within the allowable 6,558 population limit. At Kirkwood, density within particular parcels is considered as population potential and not necessarily a limit to a number of units per acre, thereby reducing the focus on maximizing the number of units that can be constructed on a site.

Kirkwood retained the services of RRC Associates, a firm experienced in the study and prediction of population trends in resort areas. RRC has analyzed Kirkwood’s plan and from surveys and experience developed a methodology to estimate population in the resort at buildout. The following factors are RRC’s recommendation to estimate ultimate population, based on unit type, size and assuming 100% pillow occupancy.

Single-family homes are counted at 5.8 persons per household.

The following population assignment calculations are for multi-family projects. A population count is assigned to the bedroom count for residential units as follows:

<u>Studio:</u>	<u>2.2</u>	<u>people per occupied unit</u>
<u>1 bedroom:</u>	<u>2.2</u>	<u>people per occupied unit</u>
<u>2-bedroom:</u>	<u>4.3</u>	<u>people per occupied unit</u>
<u>3-bedroom:</u>	<u>6.5</u>	<u>people per occupied unit</u>
<u>4-bedroom:</u>	<u>8.6</u>	<u>people per occupied unit</u>
<u>service</u>	<u>2.2</u>	<u>People per occupied unit</u>

(Factors developed by RRC Associates)

##### **4.10.2 Building Envelopes**

Building envelopes are identified at the time of the subdivision requests. For each single-family lot, building envelopes will outline the area that can be occupied by residential uses. Driveways are not included in building envelopes. The identification of

building envelopes for Kirkwood, as opposed to standard front, rear and side yard setbacks, allows new development to be more responsive to environmental constraints on each site and within proposed subdivisions. Topography, geophysical constraints, tree location and health, access from the road and theme for the subdivision are the main criteria used to define building envelopes.

The Village at Kirkwood poses an interesting challenge to development. Unlike a single-family subdivision with multiple lots and individual building envelopes, the Village is more precisely tied to the ground by actual building footprints, as found in the Kirkwood Village Plan, Figure 4.4. It should be recognized that during final design of a Village building, footprints may require adjustment, (up to 15% is permissible). Therefore, within the Village, individual buildings will be more constrained in the area which can actually be developed than in other single-family and multi-family subdivisions, due to the intimate relationship between all of the Village buildings and underground parking facilities.

#### **4.10.3 Height Restrictions**

##### **Single-family/Duplex**

Maximum height restrictions for Single-family/duplex residential zones (SR) is 35 feet from the base elevation to the highest point of the structure. The base elevation shall be taken as the average of the ground elevations at each of the four major house corners. Should a structure have more than four prominent corners, a rule of reason shall be employed to determine the base elevation. For lots with building envelopes that have a slope which exceeds 25% (building envelope only, not the entire lot), the maximum height shall be set at 40 feet from the base elevation. Should a proposed home be located within an existing subdivision that has no established building envelopes (i.e., Kirkwood Meadows West), the average slope shall be calculated for the area that would be built upon, i.e., the building site and not the entire lot.

##### **Multi-family**

For Multi-family residential and Multi-family and Commercial zones (MF, MF-C) (no proposed plaza deck), the maximum height restriction is 65 feet from the base elevation to the highest point of the structure.

For Multi-family and Commercial (MF-C) buildings located in the Kirkwood Village (east and west) wherein there is a proposed plaza deck, the maximum height restriction is 55 feet from the plaza deck to the highest point of the structure.

Amador County has set special height limits for multifamily and multifamily-commercial structures at the Timber Creek Lodge area and at the Ski-In/Ski-Out North area. Amador set maximum height of 45 feet above a plaza deck and 55 feet above grade level if there is no deck. Multi family structures in Ski-In/Ski-Out North shall have a maximum height of 45 feet if built in the area of the current Chair 9 parking area.

The height limit for Multi-family residential and Multi-family and Commercial zones shall be calculated using the maximum possible distance from the base elevation to the highest point of a structure, except that:

- Chimneys, flues, vents or similar structures may extend up to ten feet above the specified Maximum Height Limit;
- Spires, bell towers and like architectural features may extend over the specified height limit, however, however a special use permit shall be required by Tri-TAC and approved by the appropriate County.

Any deviation from these height restrictions would require a variance from the appropriate County. Variance applications shall require review and recommendation from TCTAC. Separate review and approval may be required pursuant to CC&R's and other architectural review and control guidelines.

#### **4.11 PAOT/SAOT**

##### **4.11.1 Wintertime PAOT/SAOT**

Recreational planning often refers to PAOT (people-at-one-time) and SAOT (skiers-at-one-time) for placing limitations on the number of people allowed in an area of concentrated recreational use. The 1973 EIS for the Kirkwood Winter Sports Development and the 1974 EIR for the Kirkwood Meadows Ski Development, established a PAOT and SAOT for wintertime use. For the public and private lands of Kirkwood, 11,800 PAOT are allowed and 10,800 SAOT are allowed. Currently, KMR does not foresee requesting a change in either of these limits.

##### **4.11.2 Summertime People-at-one-time**

One of the main objectives of the Plan is to create a more uniform, year-round use of the resort. Therefore, the summer PAOT limitation is increased to accommodate the final maximum buildout overnight population of 6,558 people, as well as to accommodate the increase in special event participants and spectators of summer activities in the Kirkwood Valley. An integral part of the Kirkwood Summer Programs is attracting events, such as concerts and craft festivals. These types of events necessitate an increase in the current summer PAOT to accommodate peak visitation during in-valley day visitor events.

A dual summertime PAOT, (baseline and peak) to cover the private lands of Kirkwood is established. A baseline PAOT for Kirkwood shall be set at 6,558 PAOT. A day summer peak PAOT to accommodate special events, and Kirkwood residents at 100 percent occupancy, is 9,800 PAOT. Special event permit(s) from the appropriate county will be required for many events. The peak PAOT is only allowed for the duration of the special event. After the event, the baseline PAOT of 6,558 prevails.

#### **4.12 DESIGN STANDARDS**

The design standards, contained in the Plan as Appendix 4, form the foundation of the design elements that are applicable to a development at Kirkwood.

When accepted, these standards are enforceable by the county, as they are intended to be ordinances of Alpine, Amador and El Dorado counties.

# **CHAPTER 5 – TRANSPORTATION, PARKING, SOLID WASTE AND OTHER PUBLIC SERVICES**

## **INTRODUCTION**

This chapter of the Plan addresses the following: transportation and parking; solid waste and recycling services; fire and police protection; emergency medical services; telecommunication service; school and child care facilities; library services; snow removal and avalanche control; and easements.

## **5.1 TRANSPORTATION**

### **5.1.1 Objectives for Transportation**

1. Encourage non-auto transit within Kirkwood by placement of commercial uses within walking distance of residences.
2. Encourage public transit use from outside of Kirkwood, especially from populated areas such as South Lake Tahoe.
3. Promote electric vehicles, bicycles, horseback riding, and pedestrian activity by designation of trails/routes for such use.
4. Provide an efficient transportation system within Kirkwood for motorists, pedestrians, bicyclists and horseback riders in a way that minimizes congestion and conflict between different modes of transit.

### **5.1.2 Policies for Transportation**

1. Kirkwood Meadows Drive shall remain the main access road to and through Kirkwood.
2. Pavement widths shall be minimized, consistent with safety considerations, to improve the visual appearance and scale of street corridors, especially within neighborhoods.
3. Driveways serving individual homes may be accessed from collector roads, but may not intersect State Route 88.
4. A street (cul-de-sac) may serve no more than 50 single-family homes with a single point of access.
5. Up to five residential units may be served by a private driveway.
6. Applicable county and state requirements for fire protection plans related to cul-de-sacs shall be met.



7. Speed limits shall be established for all local roads within Kirkwood to maximize safety and shall account for design speed, sight distance, adjacent land uses and street function.
8. Design of future streets (subdivisions), parking areas and driveways shall include snow storage areas.
9. Employee shuttle service routes shall be provided to employees of Kirkwood Mountain Resort, provided they are scheduled to work that day.
10. An on-site shuttle service shall be provided to transport visitors/residents and employees between various destinations within Kirkwood. When occupancy of the valley provides a sufficient population to support such a service in the summertime, this in-valley shuttle service will be expanded.
11. Safe and convenient bus stop facilities shall be provided near the Village Center and at other central parking locations to encourage the use of the shuttle service.
12. Bus pullout areas shall be provided, where appropriate, to minimize conflicts with vehicular/pedestrian traffic.

### **5.1.3 Public Transportation**

Due to its isolation from other urbanized areas and its relatively small size, Kirkwood does not lend itself to the use of significant public transit except for a local "in-valley" shuttle service and an employee shuttle system, described below. The in-valley shuttle is in service during the wintertime. As summer occupancy of the resort increases, this in-valley shuttle system can be operated during the summer season, and if needed, during special events.

A privately owned business currently buses patrons from South Lake Tahoe hotels to Kirkwood during the winter ski season. Although this service can change from year to year, depending on market conditions, it will be encouraged by KMR in the future.

### **5.1.4 Employee Shuttle System**

In addition to on-site employee housing, KMR operates an employee shuttle service. This service is available and primarily utilized during the ski season by the seasonal employees of KMR. During the summer, the shuttle service is available to employees on a more limited basis. This service is limited to employees who are scheduled to work that day.

KMR has elected to provide this service and/or other subsidy to assist employees who elect to live outside of Kirkwood. KMR's employee programs will keep pace with the increase in commuter employees as the resort continues to grow.

### 5.1.5 Road Classification and Standards

Kirkwood has one major Residential Collector-street (Kirkwood Meadows Drive) with numerous local residential streets that feed into Kirkwood Meadows Drive. Kirkwood is accessed by State Route 88, a two-lane state highway maintained by CalTrans. Table 5.1 includes the road classifications applicable to Kirkwood, excluding the state highway.

**TABLE 5.1  
KIRKWOOD ROAD CLASSIFICATIONS AND STANDARDS**

Road Type	Right-of-Way(1)	Number of Lanes	Access Control	Capacity (vehicle/day)	On-Street Parking
Residential Collector	62'	2	Intersections at grade driveway access	7,000	On shoulder of road
Local Residential Type I	45'-54'	2	Intersections at grade; driveway access	300	In designated parking bays only
Local Residential Type II	49-58'	2	Intersections at grade; driveway access	600	In designated parking bays only

Notes to Table 5.1:

(1) Right-of-way includes all public land (if Offer of Dedication has been accepted by the respective County) within the street boundaries including roadway median, walks, paths and landscaping.

## 5.2 PARKING

### 5.2.1 Objectives for Parking

1. Provide adequate parking for residents and day visitors alike.
2. Create unique designs for parking lots for multiple uses when parking requirements are low.
3. Minimize large expanses of unnecessary surface parking.
4. Adequately screen parking facilities from public view, where practical, without interfering with snow removal activities.
5. Minimize congestion at Kirkwood by providing adequate parking areas in appropriate locations.

### **5.2.2 Polices for Parking**

1. Parking shall be governed by the Kirkwood Master Parking Plan as amended from time to time. The current plan provides parking for approximately 2,500 day visitor vehicles. Parking shall be concentrated in surface parking areas and/or parking structures as a means of promoting a pedestrian-oriented community. During winter months, shuttle service shall be provided to/from parking areas.
2. Parking areas for employees shall be designated and served by a shuttle to transport employees to their destination, especially during winter months.
3. Surface parking areas shall include locations for shuttle service.
4. Off-street parking may be covered, but in no event is covered parking a requirement for day visitors and designated passenger loading and unloading areas.
5. Covered parking facilities may include parking as well as space for garbage receptacles, recycling facilities, mechanical rooms, fire equipment rooms, ventilation equipment and other reasonable uses.
6. Permanent on-street parking shall be prohibited on local collectors (excluding Kirkwood Meadows Drive), and shall be restricted to parking bays provided in residential areas for visitor parking, unless a “special parking” permit is obtained from the appropriate entity.

### **5.2.3 Parking Standards**

Parking demand at Kirkwood is most significant during winter months when skiing activity is at its peak. For this reason, Kirkwood has developed a number of large surface parking areas that are in the vicinity of ski lifts.

Off-street parking is available for individual residences and condominium buildings. It is this Plan’s intent that adequate parking continue to be available to serve both residents and visitors alike. Parking standards are summarized below in Table 5.2. Minimum parking requirements are identified for specific land uses, with the goal of protecting the rural quality of Kirkwood by avoiding unnecessary expanses of paved parking areas, and at the same time meeting the demonstrated parking demand.

### **5.2.4 Covered Parking**

The following standard applies to multi-family development projects. Covered parking shall be required per the requirements outlined in Table 5.2 of this document. Of these required spaces, at least 80% of the parking spaces within the covered parking garage shall be regular, single-loaded (non-tandem spaces). Ten percent (10%) of this 80% can be compact. 20% of the total parking spaces may be tandem (double loaded, valet style). Fifty percent (50%) of this 20% may be compact.

Covered parking need not be satisfied on-site so long as the spaces are reserved to the development in the parking plan, all parking requirements are met and the distance from the parking facility to the residential units is not unreasonable, burdensome or a valet service is provided.

### **5.2.5 Surface/Uncovered Parking**

Approximately 2,500 surface outdoor parking spaces are available on a daily basis at Kirkwood. KMR anticipates expanding parking facilities to allow for a potential 3,100 parking spaces, however, a percentage of these spaces will be restricted in use due to the off-site uncovered parking requirements generated by multi-family development. It is required that, under buildout conditions, 2,500 surface, uncovered parking spaces will be available on a daily basis for patrons who are not staying overnight in Kirkwood.

**TABLE 5.2  
MINIMUM PARKING REQUIREMENTS**

<b>LAND USE</b>	<b>total parking spaces req'd per unit</b>	<b>covered</b>	<b>Uncovered (note 3)</b>
<b>Residential Uses</b>			
Single-family/Duplex	3	2	1
Multi-family-studio	1	1	
Multi-family1&2 bedroom	1.5	1	.5
Multi-family3&4 bedroom	2	1.5	.5
Hotel/Motel	1		1
Bed and Breakfast	1		1
Employee Housing	1		1
Employee housing Hostel/dormitory units	1/bed	optional	1/bed
<b>Commercial Uses (note 1)</b>			
Retail, Customer Services	1 space per 1000 sq. ft. of net		
Food and Beverage,	floor space (note 2)		
Medical Services, Educational and Child-care services,			
Group Assembly (community and/or religious services)	¼ (25%) of seating capacity (occupancy)		

Notes to Table 5.2

1. Parking for non-residential uses shall not be required in the immediate vicinity of the proposed commercial use. Parking for non-residential uses will be concentrated in either a surface parking area or a parking structure.

2. Parking for commercial uses is provided/reserved for employees only. Parking for patrons of commercial businesses is provided for through temporary parking and/or day skier parking lots.

3. Required uncovered parking is allowed to be accommodated by covered spaces.

## **5.3 SOLID WASTE AND RECYCLING SERVICES**

### **5.3.1 Objectives for Solid Waste and Recycling Services**

1. Ensure adequate solid waste removal service while maximizing opportunities for recycling to reduce the amount of waste requiring disposal at a landfill.
2. Provide easily accessible recycling facilities at Kirkwood for residents, patrons and businesses.
3. Assist Amador, Alpine and El Dorado counties in meeting waste reduction and diversion goals established by the State of California.

### **5.3.2 Policies for Solid Waste and Recycling Services**

1. New commercial and mixed-use development shall incorporate facilities for solid waste and recycling.
2. Areas at Kirkwood shall be provided to allow residents to dispose of recyclable materials where pickup can occur by the waste hauling service.
3. Receptacles shall be clearly marked to encourage recycling of appropriate materials such as aluminum and glass.
4. Administrative offices at Kirkwood shall include facilities for recycling waste paper.
5. Post Office facilities shall include recycling facilities for waste mail.
6. Solid waste receptacles such as dumpsters shall be managed to minimize damage by animals (bears) and snow removal equipment and to reduce litter at Kirkwood.
7. Litter shall be minimized by the placement of adequate trash and recycling containers in high-use traffic areas.

### **5.3.3 Solid Waste Hauling**

A private contractor or appropriate government entity will be used to haul solid waste from Kirkwood. Solid waste from Kirkwood will be shipped to an approved landfill.

## **5.4 FIRE PROTECTION SERVICES**

### **5.4.1 Objectives for Fire Protection Services**

1. Ensure adequate emergency access to all future development.
2. Provide adequate volunteer and/or paid fire-fighting staff to serve future development

within a reasonable emergency response time.

#### **5.4.2 Policies for Fire Protection Services**

1. Tentative and Final maps for future subdivisions shall identify emergency vehicle access.
2. Adequate snow removal and storage procedures for all roads and driveways shall be ensured, as provided for at the Tentative map stage to allow emergency access.
3. Future development plans should be reviewed by the KVFD to ensure that adequate access and fire protection measures are incorporated into site planning and design.
4. An automatic fire suppression (sprinkler) system shall be required in all buildings located within the Village Center, commercial occupancies, all multi-family structures of 3 or more units and all single family residences of more than 5,000 square feet.

#### **5.4.3 Kirkwood VFD**

Structural fire protection services are provided at Kirkwood by the Kirkwood Volunteer Fire Department (KVFD) under the direction of the KMPUD. These volunteers are available on a year-round basis. Regular training meetings are held and include drills and specialized training through the fire chief and outside fire fighting experts. Subjects emphasized have included propane hazards, fire fighting in multi-story structures and forest fire suppression.

The KMPUD and KVFD have completed a Fire Service Master Plan (FSMP) for the Kirkwood Community. This FSMP analyzed the existing conditions at Kirkwood as they pertain to issues relevant to the Fire Department. A series of recommendations and goals came out of this document. A timeline for capital improvements and expenditures, as well as recruitment of paid and volunteer staff was also developed. The new Community Services Building and Firehouse is a direct result of the recommendations of this plan. The KMPUD Fire Service Master Plan may be reviewed at the District's office.

#### **5.4.4 KVFD Support**

Backup for the KVFD is provided by a number of different agencies depending upon the situation and how many firefighters are required. Amador Fire Protection District responds by request for backup to all calls for KVFD. KVFD automatically receives backup from the Markleeville and Woodfords VFD's. Lake Valley Fire Department in Meyers, California is also notified for response to Kirkwood.

The U.S. Forest Service (USFS) provides wildland fire response in the Kirkwood vicinity from its Lumberyard station, about 16 miles west of Kirkwood on SR 88. The second responding station is the joint California Department of Forestry (CDF) and USFS station located at Dewdrop about 27 miles west of Kirkwood. This station is manned by

the USFS during the summer.

#### **5.4.5 Fire Protection Service Charge**

The KMPUD has established a Fire Protection Service Charge, Ordinance 93-1. Funds collected from the annual charge are used to cover equipment, insurance, personnel costs and will also help to begin a fund for expansion. An Impact Fee is also levied on new development within Kirkwood. In Alpine County this fee is collected at the time that the building permit is approved by the Alpine County Building Department (Ordinance 539-92). In Amador County, KMPUD collects this fee directly (Ordinance 1319). In El Dorado County, no such fees have been levied because the County has not established an ordinance to do so. In the future, when the private landholdings located in El Dorado County are developed, there will be the need to establish this fee.

In addition to these funding sources, the KMPUD is apportioned approximately 20 percent (20%) of the tax base allocation from the respective counties (Amador, Alpine and El Dorado) within the District boundaries.

#### **5.4.6 Fire Prevention**

The use of fire prevention and detection systems has been and will continue to be required. Multi-family housing with three or more units, parking garages and commercial spaces are required to be sprinklered. Single family homes greater than 5,000 square feet are also required to be sprinklered. Smoke detection and heat sensitive devices will be utilized in dwelling units and enclosed common spaces and emphasis will be placed on using fire-resistant construction materials whenever appropriate.

#### **5.4.7 Village Fire and Safety Plan**

The objective of the Kirkwood Village Fire and Safety Plan is to insure the safety of guests and staff from fire and protect property located in the Village Center. To accomplish this objective, a management supported fire prevention plan has been implemented. This provides for: 1) installation of automatic fire sprinkler protection, 2) installation of automatic fire detection, 3) fire safe building construction, 4) appropriate building separation, and 5) strategic placement of on-site fire suppression resources. Other emergencies, although not directly addressed by the Village Fire and Safety Plan, such as medical emergencies can be responded to using the underground garage which provides vehicle access to all buildings.

### **5.5 POLICE PROTECTION SERVICES**

#### **5.5.1 Objectives for Police Protection Services**

1. Maintain public safety and cooperate with Alpine, Amador and El Dorado County Sheriff's departments to facilitate law enforcement activities.



2. Provide existing and future development at Kirkwood with adequate police protection services to protect public health and safety.

### **5.5.2 Policies for Police Protection Services**

1. Ensure that all new residential and commercial development designs lend themselves toward public safety and police protection.

2. A Sheriff's sub-station shall be located in Kirkwood within the KMPUD Community Services Building or other location as may be determined by the Resort and appropriate authorities.

### **5.5.3 Alpine and Amador County Sheriff**

Kirkwood is served by Alpine and Amador counties for police protection depending upon the county in which an incident occurs. Police protection for any incident along SR 88 is the responsibility of the California Highway Patrol. Deputy Sheriffs from Alpine and Amador counties patrol the area at various times. The El Dorado and Alpine County Sheriffs have a written agreement, wherein an Alpine County deputy sheriff will respond to disturbances north of SR 88 (El Dorado County) in exchange for jail space located at the El Dorado County offices/jail in South Lake Tahoe (Veatch, 1996).

## **5.6 MEDICAL SERVICES**

### **5.6.1 Objectives for Emergency Medical Services**

1. Provide basic medical services to meet the needs of existing and future residents, employees and visitors of Kirkwood.

2. Assist county medical providers with services rendered to existing and future residents, employees and visitors of Kirkwood.

### **5.6.2 Policies for Emergency Medical Services**

1. Kirkwood Mountain Resort shall continue to maintain medical facilities during the ski season to serve those requiring emergency medical services.

2. Clinical services shall be expanded, if necessary, to accommodate the increased number of skiers at buildout.

3. The provision of year-round medical services shall be investigated as the year-round resident population increases at Kirkwood.

### **5.6.3 KMR Emergency Medical Clinic**

KMR contracts with private contractors to operate an immediate care medical clinic in the Red Cliffs Lodge. During the ski season, the clinic is staffed with a registered nurse,

X-ray technician and doctor from 8:30 AM to 4:30 PM. An average of 800 patients are treated yearly at the clinic, primarily for orthopedic injuries. Of these, about eight are referred to the hospital each month. During the non-ski season, the emergency medical clinic is not operated at Kirkwood.

The nearest hospital to Kirkwood is Barton Memorial Hospital in South Lake Tahoe, about 38 miles northeast of Kirkwood via SR 88, SR 89 and US Hwy. 50. Three additional hospitals which also serve Kirkwood, are Washoe Medical Center and St. Mary's Hospital, both located in Reno, Nevada and Carson Tahoe Hospital in the Carson City area. During the ski season, a landing area is maintained near the medical clinic for helicopter access in cases where a seriously injured skier needs immediate hospital care.

The existing medical facility and service is provided and subsidized by KMR as a requirement of the Special Use Permit with the USFS and is not intended to offer community medical needs.

## **5.7 TELECOMMUNICATION SERVICES**

### **5.7.1 Objectives for Telecommunication Services**

1. Provide telecommunication services to the existing and future community of Kirkwood.
2. Expand telecommunication services as residential and commercial development needs grow.

### **5.7.2 Policies for Telecommunication Services**

1. Maintain existing telecommunication microwave link in proper working order.
2. Maintain existing satellite link and underground cable connections.
3. Plan for foreseeable expansion of Kirkwood by upgrading and/or extending existing services.

### **5.7.3 Telephone Service**

Volcano Telephone Company of Pine Grove, California, a small, private telephone company, supplies telephone service. Service is provided through a fiber optic line connecting Kirkwood with Volcano Telephone Company in Pine Grove, California. Telephone service within Kirkwood is provided via underground cable. Volcano Telephone has the capability and desire to serve Kirkwood as it continues to grow.

Cellular telephone service is available within the valley of Kirkwood. It is anticipated that with the installation of an additional antenna, located at the top of Chairlift 2, service will be more consistent, and has the potential of reaching beyond the Kirkwood valley,

to areas along State Route 88.

#### **5.7.4 Cable Television Service**

Volcano Vision provides cable television service to the developed areas of the Kirkwood community. Cable programs are transmitted through Volcano Telephone Company's fiber optic line from Pine Grove, California to Kirkwood. Distribution lines are buried in road rights-of-way and other easements as necessary.

### **5.8 SCHOOL AND CHILD CARE FACILITIES**

#### **5.8.1 Objectives for Education**

1. Provide quality education for children of the Kirkwood community, as well as childcare for visitors and residents.
2. Expand educational programs and facilities as demand dictates.
3. Provide childcare services for the community and patrons of Kirkwood.

#### **5.8.2 Policies for Education**

1. Ensure that adequate school facilities, which meet all applicable State regulations, are provided.
2. When appropriate, an elementary school should be constructed at Kirkwood at the site already deeded to the Alpine County Unified School District.
3. Childcare shall be available year-round, as need dictates, for visitors, employees and residents of Kirkwood.

#### **5.8.3 Current School Conditions**

School facilities for Kirkwood area residents of Amador and Alpine counties are provided by the Alpine County Unified School District (ACUSD). The ACUSD currently leases half (½) of the bottom floor of the Sun Meadows IV condominium in Kirkwood for a school used by about twelve (12) K-6 students (Peets, 1996). The ACUSD has been deeded a six-acre parcel located at the edge of Kirkwood Meadow near Loop Road. Should demand dictate and the funds become available, this location will house a new school facility. Unless major State construction funds become available, the ACUSD will continue to lease space at Kirkwood at no or minimal cost. Bussing while possible is not the preferred system by the ACUSD, especially for children from Kindergarten through the sixth grade. Students in grades 7 to 12 are currently bussed to the Douglas County School District in Nevada under an agreement with the Alpine County School District.

#### **5.8.4 Projected School Requirements At Buildout**

At full buildout, it is estimated that 52 elementary school age (grades K-8) and 23 high school age children may reside in Kirkwood, as indicated in Table 5.3. This projection is consistent with the current situation in Kirkwood and allows for a linear increase in the percentage of school age children as it relates to the current level of development. However, as a resort community, only a small percentage of the 6,558 person maximum population will be permanent residents. As a result of the relatively small percentage of permanent residents, the number of school children is expected to remain very small when compared with the maximum population allowed in Kirkwood. As of January 2002, there are only seven kindergarten through sixth grade students and zero high school students residing in Kirkwood.

**TABLE 5.3  
MAXIMUM ESTIMATED SCHOOL CHILDREN AT BUILDOUT FOR FULL-TIME  
RESIDENTS**

<b>Unit Type</b>	<b>No. of Units(2)</b>	<b>Grades K-6</b>	<b>Grades 7-8</b>	<b>Grades 9-12</b>	<b>TOTAL</b>
Single-Family	39	15.6	3.9	7.8	27.3
Multi-Family	93	25.11	7.44	14.88	47.4
<b>TOTAL</b>	<b>132</b>	<b>40.7</b>	<b>11.34</b>	<b>22.68</b>	<b>74.7</b>

Notes to Table 5.3

(1) Student yield factors were as follows: single-family units: a) K-6: 0.40 students per unit; b) Grades 7-8: 0.10 students per unit; c) Grades 9-12: 0.20 students per unit. Student yield factors for multi-family units were as follows: a) K-6: 0.27 students per unit; b) Grades 7-8: 0.08 students per unit; c) Grades 9-12: 0.16 students per unit. Due to the resort nature of Kirkwood, it was assumed that no more than 15 percent of future single-family and 10 percent of future multi-family units would be occupied year-round.

(2) Number of units is the number of units (10%) that are anticipated to be occupied year round by families with school aged children. It is recognized that the demographics of Kirkwood may vary significantly. The foregoing estimates are therefore the maximum expected.

### **5.8.5 Library Services**

The Alpine County Library provides a mobile library service for Kirkwood residents to check out books and return them to the mobile service. At some point in the future, Kirkwood may want to develop a permanent library facility, possibility in conjunction with the school, or as part of a community center.

### **5.8.6 Current Child Care Facilities**

KMR operates a day care business, located adjacent to Red Cliffs Day Lodge. It currently offers supervision of small children seven days a week, during the winter months only. As is expected, during the weekend this facility is full, with less business during the week. This service is offered on a first come first served basis, and typically only toddlers are enrolled. This service is offered at a discount to employees of KMR.

### **5.8.7 Child Care Facilities Expansion**

As development at Kirkwood continues, it is likely that this service will need to be expanded to accommodate more children. Expansion of this facility would require the acquisition of more floor space, either within the existing building, or relocated to another. More staff would also need to be hired to equitably supervise the children enrolled. Expansion of this facility would require the re-licensing of the operation to accommodate an increase in enrollment.

## **5.9 SNOW REMOVAL AND AVALANCHE CONTROL**

### **5.9.1 Objectives for Snow Removal and Avalanche Control**

1. Provide snow removal ensuring adequate ingress and egress in the winter season.
2. Provide “basic needs” snow removal for the operation of skiing facilities.
3. Ensure against accidents and injury due to avalanches.

### **5.9.2 Polices for Snow Removal and Avalanche Control**

1. Kirkwood Mountain Resort shall maintain control over snow removal activities as required for ski area activities and associated parking lots. Kirkwood shall maintain and amend as necessary, a Master Snow Removal Plan for KMR operations.
2. The Kirkwood Resort Master Owners Association will control or contract snow removal for the Village Plaza areas and Kirkwood Meadows Drive.
3. Snow removal for private roads, drives and parking lots may be provided by the Kirkwood Resort Master Owners Association, KMPUD, the county of concern or any other appropriate entity.
4. Adequate safeguards for the public and residents of Kirkwood shall be provided during avalanche hazards, i.e., KMR does not allow patrons of Kirkwood to load a chairlift or access the mountain without clearance from the ski patrol.
5. New development shall be located outside of avalanche hazard zones based on avalanche studies by qualified personnel, however access roads are allowed within known avalanche zones.

### **5.9.3 Snow Removal**

The Kirkwood Resort Master Owners Association (KRMOA) has been given the responsibility for snow removal along Kirkwood Meadows Drive and the Village Plaza areas. It may also contract snow removal services for the other homeowner’s associations found at Kirkwood. Should an individual HOA choose not to contract with

the KRMOA, it will be up to that individual association to privately contract with an independent entity for snow removal services. At present, Alpine, Amador and El Dorado counties do not provide funding for snow removal for the Kirkwood Community.

#### **5.9.4 Avalanche Control**

Avalanche control activities are designed to maintain the safety of skiers and residents alike. Avalanche control is carried out by specially trained personnel in cooperation with the USFS. No high use activities or residences are intended to be sited within known avalanche hazard areas. KMR completed avalanche/rockfall hazards analyses utilizing a qualified expert. This study identified potential hazard areas in locations subject to future development (Mears, 1995 and 1997). The studies may be reviewed at the Alpine County Planning Department in Markleeville, California.

### **5.10 EASEMENTS**

#### **5.10.1 Objectives for Easements**

1. Maintain adequate easements for utility construction and maintenance, recreation and snow removal activities.

#### **5.10.2 Policies for Easements**

1. Existing easements shall be maintained and protected during future construction.
2. Additional easements, as necessary, shall be identified for future utility line needs, recreation and snow removal activities.
3. Whenever possible, easements shall serve a dual purpose by being available for public recreational purposes (i.e., hiking or riding trails).

#### **5.10.3 Easements**

It is desirable to maintain adequate easements for the installation, upgrade and maintenance of utilities. Existing easements within the private lands of Kirkwood are primarily for water, wastewater, power lines, communications, recreational access and drainage paths. The USFS has access easements that cross through Kirkwood private lands onto national forest land.

It is imperative to maintain snow removal/storage easements for the equitable and efficient removal of snow from streets and parking areas for the residents and visitors of Kirkwood. A system of dedicated snow storage easements will be maintained, ensuring that adequate area exists to maintain basic access even in severe winter conditions.

# **CHAPTER 6 – INFRASTRUCTURE: SEWER, WATER, GAS, ELECTRIC SERVICES AND PARKS AND RECREATION**

## **INTRODUCTION**

This chapter of the Plan outlines water and sewer services provided by the Kirkwood Meadows Public Utility District, gas and electric services provided by Mountain Utilities and recreational facilities and programs. Projections for expansion of infrastructure to serve the resort at buildout are analyzed individually. The anticipated expansion of these facilities is discussed individually. Recreational facilities and programs are discussed at the end of this chapter.

## **6.1 WATER AND WASTEWATER**

The Kirkwood Meadows Public Utility District (KMPUD) was formed by the Alpine County Local Agency Formation Commission (LAFCo) in June, 1985. Presently, the KMPUD is responsible for the operation of the water and wastewater systems serving the community of Kirkwood and the operation of the Kirkwood Volunteer Fire Department (KVFD), mosquito abatement, maintenance of existing public parks and recreational facilities (e.g. the tennis courts and playground), and contracts for solid waste removal. The KMPUD may become responsible for other public services in the future.

## **6.2 DOMESTIC WATER SUPPLY**

### **6.2.1 Domestic Water Supply Objectives**

1. Provide Kirkwood with an adequate year-round water supply that meets all applicable State water standards.
2. Explore alternative domestic water supplies.
3. Maintain a high quality water supply.

### **6.2.2 Domestic Water Supply Policies**

1. Water supply shall be under the jurisdiction of the KMPUD, a public entity responsible for ensuring an adequate water supply that meets all standards.
2. The boundaries of the KMPUD shall follow the outline of the current private land holdings within the Kirkwood area. Any expansion of these boundaries shall require an annexation process and approval by the following entities: 1) Local Agency Formation Commission (LAFCo) in the county which the expansion is proposed, (Alpine, Amador or El Dorado County), and 2) the KMPUD Board of Directors.
3. Water conservation methods shall be incorporated in all new construction.

4. The KMPUD shall be responsible for ensuring that an adequate water supply is available to serve all proposed development
5. Water supply shall continue to be, but is not limited to, groundwater sources and wells operated by the KMPUD. Wells sufficient to meet the maximum daily demand shall be constructed to ensure the demand can be met with the largest well out of service.
6. Water supply pressure shall be adequate for domestic, commercial and fire-fighting purposes. Booster pumping will be used in the event gravity cannot sustain proper pressure and flow.
7. Water demand projections shall be compared to actual water usage figures, based on annual monitoring by the KMPUD. If actual usage exceeds projections, a review would occur by the KMPUD to determine whether mitigation measures are required to reduce overall water demand or to increase supply.
8. An efficient system of water lines shall be developed to minimize ground disturbance in the overall Kirkwood area. Whenever possible, water lines shall be located under proposed/existing roads and road rights-of-way.
9. Water treatment and storage facilities shall be sited, designed and landscaped to avoid and minimize visual impacts.
10. Xerophitic landscaping (low-water-consuming) shall be incorporated into all public areas and shall be encouraged for private areas, as recommended by the Landscaping and Revegetation Ordinance.
11. Sufficient water storage facilities shall be constructed to meet the following criteria:
  - a. Emergency storage: not less than 130 percent of the maximum daily demand.
  - b. Operational storage: not less than 25 percent of maximum daily demand.
  - c. Fire flows: as recommended by the fire marshal, subject to KMPUD approval.
12. Water supply for snowmaking shall be the responsibility of KMR.

### **6.2.3 Water Facility Locations and Capacities**

Presently, there are approximately 633 equivalent dwelling units (EDUs) connected to the water system. For water planning purposes, it was estimated that 1,757 equivalent dwelling units would be connected to the water system under buildout conditions. With present patterns of use, maximum daily demands at buildout would be 320,000 gallons per day based on 1,757 EDU's, with a maximum daily demand of 182 gallons per day per unit. (Note: The projected number of residential units at buildout is 1,413 units).

Domestic water is supplied by five groundwater wells. Well 2, the Lodge Well, is located at the southeast edge of Kirkwood Meadow. Well 3 is located on the southwest edge of Kirkwood Meadow, Well 4 is located on the eastern shoulder of Kirkwood



Meadow and Well 5 is located approximately 280 feet south of Well 4 (see Figure 6.1). Well 1, used for emergency standby only, is located east of the end of Hawkweed Way, in the Kirkwood Meadow. Well yield during fall and winter months for Wells 2 and 3 is about 83 gallons per minute (gpm) combined, while the yield for Well 1 is about 40 gpm. Well 4 was installed during the summer of 1998. Well 5 was installed in the summer of 1999. The combined capacity of Wells 4 and 5 ranges between 70 and 100 gpm.

Water from Wells 2, 3, 4 and 5 is disinfected with sodium hypochlorite and pumped into the distribution system. The existing system includes two storage tanks with a combined capacity of 950,000 gallons. These tanks are located on the lower slopes of the ski mountain above the community (Figure 6.1), thereby providing more than adequate pressure to all dwellings.

Water from the wells is pressurized to approximately 150 pounds per square inch (psi) and pumped into the distribution system. The existing system consists of about five miles of pipelines ranging from six to ten inches in diameter. These lines are primarily located within existing roadways on the east and west sides of Kirkwood Meadow. South of the existing KMPUD offices, pipelines are located at the meadow edge and run under Kirkwood Meadows Drive to serve Timber Creek Lodge, (western edge of Kirkwood) and the Red Cliffs Lodge (south end of Kirkwood).

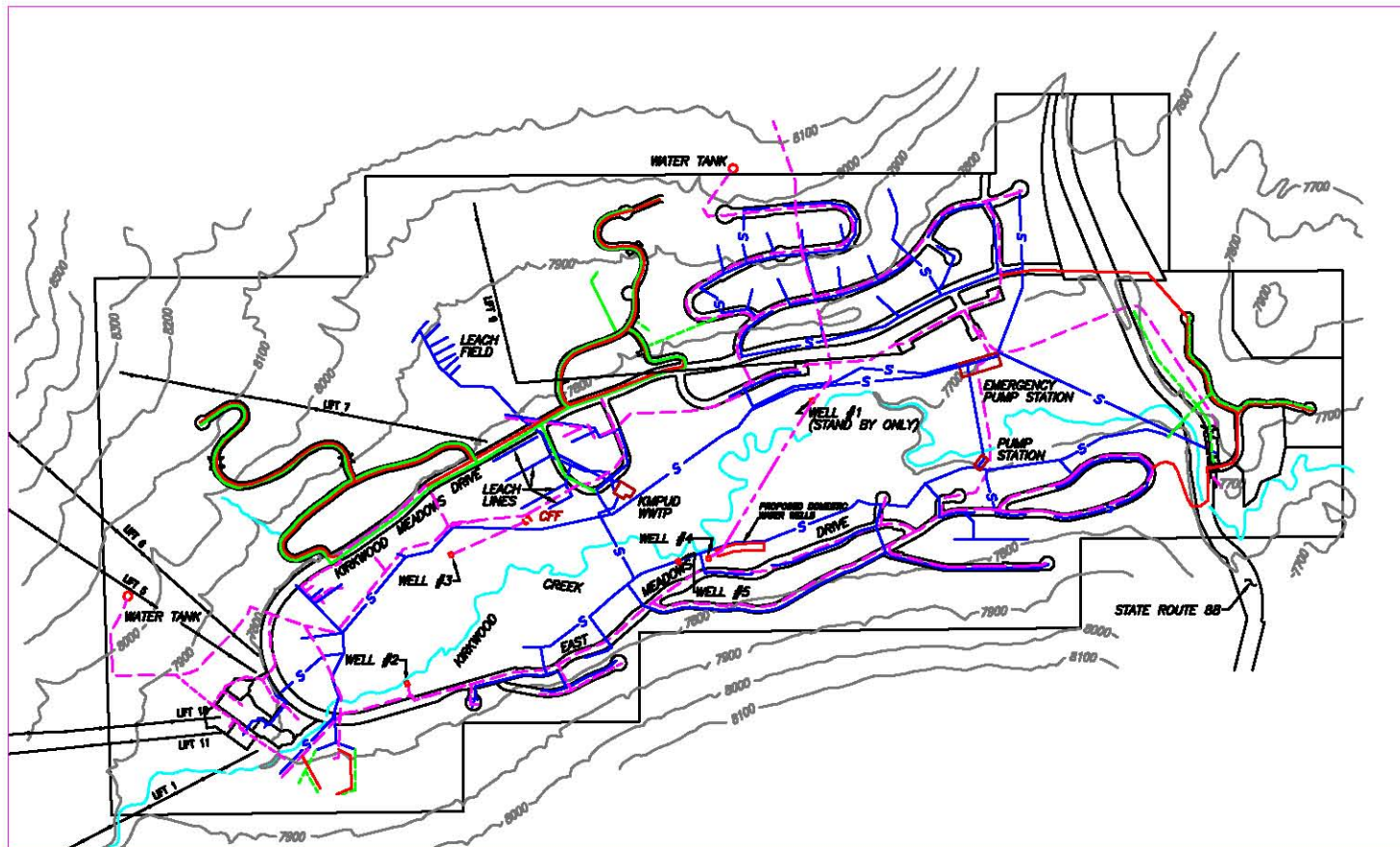
Average annual domestic water demand at Kirkwood is about 45,000 gallons per day (GPD) (see Table 6.1). Maximum daily demands occur during Christmas and New Year's. That demand typically approaches 109,000 gallons per day. This demand may last for several days. Current yearly demand is 48 acre-feet and is projected to reach 167 acre-feet upon buildout of the Plan. Water quality monitoring of the wells used for domestic water supply indicates that the water quality meets or exceeds the required standards.

#### **6.2.4 Ground Water (Aquifer)**

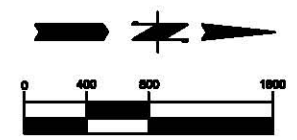
The groundwater basin below Kirkwood Meadow provides a portion of the domestic drinking water for Kirkwood.

The deeper wells are not drawing from the alluvium but penetrate fracture systems developed in basement rocks below the alluvial deposits.

The recharge of groundwater to the alluvial aquifer is primarily from surface water runoff, which is contained in the snowpack (typically 90 percent of the annual runoff). This snow pack runoff occurs primarily during April, May, June, and July. Other months of the year provide a lesser percentage of the approximately 5,660 acre-feet average annual runoff from the watershed. Minimum runoff under drought conditions is estimated at 1,869 acre-feet. This watershed encompasses 2,265 acres. The storage volume of the aquifer is about 1,100 acre-feet with surplus water exiting the basin via Kirkwood Creek and/or evapotranspiration. Recharge of the fracture-based bedrock wells is not well understood and likely comes from interconnects to significant local faults and fractures.



- LEGEND**
- EXISTING
- - - = WATER LINE
  - S - = WASTEWATER LINE
  - = WATER STORAGE TANK
  - = WATER WELL
  - CFF = CHLORINATION FACILITY
  - ▭ = EMERGENCY PUMP STATION
- PROPOSED
- = WATER LINE
  - = WASTEWATER LINE
  - = SPECIFIC PLAN BOUNDARY
  - = SKI LIFT



FEBRUARY 2002



FIGURE 6.1  
WATER AND  
WASTEWATER SYSTEM  
SCHEMATIC

## **6.2.5 Domestic Water Supply Expansion**

To satisfy additional water demands, KMPUD plans to follow a staged construction plan with the following elements:

1. The total existing storage capacity is 950,000 gallons which exceeds projected storage requirements at buildout. Storage requirements at buildout are estimated at 932,000 gallons per day based on providing 430,000 gallons of emergency storage, 82,000 gallons of operational storage and 420,000 gallons for fire protection.
2. Future water supplies will come from shallow or deep aquifer groundwater, with treatment provided, if necessary, to comply with water quality regulations. At buildout, well supplies totaling 220 gallons per minute (gpm) with the largest well out of service will be required to meet maximum daily demands. Preliminary plans call for each well to have treatment facilities, including filtration. The treatment facilities shall be constructed so they could be adapted to a future source of supply from Caples Lake, if this supply became available and preferred in the future.
3. Future wells will be constructed as growth occurs in general conformance with the following policy: A new well will be connected to the system when the maximum daily demand exceeds available supply, with the largest well out of service. Such that emergency storage reserves would be depleted in seven days should demand continue at the maximum rate.
4. Should municipal water rights be pursued and acquired by the KMPUD for Caples Lake, or other source that supply would supplement the existing water supply (wells).

## **6.3 WASTEWATER FACILITIES**

### **6.3.1 Objectives For Wastewater Treatment Facilities**

1. Treat wastewater from all Kirkwood areas at a local treatment plant that meets all applicable standards and avoids adverse impacts to public health and safety.
2. Explore alternate wastewater treatment methods.
3. Explore methods of reducing overall influent flows.

### **6.3.2 Policies For Wastewater Treatment Facilities**

1. Wastewater shall be transported via pipeline in an efficient underground manner that minimizes land disturbance.
2. Wastewater collection and treatment facilities shall be designed to protect the health and safety of residents.
3. Wastewater treatment plant expansion shall occur to ensure that adequate capacity

is available at buildout.

4. Any wastewater treatment facilities (i.e., lift/pump stations, storage tanks), shall be sited, designed and landscaped to minimize visual impacts.
5. Development should normally be located to allow for gravity flow of wastewater and minimize the need for pumping wastewater to treatment facilities, thus reducing overall energy requirements.
6. All treated effluent disposal shall meet the discharge requirements established by the Central Valley Regional Water Quality Control Board (CVRWQCB).
7. Wastewater sludge shall be appropriately disposed, in accordance with applicable regulations. Sludge reuse options should be investigated by KMPUD.

### **6.3.3 Existing Wastewater Treatment Plant**

The sanitary sewer system serving the Kirkwood community consists of gravity-flow sewage collection lines and two lift stations, which transfer the sewage to the Wastewater Treatment Plant (WWTP) (see Figure 6.1). The WWTP includes primary screening, activated sludge biological treatment, chemical coagulation and filtration and discharge into effluent absorption beds.

Operation of the WWTP is regulated by permit under the jurisdiction of the California Regional Water Quality Control Board, Central Valley Region (CVRWQCB). Kirkwood is an environmentally-sensitive area, therefore, the wastewater discharge permit is stringent and requires ongoing weekly sampling and analysis of Kirkwood Creek to determine the effects, if any, that may be occurring in the water quality of the Kirkwood watershed. The results are submitted to CVRWQCB.

The Kirkwood Meadows Public Utility District (KMPUD) Wastewater Treatment Plant treats wastewater from the surrounding community and ski resort. The WWTP is designed to treat an average flow of 100,000 gallons per day (gpd) and a peak flow of 200,000 gpd; the discharge permit allows for a monthly average effluent flow of 150,000 gpd.

### **6.3.4 Projected Wastewater Treatment Plant Parameters**

Because the average daily flow during peak months is already close to the WWTP design capacity, the additional wastewater generated by new development is expected to overload the existing plant. Therefore, the WWTP will require expansion.

The ultimate peak monthly flow in fifteen years (2012) is projected at 182,500 gpd, approximately twice the current peak monthly flow of 87,600 gpd.

**Table 6.1  
Projected Peak Monthly Flows at Ultimate Buildout**

<b>Wastewater Source</b>	<b>Present Flow (gpd)</b>	<b>Growth Factor</b>	<b>Buildout Flow (gpd)</b>
Residential	24,000 (1)	3	72,000
Commercial	30,100 (2)	2	60,200
<b>Subtotal</b>	<b>54,100</b>		<b>132,200</b>
	33,500 (3)	1.5	50,300
<b>TOTAL</b>	<b>87,600</b>		<b>182,500</b>

(1) March 1997 metered water usage for Single-family and Multi-family dwellings

(2) March 1997 metered water usage for commercial establishments

(3) March 1997 WWTP effluent flow minus total metered water usage

Based on the future flow and load characteristics of the WWTP, the following is recommended:

- Provide interim expansions to the plant to accommodate flow and constituent loads for the plant until complete expansion is possible.
- Expand the WWTP to accommodate ultimate buildout flows and constituent loads. A new or revised Waste Discharge Permit will need to be obtained reflecting the larger anticipated effluent flow.

### **6.3.5 Wastewater Treatment Plant Expansion**

To accommodate future flows, the WWTP will require modification and expansion. Alternatives have been analyzed to meet these requirements. The Plant currently utilizes an Extended Aeration Activated Sludge system. The KMPUD has chosen to pursue the membrane treatment method as the best means of meeting the requirements of the community at buildout.

To summarize the membrane treatment method, following are the basic components of that system. The existing flow equalization basin would be converted to three tanks: an aeration basin containing the membranes, a denitrification tank, and an aerobic digester. The existing secondary clarifier would be demolished and that whole basin converted to flow equalization. The existing filters would be removed. The membrane process would not require the construction of any additional process basins.

For more information pertaining to the expansion of the WWTP, please refer to the Wastewater Facilities Plan, September 1998 prepared by Kennedy/Jenks Consultants for the KMPUD.

### **6.3.6 Membrane Treatment Process Descriptions**

Membrane treatment processes combine biological treatment, clarification and filtration into one process. Solids from the aeration basin can either be wasted to a sludge digester or directly to a dewatering system.

The membrane system offers certain advantages for the WWTP. It does not require the construction of any new treatment basins. It also eliminates the need for a clarifier and filters. Finally, it produces a very high quality effluent.

### **6.3.7 Influent Pumping**

The Influent Pumping Station must be capable of handling the peak hourly flows to the WWTP. As projected, the ultimate buildout peak hourly flow is approximately 730,000 gpd. Assuming the Influent Pumping Station will accommodate 70% of the total flow (and the East Meadows lift station accommodating the remaining 30%), the required capacity of the influent pumping station is 511,000 gpd, or approximately 355 gpm.

Expansion of the influent pumping processes includes two possibilities:

#### Build a parallel pump station

The existing pump station would be used as a backup if one of the new pumps fails. The new pump station would be constructed while the existing pump station was still on-line. A diversion box structure would be built to link the two pump stations together; or

#### Build a parallel pump station and replace existing pumps

This is the same method as described above, with the additional feature that the pumps in the existing pump station would be replaced by grinder type pumps.

### **6.3.8 Sludge Dewatering And Disposal**

Currently, 5,000 gpd of sludge from the aerobic digester is processed during peak periods. It is anticipated that the peak volume of sludge to be treated per day will double. Therefore, the future solids handling system should be capable of dewatering a peak of 10,000 gpd of 1% to 2% sludge.

A Centrifuge is used to dewater sludge, which is containerized for subsequent hauling off site.

### **6.3.9 Effluent Pumping and Disposal**

The best process for effluent disposal at Kirkwood continues to be absorption beds. New effluent absorption beds will need to be developed to accommodate the increased effluent volumes through buildout. The proposed and existing locations for the absorption beds are shown on Figure 6.2. The new effluent absorption bed sites are

intended to show the maximum limits of all of the possible disposal areas, and not necessarily the extent of the absorption beds at buildout that will be installed.

For effluent absorption sites that are considered to have marginal percolation rates, it may be possible to enhance these sites through engineering. Engineered absorption beds can be installed in many instances with advantages to ecosystems and operations.

Within some areas of California, effluent has been used to enhance man-made and naturally occurring wetlands. At some point in the future this may become an economic and environmentally sound alternative to supplement the existing absorption beds.

## **6.4 PROPANE AND ELECTRICAL SERVICE**

### **6.4.1 Objectives For Propane and Electrical Service**

1. Provide electric and propane service in an efficient manner that minimizes land disturbance for distribution lines and related facilities.
2. Maximize energy conservation by encouraging appropriate building techniques and site planning to encourage the use of solar and other alternative energy sources.
3. Provide cost-effective gas and electrical service to Kirkwood businesses and residents.
4. Provide energy sources while minimizing adverse air quality and public safety impacts.

### **6.4.2 Policies For Propane and Electric Service**

1. All residential and commercial structures shall be designed to comply with State of California energy conservation standards to reduce the need for fossil fuels and wood burning for heating.
2. All utilities shall be placed underground and shall follow the alignment of roads whenever practical to minimize land disturbance.
3. Utility installations shall be coordinated in terms of timing and location to minimize land disturbance.

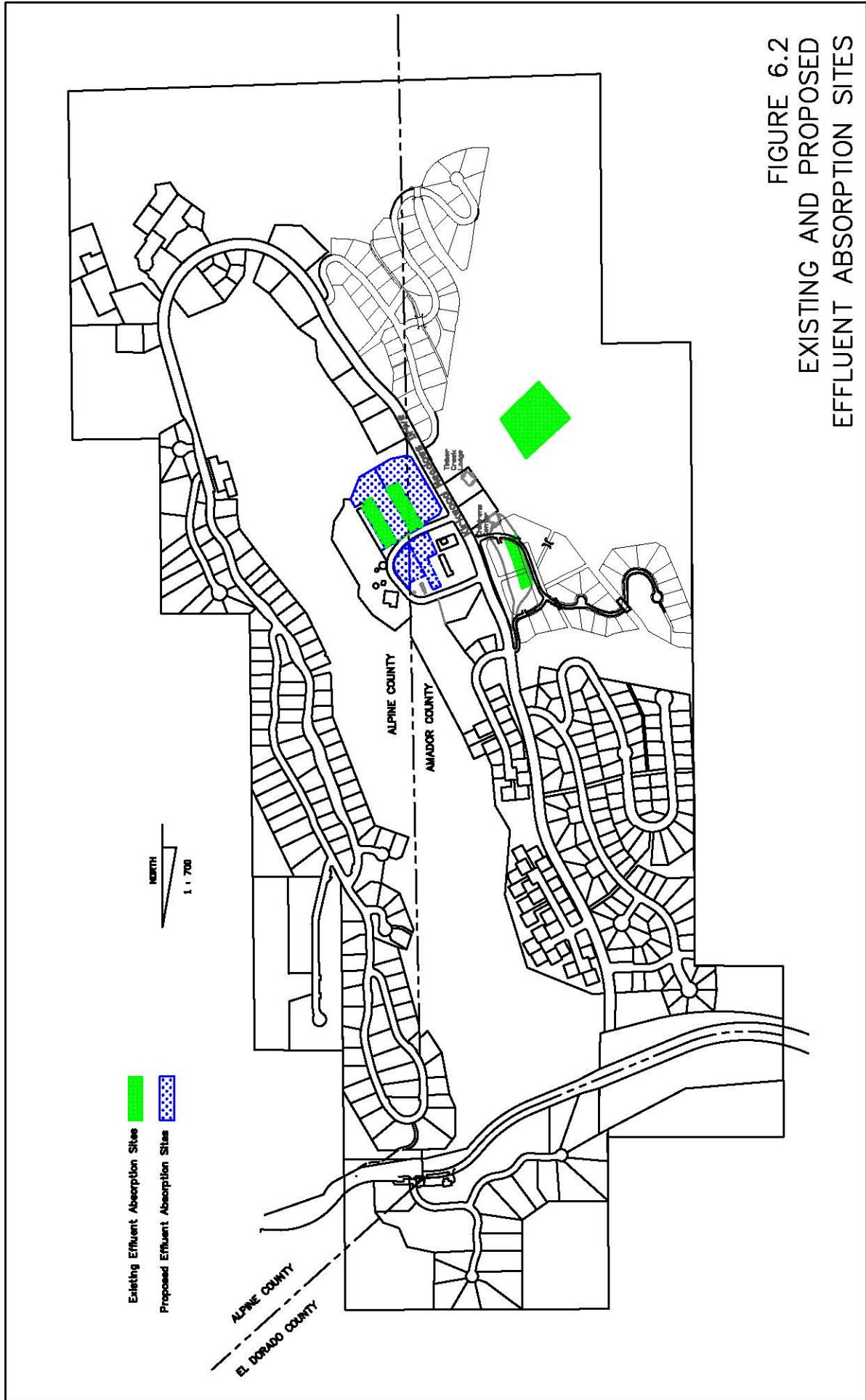


FIGURE 6.2  
 EXISTING AND PROPOSED  
 EFFLUENT ABSORPTION SITES



### **6.4.3 Electric Power Generation**

Electrical power is produced on-site by Mountain Utilities (MU – formerly Kirkwood Gas & Electric), utilizing diesel generators. MU is a wholly owned subsidiary of KMR and the electrical power generation is regulated by the California Public Utilities Commission (PUC). The present plant, located northeast of Red Cliffs Lodge (see Figure 6.3) has the capacity of producing 4.2 megawatts (MW). However, due to minor distribution constraints, the plant is limited to delivering approximately 4.0 MW. Electricity is currently produced utilizing two 12-cylinder (500 KW) and four 16-cylinder (800 KW) diesel generators. During the summer of 1997, Mountain Utilities installed a Selective Catalytic Reduction system (SCR), which targets the reduction of NO<sub>x</sub> (Nitrogen Oxides) from the diesel engine emissions.

The current peak electric demand of about 3.0 megawatts occurs during the early winter months, due to snowmaking activities. An average of twenty percent (20%) of maximum capacity is used during the summer months.

During the winter season, diesel fuel shipments to MU average six times per month. During the summer season diesel fuel is delivered about twice per month.

Within the developed portion of Kirkwood, underground electrical transmission and distribution lines are generally located within road rights-of-way, with the exception of three segments. One of these segments connects the Sun Meadows Condominium area with the KMR Maintenance Yard running along the west side of Kirkwood Meadow. An additional loop is buried in the Kirkwood Meadow from the KMR maintenance yard to the entrance to East Meadows subdivision. The third segment is located at the north end of the meadow and connects East Meadows Phase 2 with Kirkwood Meadows West subdivision, (see Figure 6.3). A high voltage electrical cable runs south from the power house to the base of Lift 1, and then generally parallel to the lift up the mountain to Lift 2, Lift 3, and terminating at the base of Lift 4.

### **6.4.4 Electric Power Generation Expansion**

The long-range electrical power needs of Kirkwood will require either the expansion of the on-site generating facilities or the transmission of electricity from an outside energy source. It is unlikely that the availability of grid power from an outside source will become economically or environmentally sound within the foreseeable future.

Recent load calculations indicate a plant size of 11 Megawatts (MW) will be needed at buildout to handle the anticipated growth. See Table 6.3 for the buildout electrical load projection. The electrical power generation method considered to be the best plan for meeting the projected electrical demand at buildout is expanding the existing diesel powerplant or augmenting the existing plant with local alternate sources. MU is permitted to use temporary standby power in winter to meet peak loads in the event one or more existing generating units are out of service.

Several concepts are under review including fuel cells, micro turbine generators and co-generation. These generating sources could be installed as powerhouse augmentation or as distributed power components dispersed throughout the development. A technological breakthrough is necessary for successful application of any of the three listed concepts. Therefore, in the short term, expansion of the diesel plant is the preferred and only viable alternative.

#### 6.4.5 Diesel Engine Expansion

The preferred electrical power generation plan uses the existing diesel plant and expands its capacity with additional or larger diesel generators. This would require the existing plant building to be expanded or rebuilt. Additional diesel engines, additional switches and additional emission controls will also be required. Particulate filters are a new requirement for the expanded plant.

For more information pertaining to the expansion of the MU Powerplant, please refer to the Electrical Generation System and Distribution– Master Plan, March 1999, prepared by Henwood Energy Services, Inc., for Mountain Utilities.

**TABLE 6.3**  
**Projection Of Kilowatt Usage At Kirkwood Through Buildout**

		PROJECTED	PROJECTED	PROJECTED
	PROJECTED	SUMMER	WINTER	ANNUAL
YEAR	PEAK kW (1)	kWh USE	kWh USE	kWh USE
01 – 02	3,996	3,007,173	7,293,520	10,300,693
02 – 03	4,223	3,178,545	7,709,161	10,887,706
03 – 04	5,634	4,239,891	10,283,321	14,523,212
04 – 05	6,343	4,773,770	11,578,177	16,351,947
05 – 06	6,635	4,993,574	12,111,285	17,104,859
06 – 07	7,169	5,395,266	13,085,538	18,480,804
07 – 08	7,390	5,561,552	13,488,845	19,050,397
08 – 09	7,586	5,709,408	13,847,451	19,556,859
09 – 10	7,694	5,790,307	14,043,660	19,833,967
10 – 11	7,985	6,009,620	14,575,576	20,585,196
11 – 12	8,523	6,414,779	15,558,238	21,973,017

Notes: (1) Projected peak occurs in the winter due to ski resort operations  
 kW = kilowatt kWh = kilowatt hour  
 (2) Chart is based on an assumed development rate, not current experience.

**LEGEND**

**EXISTING**

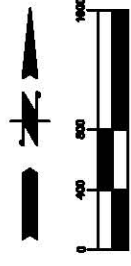
- - - PROPRANE LINE
- - - ELECTRICAL LINE

**PROPOSED**

- - - PROPRANE LINE
- - - ELECTRICAL LINE

- - - SPECIFIC PLAN BOUNDARY

- - - SKI LIFT

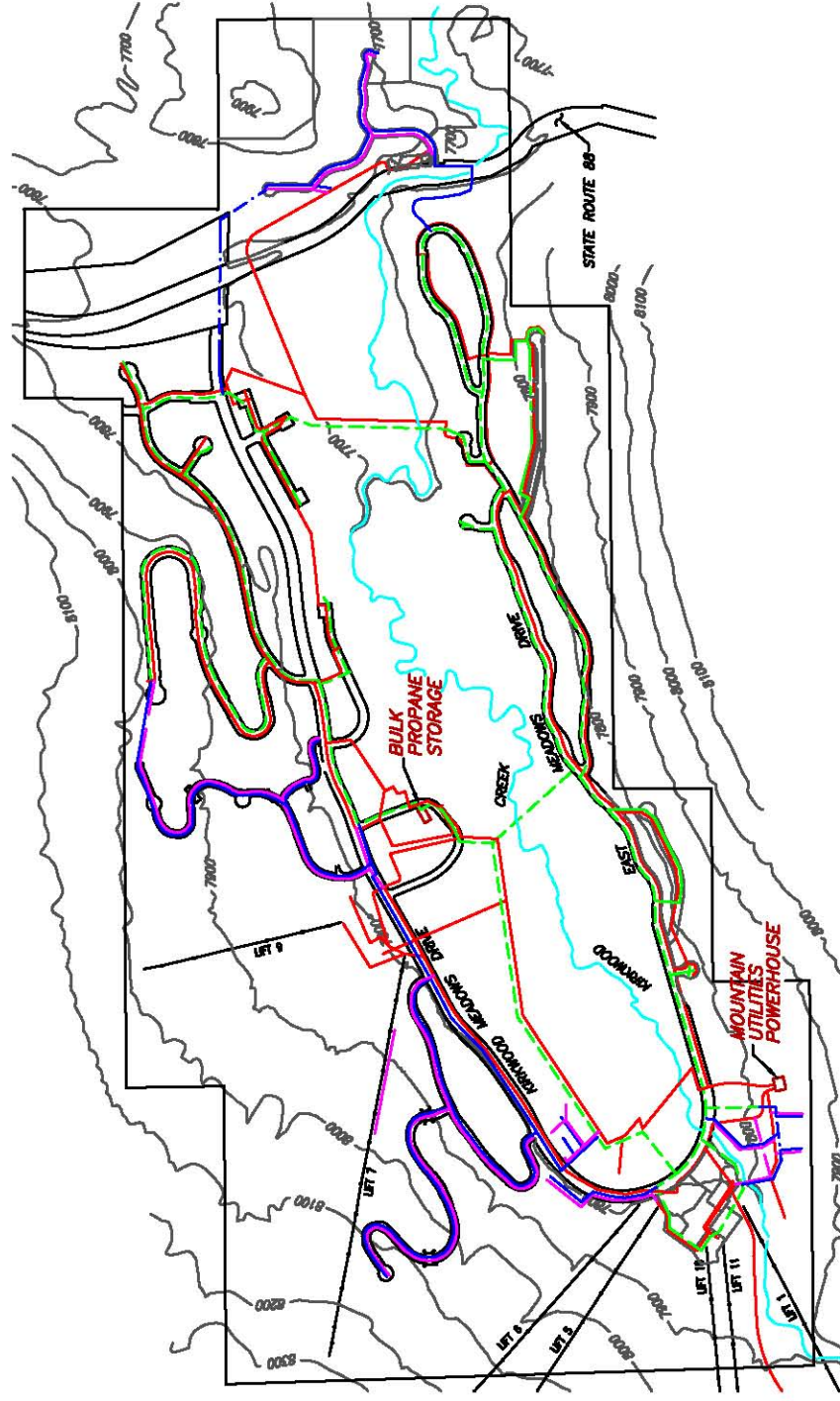


DATE:

JANUARY 2002



**FIGURE 6.3  
PROPANE AND  
ELECTRICAL LINES**



## **6.4.6 Gas Distribution**

Liquefied propane gas is distributed throughout Kirkwood via an underground distribution system operated by MU. The system is supplied from a 30,000 and 20,000-gallon bulk storage tanks located in the KMR maintenance yard (see Figure 6.3). Deliveries are made via SR 88 about 1 - 2 times per month. It is anticipated that the combined 50,000 gallons of stored propane will supply Kirkwood through buildout. For more information, please refer to the Liquefied Petroleum Gas Master Plan Report for Kirkwood Mountain Resort, Kirkwood, California, May 18, 1999, prepared by Petty and Associates, Inc., available at the Mountain Utilities offices. Gas lines are generally located within road rights-of-way, with the exception of three segments. One of these segments connects the Sun Meadows Condominium area with the bulk storage area adjacent to the KMR maintenance yard and runs along the west side of Kirkwood Meadow (see Figure 6.3). Kirkwood Meadow is crossed in the east-west direction in the northern and central sections of the meadow. Propane is currently supplied to structures on the north side of SR 88 by individual tanks located adjacent to each building.

## **6.5 PARKS AND RECREATION**

### **6.5.1 Objectives For Parks and Recreation**

1. Provide year around recreational opportunities at Kirkwood and to maintain the high quality of recreational facilities, amenities and opportunities.
2. KMR will work closely with other service providers in promoting recreational opportunities at Kirkwood.

### **6.5.2 Policies For Parks and Recreation**

1. Kirkwood Mountain Resort shall continue to evaluate recreational needs and opportunities and shall provide a diversity of year-round recreational amenities, as need dictates.
2. Skiers and snowboarders shall be provided with quality facilities and amenities.
3. Recreational facilities shall be provided while protecting Kirkwood's environment, natural beauty and alpine setting.
4. Summertime recreational activities shall be expanded to enable Kirkwood to operate as a year-round recreation resort.
5. Maintain appropriate facilities in existing Open Space-Recreation and Meadow zones.

### **6.5.3 Parks and Recreation Facilities**

The purpose of Kirkwood Ski Resort is recreation. There are 2,300 “skiable” acres located on private land owned by KMR, as well as National Forest Land, including 80 kilometers of groomed cross-country trails. Within the private landholdings of Kirkwood, there are 202 acres of undeveloped open space and 129.1 acres of meadow. During the summer months, this land is open to day hikers, mountain bikers, fishermen, photographers, and sightseers. Numerous hiking and riding trails are located on private land and National Forest Land in the Kirkwood vicinity.

#### **6.5.4 Equestrian Activities**

Horseback riding is available through Kirkwood’s stables in the summer months. The stables are currently located on the north side of SR 88 with trails located throughout Kirkwood. In the winter months, horse-drawn sleighs take interested parties on rides through the Kirkwood Meadow using groomed trails. Horseback riding is expected to continue at Kirkwood. Equestrian trails and stable locations will be managed as provided and controlled by the Forest Service and county regulations.

#### **6.5.5 Tennis Courts**

A total of four public tennis courts are currently available during the summer months, located immediately adjacent to a small playground at the entrance to East Meadows and are for the general use by Kirkwood residents and guests. There are two additional tennis courts located in the East Meadows subdivision for the exclusive use of East Meadows HOA members. As residential development continues, the provision for additional amenities will be encouraged.

#### **6.5.6 Multi-use Trail Network**

A number of multi-use trails exist within and around the community of Kirkwood (on National Forest Land and private land) for use during summer months. Some of these trails connect with dirt roads used to access ski lifts for maintenance during summer months. In addition to trails, pedestrian and bicycle use occurs along many of the local roads within Kirkwood.

Figure 6.4 depicts the existing and proposed trail network within the Kirkwood Valley. Construction of these new trails is likely to coincide with ski trail and ski lift expansion and possibly with private land development.

Trail construction would occur in such a way as to avoid and minimize erosion and guard against plant and riparian habitat degradation. If in the future, use conflicts arise on these trails, trail use will be coordinated and/or restricted to certain types and/or combinations of use.

One partially existing trail, the Meadow Trail Nature Walk, parallels the eastern perimeter of the meadow. To protect the sensitive meadow ecology and to minimize unauthorized trail-blazing, a complete trail encircling the meadow is proposed. All proposed trail construction shall be consistent with the open space and recreational

land use policies found within this Plan. Utility easements will be used where possible to create this looped trail system. Figure 6.4 shows the proposed and existing trail routes.

### **6.5.7 Community Recreation Facility**

KMR and the KMPUD have considered a number of community recreation facilities that would improve neighborhood and community parks at Kirkwood. Some of the proposed facilities include a swimming pool complex, a community recreation center/gymnasium/convention facility, and an ice-skating rink located in the Village. In summer of 2001, a Recreation Center and ice skating rink were both started in the Village area. The Recreation Center, sponsored by the Master Home Owners Association, is on the west side of East Meadows Drive, opposite the Red Cliffs Employee Housing complex. The ice rink, also an MOA project, is located just north of The Mountain Club.

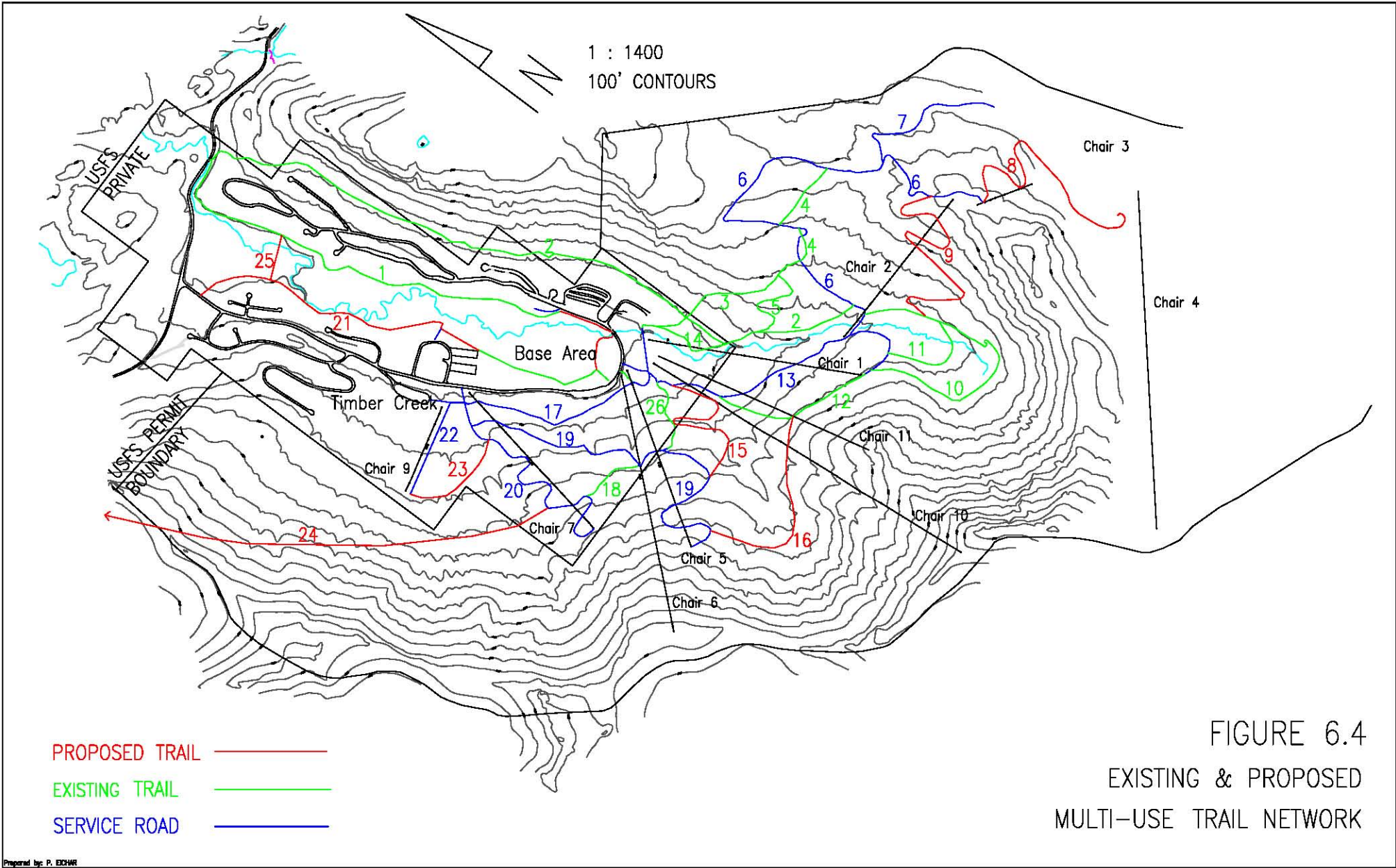
### **6.5.8 Ski Mountain Development**

KMR owns 220.2 acres that are designated as Open Space in addition to 132.1 acres of Meadowland. KMR also operates under a Special Use Permit from the United States Forest Service, Eldorado National Forest, which covers 2,300 acres of skiable terrain. Not all of this terrain is currently accessible from chairlifts, so expansion and upgrades of existing facilities is planned. These expansions and upgrades will be done in an effort to attract more skiers and snow boarders, but located so the open space and uncrowded slopes that have made Kirkwood famous are not lost.

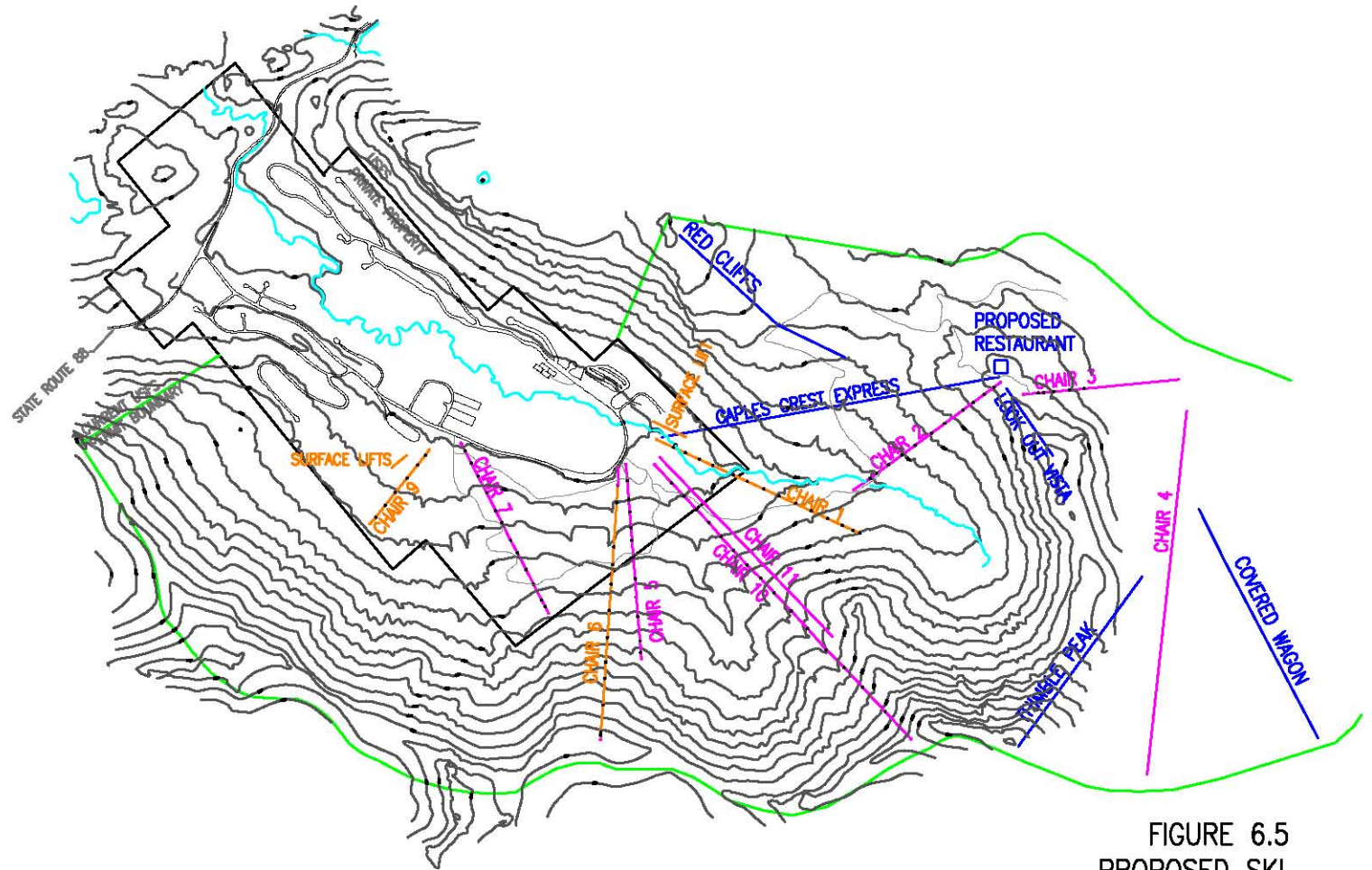
KMR is in the process of updating its Mountain Master Plan with the Eldorado National Forest. The updated Mountain Master Plan includes the construction of chairlifts, which have been proposed since Kirkwood's inception, as well as some newly proposed chairlifts.

KMR sees on-mountain facility expansion occurring in three directions: 1) upgrades to existing facilities and chairlifts; 2) construction of new chairlifts, related facilities and on-mountain food service; and 3) construction of new summer recreation oriented facilities and activities. Figure 6.5 depicts the extent of the Special Use Permit boundary and the anticipated lift expansions, upgrades and associated facility construction/expansion. The Mountain Master Plan currently being developed is envisioned to address the next seven to 10 years of activities, while Figure 6.5 depicts the ultimate development proposal for all envisioned ski lifts. This figure is in no way an indication of county or USFS approval; it is included in this document for informational purposes.





1 : 1800  
100' CONTOURS



**EXISTING SKI LIFTS**

CHAIRS 1, 6, 9  
SURFACE LIFTS

**EXISTING UPGRADED SKI LIFTS**

CHAIRS 2, 3, 4, 5, 7, 10, 11

**PROPOSED SKI LIFTS**

THIMBLE PEAK  
COVERED WAGON  
RED CLIFFS  
CAPLES CREST EXPRESS  
LOOK OUT VISTA

FIGURE 6.5  
PROPOSED SKI  
MOUNTAIN DEVELOPMENT

EXISTING SKI LIFTS ———  
PROPOSED SKI LIFTS ———  
EXISTING UPGRADED LIFTS ———  
PRIVATE PROPERTY BOUNDARY ———  
USFS PERMIT BOUNDARY ———



# **CHAPTER 7 - NATURAL RESOURCE CONSERVATION AND VISUAL SENSITIVITY**

## **INTRODUCTION**

This chapter focuses on environmental factors that have guided the development of the Specific Plan, and sets forth the policies to be implemented to ensure future protection of natural resources and visually sensitive areas of Kirkwood. As a mountain resort, KMR's success is largely dependent upon protection of the natural resources that make Kirkwood a unique area.

## **7.1 FLORA AND FAUNA RESOURCES**

### **7.1.1 Objectives for Flora and Fauna Resources**

1. Maintain and protect the riparian corridor of Kirkwood Creek, both within and outside Kirkwood Meadow, by way of building envelopes, continued water quality monitoring and restrictions on any development within the meadow area.
2. Minimize unnecessary tree removal by establishing building envelopes after reviewing required tree surveys for any proposed subdivisions and by requiring compliance with the Tree Ordinance.
3. Preserve trees in the vicinity of new construction by ensuring adequate setbacks for construction equipment to avoid damage to tree roots.
4. Comply with the State and Federal Endangered Species Acts.

### **7.1.2 Policies for Flora and Fauna Resources**

1. No new development of above-ground structures (excluding those necessary for utilities such as well pump enclosures) shall occur in the Kirkwood Meadow area. However, structures such as trail markers and bridge crossings are allowable to maintain the integrity of the meadow via approved trails and creek crossings.
2. Activities within the meadow such as horseback riding shall be monitored and controlled to ensure that no long term environmental damage occurs to meadow resources or Kirkwood Creek.
3. Any maintenance of existing facilities or construction within the Kirkwood Meadow, such as water or sewer lines, shall be reviewed by Tri-TAC and shall include a program to minimize disturbance to existing vegetation and revegetation as necessary. An exemption would be allowed for emergency repair work.
4. The Tree Ordinance shall apply to all development at Kirkwood including road widening and public works projects.

5. Development in areas not surveyed for rare, threatened, or endangered plant species and not previously disturbed by existing/prior land uses shall be surveyed for species listed or proposed to be listed under the California and Federal Endangered Species Acts, prior to approval of Final Subdivision Maps or prior to the issuance of building permits. Survey protocols shall follow those acceptable to the California Department of Fish and Game, U. S. Fish and Wildlife Service and the U.S. Forest Service.

### **7.1.3 Flora**

Numerous surveys of potential development areas were undertaken to define and identify any potentially rare, threatened or endangered plant species. These surveys may be reviewed at the Alpine County Planning Department. Surveys concluded that no rare, threatened or endangered plant species were found within the surveyed areas based on review of climatic and local habitat conditions in addition to field surveys.

### **7.1.4 Fauna**

Wildlife species considered non-sensitive but likely to be found at Kirkwood include mule deer, black bear, and mountain quail. These are considered Management Indicator Species by the U. S. Forest Service which represent the diversity of vegetation and special habitat components required by all fish and wildlife species. At Kirkwood, the overall habitat capability for these species is medium (Simpson Environmental, 1995). A list of wildlife species observed during 1973 and 1994 wildlife surveys of the Kirkwood area can be found in the Environmental Impact Report/Environmental Assessment for the Kirkwood Water Rights and Snowmaking Project (1995), available for review at the Amador County Planning Department (Jackson, California) or the Alpine County Planning Department (Markleeville, California).

### **7.1.5 Aquatic Life**

Fishery resources in the immediate vicinity of Kirkwood are limited by minimal or absent summer flows in tributaries and the headwaters of Kirkwood Creek. Brook trout (Salvelinus fontinalis) have been observed in isolated pools located within sections of Kirkwood Creek. Further downstream, Kirkwood Creek supports brook trout and brown trout (Salmo trutta) populations that are self-propagating.

## **7.2 HYDROLOGY AND WETLANDS**

### **7.2.1 Objectives for Wetlands and Hydrologic Features**

1. Ensure drainage from the Kirkwood Meadows Creek watershed is considered in the design of a Kirkwood storm drainage system and is safely conveyed through the Kirkwood community.
2. Protect existing wetlands in accordance with all local, state and federal regulations.
3. Protect existing riparian corridors in terms of existing vegetation, soil conditions and

water quality.

## **7.2.2 Policies for Wetlands and Hydrologic Features**

1. All proposed subdivisions shall include adequate storm drainage systems to ensure that all off-site and on-site drainage is safely conveyed to Kirkwood Creek.
2. Erosion control measures during construction shall be undertaken in compliance with the Erosion Control Ordinance in effect at the time of construction, to ensure protection of water quality and conservation of topsoil. Such construction-related measures may include, as examples, construction of open channels to convey storm water runoff, streambed protection and/or energy dissipaters, use of hay bales down slope of construction sites and revegetation with appropriate plant materials along channels.
3. New development shall comply with any applicable National Pollutant Discharge Elimination System (NPDES) permit requirements for point and non-point source discharges.
4. Storm drainage systems shall be designed for the 100-year flood event. These systems shall be designed for gravity flow and winter freeze/thaw conditions.
5. All on-site detention basins shall be designed to allow adequate access for maintenance and shall be landscaped appropriately.
6. All identified wetlands shall be protected (disturbance avoided and or minimized) in accordance with local, state and Federal regulations. New development that may impact Waters of the U.S. or other streambeds shall comply with any applicable requirements of the U.S. Army Corps of Engineers, the California Department of Fish and Game and the Central Valley Regional Water Quality Control Board.
7. Any new development of subdivisions proposed in areas not surveyed for Wetlands or Waters of the U.S. shall be surveyed for such prior to design approval.
8. Whenever practical, riparian corridors shall be revegetated to enhance creek habitat and increase in-channel roughness, thereby reducing the average flow velocity by dissipating energy.
9. For any commercial project, residential subdivision or public works projects involving the use of hazardous materials, a spill prevention and cleanup plan shall be adopted prior to issuance of building permits. The intent of the plan is to minimize the risk of spills during outdoor handling and transport of chemicals and to contain and rapidly clean up the spill before it enters a storm drain.
10. A street/storm sewer maintenance program may be required in the future to provide for the removal of pollutants from paved areas and to maintain the functions of the various storm drain components.

11. All new development shall be protected from the 100-year flood. Mapping shall identify any areas within the 100-year floodplain and shall address potential ice dams and stream sedimentation events (i.e., increased gravel deposits).

### **7.2.3 Hydrologic Features**

A wetland is defined as “an area that is periodically inundated or saturated by surface or ground water on an annual or seasonal basis, that displays hydric soils and that typically supports or is capable of supporting hydrophytic vegetation” (Black, 1991).

Kirkwood Creek is the primary hydrologic feature located within Kirkwood. After crossing SR 88 at the north end of Kirkwood, Kirkwood Creek flows into Caples Creek. The confluence of these two creeks is about 1.5 miles downstream of the northern dam of Caples Lake. Caples Creek is a major tributary of the Silver Fork of the South Fork American River, which discharges into Folsom Lake. Below Folsom Dam, the American River joins the Sacramento River, one of the principal drainages feeding the Sacramento-San Joaquin Delta.

A hydrologic model was used to determine total annual runoff of Kirkwood Creek, as there is no streamflow gauging station on Kirkwood Creek (Simpson Environmental 1995). The private landholdings within Kirkwood are located entirely within the watershed of Kirkwood Creek, a basin that encompasses 2,265 acres, or 3.53 square miles. This model calculated total annual runoff as 5,660 acre-feet for a ‘normal’ year, or about 2.5 acre-feet per acre. About 80 percent of this runoff would occur between April and June as a result of melting snowpack. During a drought year, runoff could be as low as 1,869 acre-feet or 0.8 acre-feet per acre.

Development within this watershed, outside of the private land boundary is limited to that allowed by the U. S. Forest Service, which primarily includes ski lifts and associated facilities of KMR.

Surveys have been undertaken by KMR for Wetlands and Waters of the U.S. that may be located within private lands at Kirkwood. These surveys may be reviewed at the Alpine County Planning Department in Markleeville, California. More than 60 acres of Wetland and Waters of the U.S. were identified within the surveyed areas. This acreage was defined as those elements shown in Table 7.3. Disturbance of these areas by building or any other activity would require applicable permits from the California Department of Fish and Game, U.S. Army Corps of Engineers and the Central Valley Regional Water Quality Control Board.

**TABLE 7.3  
WETLANDS AND WATERS OF THE U.S.  
LOCATED WITHIN SURVEYED AREAS**

<b>Feature Type</b>	<b>Acreage</b>
Ephemeral drainage	4.15 ac
Seeps	4.67 ac
Perennial Drainage	6.41 ac
Open water wetland	0.45 ac
Meadow	51.85 ac

Source: Simpson Environmental, 1995, Moore Biological 2001

### **7.3 GEOLOGY, SOILS AND SEISMICITY**

#### **7.3.1 Objectives For Geology, Soils and Seismicity**

1. Minimize soil erosion and sedimentation as a result of new construction by avoidance of excessively steep slopes and enactment of erosion control measures prior to construction activities.
2. Avoid rockfall hazards by proper siting of new development.
3. Minimize damage due to seismic activity by proper siting of development and construction techniques.

#### **7.3.2 Policies For Geology, Soils and Seismicity**

1. New construction shall comply with the Kirkwood Erosion Control Ordinance.
2. No new development shall be located in areas defined as "red zones" as mapped during the 1995 avalanche survey. If any development is proposed in areas not yet surveyed, such avalanche surveys shall occur prior to design/layout of lots or buildings.
3. All new construction shall comply with requirements of the Uniform Building Code regarding seismic safety.
4. Whenever possible, new development should avoid slopes that exceed 30 percent in areas where soils are prone to erosion.

#### **7.3.3 Geology**

Elevations within the area covered by this Plan range from 7,675 feet to 8,025 feet above mean sea level (msl). Kirkwood Meadow, located in the center of Kirkwood, is a glacially derived alluvial valley surrounded by mountains on the south, east and west ends.

The most critical constraints to development at Kirkwood related to geology, soils and seismicity are erosion due to development on steep slopes, and rockfalls due to natural erosion processes (i.e., thaw/freeze). In March 1996, KMR completed a study entitled "Report of Preliminary Geotechnical Investigation" which addressed proposed development areas within the Village Center, Ski-In/Ski-Out area, East Meadows Phase III area, Juniper Ridge and the North Kirkwood area (Nolte and Associates, Inc., 1996).

The five geologic formations found within the Plan area include the following (Simpson Environmental 1995):

- Qal: Alluvium (Kirkwood Creek floodplain)
- Ql: Lakebed Deposits (small area at south end of Kirkwood)
- Qm: Moraines (western and eastern edges of Kirkwood Meadow)
- Pvp: Merhten Formation (western and eastern mountain slopes)
- Kgr: Hornblende granite (north end of Kirkwood, north side of SR 88)

Granitic rocks (Kgr) are found north of State Route 88. The predominant rock type is Hornblende granodiorite. In this area, rock outcrops are mainly on steep, to very steep slopes. These areas are essentially barren with plant cover limited to sparse grasses, shrubs and stunted trees. Granitic rock masses in the Kirkwood North area will require blasting prior to grading for construction.

Rockfall hazards were surveyed in 1995 and 1997 by studies undertaken by A. Mears, P.E., an avalanche-control engineer based in Colorado. These studies concluded that rockfall hazards tend to be localized in few areas, therefore, development is not planned nor allowed within these areas.

#### **7.3.4 Seismicity**

No identified or known fault lines or zones fall within the project area covered by this Plan (Simpson Environmental 1995). The Kirkwood area lies between the Sierra Frontal fault system to the east and the Foothill fault system to the west, and is within Uniform Building Code (UBC) Seismic Zone 3 (Nolte 1996). Based on recent research and recent seismic events, a seismic event could produce effects in the Kirkwood vicinity of Modified Mercalli Intensity VII or VIII.

#### **7.3.5 Soils**

Soils in the meadow area (where no development is proposed) are aquepts and umbrepts on less than 10 percent slopes. To the east of the meadow, the predominant soil type is lithic cryumbrepts (15 to 75 percent slopes). Maximum erosion hazard is very high, especially on the steep slopes and these soils have a high runoff potential.

To the west and south of the meadow, the predominant soil type is andic cryumbrepts-lithic cryumbrepts association on 15 to 50 percent slopes. The main management concerns are steep slopes and the hazards of erosion and high runoff potential.

## **7.4 AIR QUALITY**

### **7.4.1 Objectives For Air Quality**

1. Meet or exceed all applicable state and Federal air quality standards.
2. Promote activities which do not contribute to air quality problems.

### **7.4.2 Policies For Air Quality**

1. All new construction shall include measures to reduce dust emissions such as the use of water as a dust palliative during dry conditions.
2. Construction equipment shall be equipped with emission reduction equipment consistent with California Air Resources Board requirements.
3. All new wood-burning stoves shall be required to meet applicable standards to minimize polluting emissions, as established by both the U.S. Environmental Protection Agency, and the Great Basin Unified Air Pollution Control District (GBUAPCD), the Amador County Air Pollution Control District (ACAPCD) or the El Dorado County Air Pollution Control District (EDCAPCD), dependent upon the location of the project.
4. Any expansion of the Mountain Utilities Power Plant and other facilities at Kirkwood shall comply with applicable air quality regulations and permit requirements.
5. Energy conservation measures shall be implemented for new construction in compliance with applicable building code requirements to minimize energy use and associated emissions from the Mountain Utilities Power Plant. The use of solar and other alternative energy sources is encouraged.
6. Vehicle fuel consumption shall be minimized by siting commercial uses in proximity to residential uses (to encourage walking and other non-auto transit) and by continuation of the employee and in-valley shuttle service.
7. Any expansion of the Kirkwood Wastewater Treatment Plant shall comply with applicable air quality regulations.

### **7.4.3 Wind Direction**

The mountainous topography surrounding Kirkwood influences wind direction through the valley and affects the distribution of rain and snowfall. Fall regional winds in this part of the Sierra Nevada are generally from the northwest, while winter regional winds are generally from the southeast. Local topography can make wind direction quite variable at Kirkwood. Local winds tend to flow north along Kirkwood Creek for the majority of the year.

#### **7.4.4 Monitoring and Modeling**

The private lands within Kirkwood are in three separate California air basins. These include the Great Basin Unified Air Pollution Control District (GBUAPCD) for Alpine County, the Amador County Air Pollution Control District and the El Dorado County Air Pollution Control District.

Primary pollutants of concern from proposed expansion are particulate matter from construction activity (short-term), wood burning in fireplaces and carbon monoxide from increased vehicular activity. Pollutants (e.g., nitrogen oxides) also may be associated with the burning of diesel fuel for the Mountain Utilities power plant at Kirkwood. The potential effects of these air contaminants were computer modeled to the time of buildout and were demonstrated to fall within all known air quality standards. This report, Kirkwood Expansion Project Air Quality Modeling, prepared by Ashworth Leininger Group for Kirkwood Mountain Resort, February 1999, may be reviewed at the KMR Planning Department Offices.

### **7.5 ARCHAEOLOGICAL/HISTORICAL RESOURCES**

#### **7.5.1 Objectives For Archaeological/Historical Resources**

1. Ensure that new construction does not damage or negatively impact cultural, historical or archaeological resources.

#### **7.5.2 Policies For Archaeological/Historical Resources**

1. If any archaeological or historical resources are encountered during construction activities at Kirkwood, all construction shall be halted and planning department staff of the appropriate county shall be contacted regarding the best course of action. If appropriate, a qualified archaeologist shall be contacted to evaluate the find and to determine any necessary mitigation measures.

2. If any Native American artifacts or burial grounds are uncovered during construction, appropriate personnel from the Native American Heritage Commission and County Coroner's Office shall be contacted to determine how to proceed.

3. Construction foremen/managers shall be informed of the above policies prior to the start of construction.

4. New development in the vicinity of the Kirkwood Inn shall consider the historical features of the Inn and shall incorporate architectural features that are compatible with the Inn's design. Development shall utilize construction methods and siting designed to avoid significant impact to the Inn, as recommended by a qualified architectural consultant experienced with historical structures.

5. If any development is proposed in areas not covered by archaeological and cultural resources surveys, surveys shall be completed for the new area and appropriate



mitigation measures shall be identified as necessary.

### **7.5.3 Archaeological Surveys**

Over the years, KMR completed several archaeological surveys of potential areas for development. Aside from the Kirkwood Inn, no potentially important or significant historic or archaeological resources were identified within the survey areas.

The Kirkwood Inn is located north of State Route 88 at the north end of the Plan area. This structure was built in the 1860's and has been listed as California Land Mark SRL 40. The structure straddles two counties - Alpine and El Dorado - and is immediately adjacent to the Amador County border. The Inn consists of an original log cabin to which a larger framed building has been added.

The Native American Heritage Commission (NAHC) was contacted in conjunction with surveying activity. The NAHC has no record of sacred lands in the Kirkwood area. Local Native Americans were also contacted during the surveys. Archeological surveys will be continued as necessary during any development.

## **7.6 VISUAL SENSITIVITY**

### **7.6.1 Objectives For Visual Sensitivity**

1. Ensure that new development seen from State Route 88 is screened by existing vegetation as much as possible and that new residences and commercial buildings incorporate design elements compatible with the natural surroundings.
2. Ensure that new development throughout Kirkwood is visually compatible and appropriately designed for a mountain community.

### **7.6.2 Policies For Visual Sensitivity**

1. New development within the viewshed of State Route 88 shall receive advisory recommendations from Tri-TAC and the U.S. Forest Service regarding design, material selection and color scheme.
2. Design guidelines, as approved from time to time, shall apply to all new development at Kirkwood.
3. No permanent structures (excluding needed utility structures such as well pump enclosures), or use patterns that would lead to permanent meadow degradation shall be allowed in Kirkwood Meadow.
4. Landscaping shall be incorporated into major public works projects such as parking areas, expansions of wastewater treatment facilities and school construction. Such landscaping shall follow the Landscape and Revegetation Guidelines in effect at the time of construction.

5. Residents shall be informed of the Landscape Guidelines so that new landscaping is compatible with existing landscaping and is appropriate for the climate, elevation and other conditions at Kirkwood.

6. Lighting of public areas (including recreational facilities, commercial plazas, and parking areas) shall avoid light and glare impacts to nearby residents by incorporating shielding and other means to direct lighting to specific target areas.

7. New signs shall comply with the Kirkwood Sign Ordinance in effect at the time of sign construction.

8. Short-term, special events to be held at Kirkwood shall follow Use Permit regulations from the appropriate agency and shall not result in visual degradation. Such special events shall include programs for litter control and monitoring of cleanup.

9. All new development shall comply with the Kirkwood Tree Ordinance to prevent unnecessary tree removal.

### **7.6.3 Kirkwood Meadow**

Preservation of the Kirkwood Meadow and the viewshed corridor from State Route 88 are important issues to KMR and the U.S. Forest Service. A Scenic Agreement has been adopted as part of the Special Use Permit that KMR has with the U.S. Forest Service (Ref. FSM 2710, dated 12/29/94). This agreement identifies the boundaries of the meadow where no new development shall be allowed. In addition, the Scenic Agreement identifies a second scenic zone, which is the balance of the private land forming part of the scenic backdrop to the meadow and visible from State Route 88.

### **7.6.4 Visually Sensitive Areas**

This Plan identifies "visually-sensitive areas", defined as "foreground", "midground" and "background" and shown in Figure 7.1:

**Foreground.** Most highly visible and most sensitive area from State Route 88. Extends from State Route 88 to the first major promontory on the west.

**Midground.** Has moderate visibility and sensitivity. Extends from the promontory (edge of foreground) to naturally-occurring "neck down" in the meadow.

**Background.** Least visible from State Route 88. Extends from the meadow "neck down" to the ski slopes south of the Village Center.

As can be seen by comparing Figure 4.1 with Figure 7.1, most of the new development proposed for Kirkwood is planned for the "background" area.

### **7.6.5 Landscape Zones**

Three landscape zones have been identified within the valley to determine the amount and type of modification or development as related to visual sensitivity and revegetation. These areas are based primarily on predominant vegetation types, topographic relief and soil type, as illustrated in Figure 7.2. Zone A consists of the stream, riparian edge condition, willows and flat grasslands. Zone B is the transition zone from meadow/willow/grass edge to dryer soils, predominately sagebrush and isolated clusters of conifers. Zone C is similar to Zone B except rockier and dominated by heavy tree cover and steeper slopes.

Although all three zones are found in each of the visually sensitive areas, they will be treated differently in each area based on their visual sensitivity from Highway 88. No development, except as previously described and exempted from this condition, will occur throughout Zone A.

Some parts of Zone B, when found in the foreground area, will be visible from Highway 88, while other areas will not be as visible. Care in siting, construction and revegetation will be necessary to develop this area. However, Zone B in the middle and background areas will be less visible from Highway 88, which will allow for more development flexibility.

Heavily forested Zone C is the most amenable zone for development in terms of modifying visual impacts in all three areas. Again, care in building siting and retention of vegetation will be maximized in all visually sensitive areas.

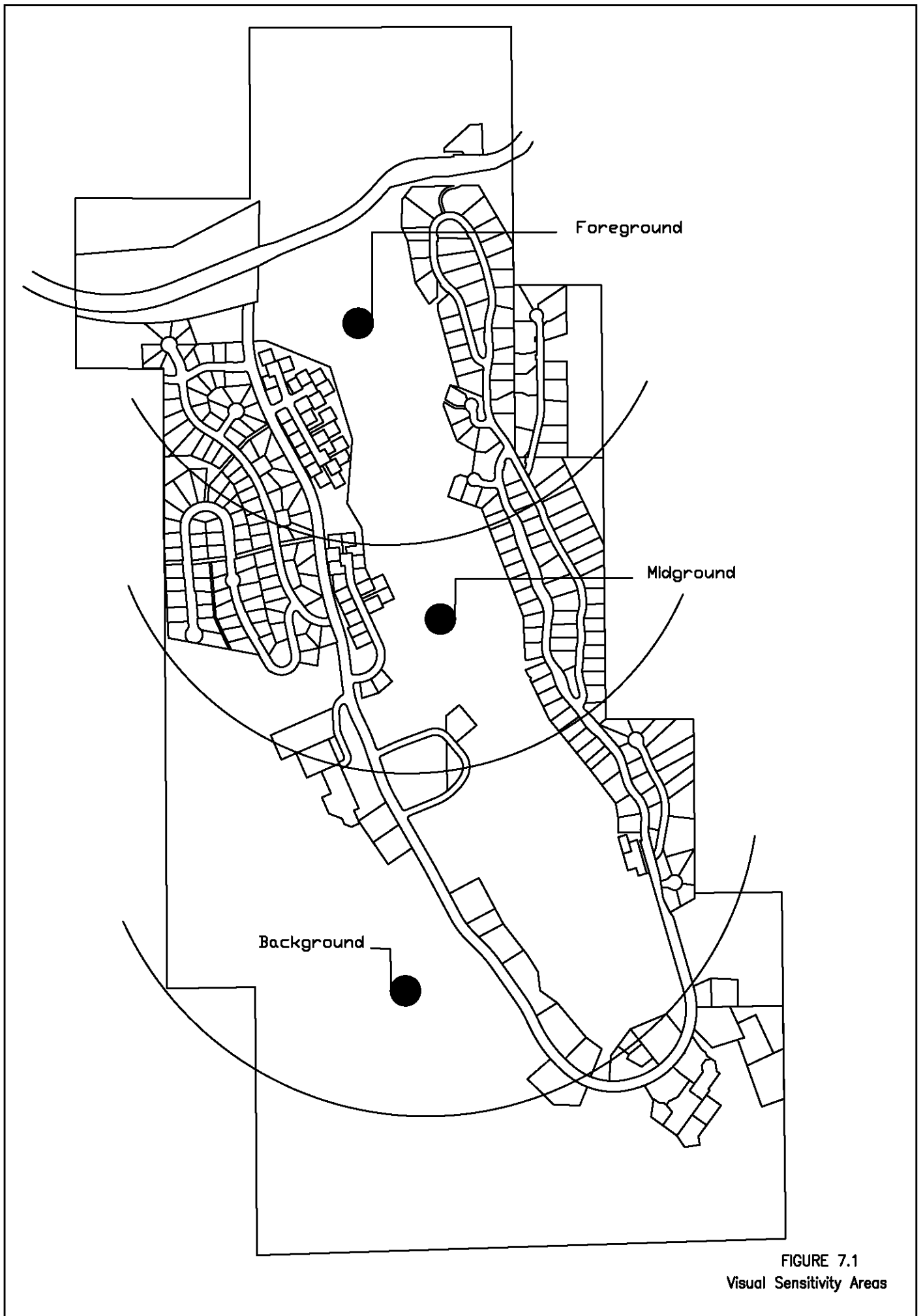
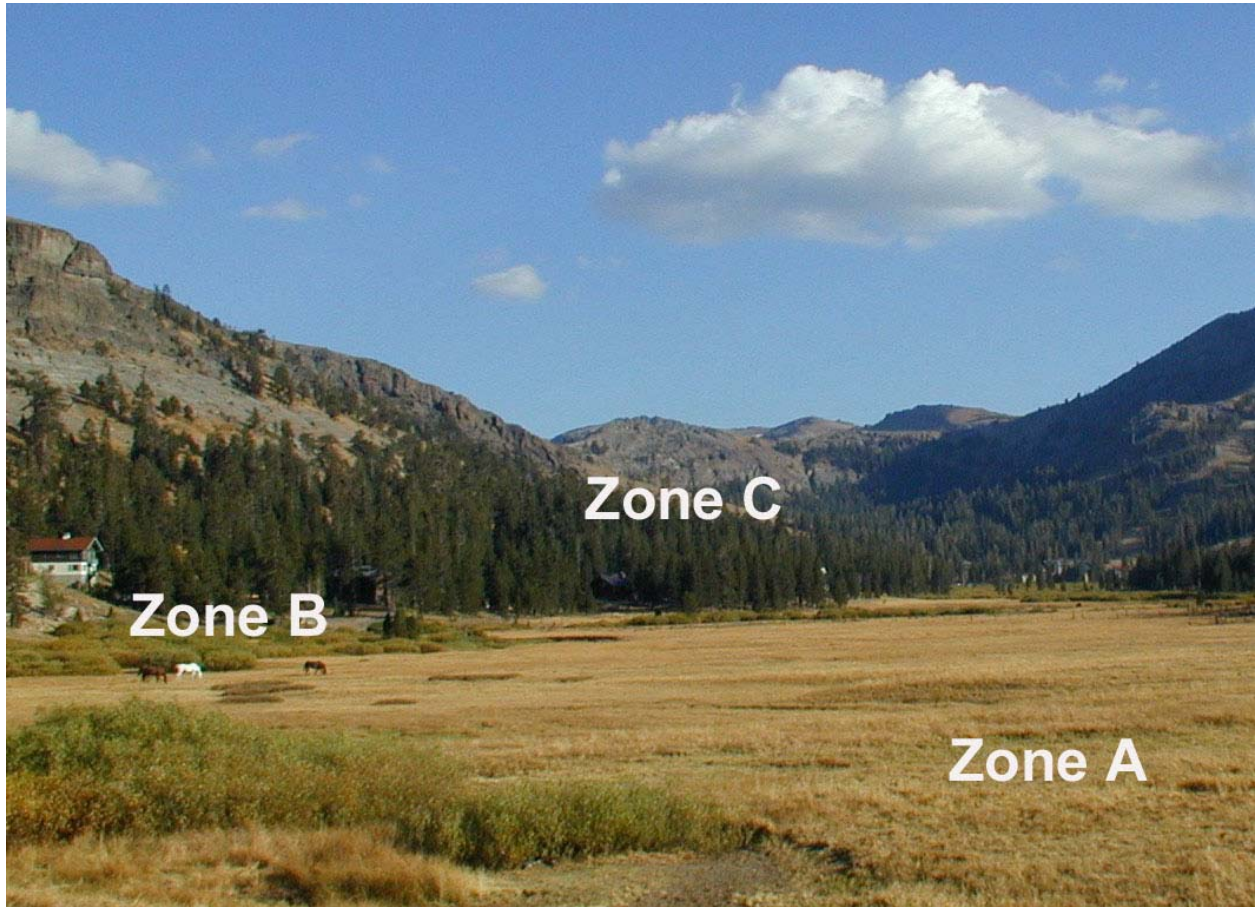


FIGURE 7.1  
Visual Sensitivity Areas



Zone A: stream, riparian edge, willows, flat grasslands  
Zone B: transition zone, sagebrush, isolated conifers  
Zone C: heavy tree cover, steep side slopes

**Figure 7.2  
Landscape Zones**

## **CHAPTER 8 - HOUSING**

### **INTRODUCTION**

The four primary housing needs at Kirkwood are: 1) the guests; 2) the residents; 3) the employees that provide services for the operation of the resort and the community; and 4) temporary emergency accommodations for patrons and employees of the valley, an occasional situation that is caused by severe winter weather. The highest levels of occupancy at Kirkwood occur during the winter months. Special events such as summer camps, special promotions or the annual homeowners' meetings during the Fourth of July weekend do cause temporary summer increases. It is the intent of this Plan to facilitate development for a more consistent level of use of the resort facilities throughout the year.

### **8.1 OBJECTIVES FOR HOUSING**

1. Ensure that a variety of housing types and sizes are available to meet the demands of a resort community and cater to a variety of income levels.
2. Provide adequate affordable housing for year-round and seasonal employees.
3. Ensure that an adequate number of short-term rental accommodations are provided for patrons to satisfy regional resort destination demands for accommodations.
4. Encourage types of development that will stimulate a more uniform use of the resort throughout the year.
5. Develop an "in-lieu" fee structure and program for private developers to provide funding for employee housing construction.

### **8.2 POLICIES FOR HOUSING**

1. For the purposes of population assignment, the method set forth in Chapter 4 shall be followed for density allocation, which correlates unit type with assigned population counts.
2. Development at Kirkwood shall follow the procedure established in the Employee Housing Ordinance in effect at the time of development for the assessment of employee housing needs.
3. Developers shall be required to meet the requirements of the Employee Housing Ordinance.
4. Housing structures shall be designed to be compatible with the Kirkwood setting and to conform with the Kirkwood Design Regulations.
5. Employee housing shall be located in proximity to other housing areas and

commercial services within the counties of Alpine, Amador and El Dorado.

6. Existing employee housing units shall be maintained in serviceable condition.

7. Caretaker units shall be encouraged in duplexes and single-family homes where allowed, as a means to provide additional employee housing.

8. This Plan shall promote incentives that will encourage the provision of affordable housing as is described in the Implementation sections of The Employee Housing Ordinance and Chapter 9.

### **8.3 GUEST HOUSING (ACCOMMODATIONS)**

Short-term occupancy of accommodation units reaches 100 percent during holidays and many weekends during the ski season. The provision of additional market-rate housing that will increase the availability of short-term accommodations is critical to the development of Kirkwood. Large condominium units (i.e. 4-bedrooms) and single-family homes are part of the planned residential development at Kirkwood; however, they are seldom placed on the market for short-term accommodations. To aid in satisfying the demand for overnight accommodations, KMR is pursuing interval/fractional ownership programs for multi-family projects.

### **8.4 RESIDENT HOUSING**

Given the semi-remote location and the limited services (institutional and commercial facilities) available in Kirkwood, there are few year-round residents. The general development plan of Kirkwood and growth in its year-round program will generate the basic demands required to provide these increased commercial services. This in turn is expected to increase the number of year-round residents. It should be noted that even with the construction of new services at Kirkwood, the year-round resident population will increase but, when compared to the maximum allowable population (6,558 persons), the number of year-round residents is expected to stay relatively low. This assumption is based on the fact that Kirkwood will not be able to compete or offer the amount of services available in the surrounding communities of South Lake Tahoe and Minden/Gardnerville. Another fact that supports this assertion is that the current resident population at Kirkwood is about five percent (5%) of the total existing housing.

### **8.5 EMPLOYEE HOUSING**

While there are a significant number of seasonal employees in the low to moderate income brackets, there are also a number of year-round employees at higher income levels whose housing requirements vary. The provision of affordable housing for employees is a primary focus. Affordable housing at resort communities often translates into some form of employee housing. At Kirkwood, the three large employee housing buildings, Renwick, Youth Hostel and Red Cliffs, require heavy subsidies by KMR for their operation and maintenance. Part of the success of this Plan will be an effective program that guides the development of creative affordable housing within

Kirkwood and adjacent communities with the assistance of third party developers, varied product, and county, state and Federal programs.

**TABLE 8.1  
1999/2000 EMPLOYMENT NUMBERS FOR THE KIRKWOOD VICINITY AND THE  
NUMBER OF ACCOMMODATIONS PROVIDED**

<b>Employer</b>	<b>#Seasonal emp.s (99/00)</b>	<b>#Year-round emp.s (99/00)</b>	<b>Total peak employment (buildout)</b>	<b>#emp. units (99/00)</b>	<b>#emp.s housed (99/00)</b>
<b>KMR</b>	800 (2)	125	1000	170 (3)	170 (6)
<b>NON-KMR (1)</b>	31	19	100	1	14 (5)
<b>Caples Resort</b>	8	2	10	1	5
<b>CalTrans (4)</b>	18	7	25	2	up to 30

Notes to Table 8.1:

1. Non-KMR employers include: Kirkwood Towers/Whiskey Run Bar & Grill, the KMPUD, Kirkwood Accommodations, Kirkwood School, Volcano Telephone and KSEF. Some of these employees live in-valley and/or have housing allowances such as the KMPUD employees.
2. Of the 800 seasonal KMR employees, 50 percent are full-time employees, working 32 or more hours per week, the other 50 percent are part-time employees. 800 employees represents the average seasonal employment.
3. An employee unit in this table equates to the number of employees housed.
4. Information per Al Schindler, CalTrans.
5. Some non-KMR employees may also work for KMR, thereby receiving housing through KMR and not their Non-KMR employer.

## **8.6 KMR EMPLOYEE HOUSING SURVEYS**

In February 1995, KMR surveyed its department heads regarding housing preferences of their employees and projected employee needs. In 1997, a second survey of KMR employees was conducted, it focused on the following:

1. Current place of residence
2. Preference for living at Kirkwood or elsewhere
3. Type of housing desired with associated rent structure
4. Reasons for choice of residence
5. Family income and other associated questions

The largest demand for employee housing occurs between November and April each year. KMR department head responses (1995) to the survey indicated the largest preference of seasonal employees would be for studios and dormitory units. For employees (1997), the preferred housing was one- or two-bedroom units as well as single-family homes.

The 1997 employee survey asked respondents to rank the most important reasons for choosing their place of residence. The top five reasons given, in order of preference



were: recreation, length of commute, cost of housing, remoteness, and availability of housing.

The 1997 survey asked respondents to rank, based on personal feasibility and preference, varying types of housing with associated market rate rent (as compared to nearby communities). Many of the respondents said that they could not afford the type of housing they desired, given the associated rent. Many of the responses indicated that they would be willing to pay about one-half of the market rate rent. This could be due to the fact that they currently reside in one of the existing employee housing complexes where the rent is about 50% of the market rate rents of nearby communities. Respondents, who were able to meet the rent demands, indicated some type of shared housing arrangement.

It is important to note that the *desire* to live at Kirkwood is very different from the *ability* to live at Kirkwood, given the cost of construction and the practical rent structures that are available. It is also important to note that many of the respondents who indicated the ability to live at Kirkwood in market rate housing were from dual income households.

### **8.6.1 Estimated KMR Employees At Buildout**

As previously discussed, during peak employment, about 800 employees work for KMR, of which only about 150 are year-round employees. At buildout, it is projected that there will be 150 year-round and 850 seasonal KMR employees.

Employee housing will be provided in accordance with the Employee Housing Ordinance. Based on the goal of providing housing for 30% of qualified employees, adequate employee housing will be created to meet the resorts needs.

### **8.6.2 Estimated Non-KMR Employees At Buildout**

Expansion of the CalTrans Caples Lake Maintenance Station and Caples Lake Resort is not under the jurisdiction of this Plan, however, their number of employees and the number of employees housed on site, is important to consider, (see Table 8.1).

The Non-KMR employees employed at businesses or public agencies within Kirkwood, whose expansion is under the jurisdiction of this Plan, need to be considered and projected to the time of buildout. The current (99/00) peak employment for non-KMR employees is estimated at 50 individuals. Of these 50 employees, approximately 14 of them live in employee housing. Employees receiving a housing allowance are not counted as accommodated employees in Table 8.1.

Non-KMR employers and/or developers are responsible to provide the Employee Housing Ordinance mandated pro-rata share of housing for employees at Kirkwood or in the tri-county vicinity. Should an outside developer construct an employee housing project, there would be the opportunity for Non-KMR employers to purchase, or gain exclusive use rights to the appropriate number of units in lieu of constructing their own. KMR has and will continue to pursue outside developers as a source of potential

employee housing development.

## **8.7 LOCATIONS FOR EMPLOYEE HOUSING**

Employee housing is an allowed use in any residentially designated zone, including mixed-use zones. In order to encourage the development of employee housing in all areas of the valley, this method of land use control was chosen. It is believed that market conditions will dictate where and when these units are constructed. Sites in all three counties should be considered as potential locations for employee housing projects. The most likely location for future employee housing complexes would be found within multi-family and multi-family and commercial (MF, MF-C) land use zones, in addition to employee units found within Single-family/Duplex Residential zones.

## **8.8 EMPLOYEE HOUSING ORDINANCE**

An employee housing ordinance will be adopted by the counties to govern the types, number and timing of providing for employee housing units. The Employee Housing Ordinance is attached as Appendix 5.

## **CHAPTER 9 - IMPLEMENTATION MEASURES AND PHASING**

### **9.1 KIRKWOOD ORDINANCES**

This Plan is intended to be both a regulatory and policy document. As such, the identified standards, guidelines and regulations contained herein serve as the enforcement mechanisms directing future development. Kirkwood is located within three separate counties, but has its own environmental and locational characteristics. It is appropriate that one set of regulations should apply to Kirkwood and these should generally supplement individual county land use regulations. If any conflicts arise between the Kirkwood Specific Plan standards and the regulations or ordinances of individual counties (Alpine, Amador or El Dorado), the Plan provisions shall take precedence.

In this Plan, standards for building regulations have been identified in Chapter 4 and will be codified in the Land Use Ordinance. The standards identified in this Plan and the ordinances are enforceable land use regulations as this Plan is a policy document and the codified Ordinance (regulations) is enforceable by the county of concern.

In addition to existing ordinances noted above, the following are new proposed ordinances contained herein which will be enacted per the ultimately approved provisions of this plan and its subsequent EIR.

1. Erosion Control Ordinance
2. Landscape and Revegetation Guidelines
3. Kirkwood Design Ordinance
4. Land Use Ordinance

### **9.2 CAPITAL IMPROVEMENTS PROGRAM AND FINANCING**

The following are the major capital improvement projects under consideration to accommodate future development at Kirkwood:

1. Employee Housing
2. Construction of an elementary school with related facilities
3. Expansion of wastewater treatment and domestic water supply facilities (school district responsibilities)
4. Expansion of electricity production facilities
5. Construction of additional recreational facilities.

### **9.3 COMMUNITY FACILITIES**

Land at Kirkwood has been deeded to the KMPUD by KMR for public services. The 5.74-acre site is adjacent to Loop Road and encompasses the existing KMPUD WWTP. The KMPUD is deed restricted in the use of this parcel for public services, such as expanded WWTP operations, domestic water supply treatment, and the Community Facilities Building.

The KMPUD has constructed a Community Services Building that will house the Kirkwood Volunteer Fire Department's equipment and office space, space for a sheriff's sub-station, KMPUD administrative offices a room for community events and meetings.

Since the passage of Proposition 218 (7-1-97), affected property owners must vote on all assessment fees. At present, the fire assessment fee is set at \$.04 per square foot of improvement on each lot, residential and commercial, on an annual basis. Funds collected as part of the fire assessment fee can be used for equipment and facility construction.

The Fire Impact Fee is imposed at the time of obtaining a building permit in Alpine and Amador County. A total of \$0.47 is charged per square foot of new construction in Kirkwood. This money is put into a trust fund for the purchase of new equipment and can also be used for construction. No impact fees are currently levied in El Dorado County, however, annual assessment fees do apply.

#### **9.4 EMPLOYEE HOUSING**

Due to the high cost of construction and the poor return on employee housing rentals, it is desirable that a developer receives revenue from vacant employee housing units. This aids in offsetting the debt and operational costs of providing employee housing units. The utilization of these facilities during the summer months will help meet the needs of construction workers or other semi-permanent tenants when the Kirkwood Valley's employment requirements are nominal.

The following list of possible actions, if implemented, may serve as a direction by which KMR or other private developers can pursue a reduction in the costs of developing employee housing. The appropriate county and/or utility provider with the appropriate approvals may undertake any or all of the following actions.

- Waiver of Real Estate Transfer Assessment – At the request of the developer, the Kirkwood Resort Master Owners Association may waive the RETA for the sale of all employee housing units or land to be used as such.
- Water Tap Fees - The developer may request the KMPUD Board of Directors to reduce or waive the water connection surcharge. If at some time in the future the project reverts to free market, all waived fees would be repaid to the KMPUD at the then current rate. The assurance of repayment in the case of a reversion to free market would be guaranteed through deed restrictions.
- Sewer Tap Fees - The developer may request the KMPUD Board of Directors to reduce or waive the sewer connection surcharge. If at some time in the future the project reverts to free market, all waived fees would be repaid to the KMPUD at the then current rate. The assurance of repayment in the case of a reversion to free market would be guaranteed through deed restrictions.

- Property Tax Credits/Abatement - The developer may request, from the county in which the project is proposed, a waiver and/or abatement of property tax assessments, for a period to be set by the county. In lieu of the abatement, the county of concern may, as an alternative, create a differential property tax that favors employee-restricted units at an appropriate discount rate to that of the standard assessment.
- Financing – At the developer’s request, the county and/or the KMPUD may create a vehicle to assist developers in gaining public financing (without any guarantee of actual receipt of said funds; when funds and or programs are available).
- Caretaker Units –In single-family subdivisions, homeowner associations may amend their CC&Rs to qualify a portion of a structure as employee housing provided the caretaker unit meets the ordinance guidelines.
- Ground Lease Program, Free Land Dedication, or a Deferred Purchase Price by the Developer - These three options, at the sole discretion of the developer, may be implemented to defer or remove the land purchase factor from the cost of developing employee housing units required by this Plan. KMR or any other land developer may defer or abate the purchase price of a parcel of land for the development of an employee housing project.
- Mixed-Use Projects - Government mandated development fees, such as building permit fees and sewer/water connection surcharges, may be reduced in relation to the area proposed for employee housing.

## 9.5 SCHOOL FACILITY

A school site comprised of six acres has been deeded to the Alpine County Unified School District (ACUSD). This school site is located adjacent to Loop Road at the western edge of Kirkwood. The site was donated in 1992 by KMR and is deed restricted for use as a public school.

Current State funding, called Necessary Small School Funding, is provided to ACUSD to operate the existing local elementary school located in Sun Meadows Four. These funds cover the costs of salaries, supplies and equipment, but do not include funds for construction of a new school nor the leasing of the space currently used. This funding does not cover indirect costs such as the principal’s time for oversight of school operations or transportation to the elementary school in Markleeville for special events. No funds are directly appropriated by the ACUSD for the Kirkwood Elementary School.

This ACUSD receives about \$80,000 per year from the State of California to cover operation of the Kirkwood School. This amount covers direct costs but does not cover indirect costs such as those mentioned above. The amount will remain unchanged unless enrollment at the Kirkwood School increases to an average daily attendance (ADA) of 25 students, at which point the amount received from the State’s Necessary Small School Funding would be increased as the regulations provide.

Many counties have developer fees assessed at the time of issuance of a building permit that can be used to fund construction of new schools, however, the ACUSD cannot qualify for developer fees due to the lack of overcrowded classrooms. Thus, other mechanisms must be used to obtain funding. One possible public financing mechanism available to the ACUSD is the creation of a Special Assessment District. Such districts are geographic areas in which local governments levy assessments to pay for public projects such as schools.

The initiation of the creation of an assessment district would need to be spearheaded by the ACUSD at the county level. Special assessments pay for projects that are of specific and direct benefit to a particular group of landowners. Such assessments may be imposed after an assessment ballot proceeding required by Proposition 218. Such a proceeding requires an affirmative vote of the affected landowners with the ballots weighted according to each landowner's financial obligation under the proposed assessment.

Given the relatively small size of the community, a combination of public revenue sources may be necessary to supplement any private funding that may be provided for construction of a local school.

A portion of the property taxes collected in El Dorado County covers the costs for the bonded debt of the Lake Tahoe Unified School District (though no Kirkwood children attend schools in this District). With future development planned for the area in El Dorado County, some type of fee structure will need to be established, in addition to an agreement between El Dorado County, Amador and Alpine Counties. These issues will need to be resolved between the respective counties

## **9.6 RECREATION FACILITIES**

Recreation facilities that offer activities for winter and summer time use are desirable. The vision of this is to provide a pool, hot tubs/Jacuzzis, an exercise complex with equipment and some type of indoor court. It should be recognized that phasing of such a building(s) would be the most economically viable program for development of said facilities. The funding for these amenities is envisioned to be a combination of private and public funds. Property tax revenues generated at Kirkwood could be used to aid in the funding for construction of a community recreation facility. Private funding is anticipated to come from the Kirkwood Resort Master Owners Association. The Quimby Act through the KMPUD is another alternative that may be pursued.

## **9.7 WASTEWATER TREATMENT AND DOMESTIC WATER SUPPLY EXPANSION**

Development projects at Kirkwood pay the KMPUD a tap fee for water connections and a hook-up fee for sewer connections. These fees are used for the operation and maintenance of said facilities.

Pursuant to California Constitution Article XIII A, Section 1, a local government may

increase property taxes above the one percent limit established by Proposition 13 to secure general obligation bonds "...for the acquisition or improvement of real property." The increase may occur only if two-thirds of the voters in a local election support the bond issuance. Approval of additional bonds may be necessary to finance future facilities. Enterprise Revenue Bonds, General Obligation Bonds or a Land-secured Mello-Roos Community Facility District formation are all plausible options for the KMPUD to finance future sewer treatment, domestic water supply expansion and effluent discharge expansion.

The KMPUD has pursued the implementation of the Mello-Roos Community Facilities Act of 1982. This Act enables special districts to establish community facilities districts and levy special taxes to fund a wide variety of facilities and services required by a specific plan. The KMPUD has chosen this route as the best means of financing the design and construction of the expanded wastewater treatment plant at Kirkwood.

In addition to the funding mechanisms mentioned above, the KMPUD and KMR have agreed that when domestic water demand exceeds supply, KMR will provide an interest free loan to the KMPUD to construct new domestic water wells to meet the demand. This loan would be repaid to KMR by KMPUD water tap fees.

Transient Occupancy Taxes (TOT) could be increased by any of the three counties in which Kirkwood is located. Currently, Alpine and El Dorado Counties charge a 10 percent TOT and Amador County charges 6 percent. This money is currently directed to the General Fund account of each county. In Alpine County, a portion of the TOT is returned to the KMPUD to cover general operating costs. A specific percentage for all three counties, at the appropriate time, could be allotted to Kirkwood (KMPUD) projects directly, based on the tax revenue received from the Kirkwood community.

## **9.8 PROPANE GAS SYSTEM AND POWER GENERATION EXPANSION**

Two propane storage tanks (30,000 and 20,000-gallon), located in the Kirkwood Maintenance yard supply the propane distribution system. It is anticipated that the combined 50,000 gallons of stored propane will supply Kirkwood through buildout.

The long-range electrical power needs of Kirkwood will either require expansion of the on-site generating facilities, or the transmission of electricity from an outside energy source. Should a transmission line to Kirkwood become economically feasible, it is anticipated that an independent third party would pursue this alternative.

Due to the fact that Mountain Utilities is a private utility company, the means for financing expansion projects are more tightly limited than if it were a public utility provider, such as the KMPUD. Therefore, funding for the electrical power generation expansion is anticipated via a mixture of private bank financing, equipment vendor financing, and internally generated Mountain Utility funds.

## **9.9 PRIVATE FINANCING**

Many of the proposed improvements at Kirkwood such as parking and landscaping are expected to be funded by KMR. However, KMR has established the Kirkwood Resort Master Owners Association (KRMOA), in which all members pay monthly fees in exchange for such benefits as snow removal, provision of a swimming pool and associated recreational amenities.

The KRMOA's responsibilities may also include, but are not limited to, the following:

- Storm Drain Maintenance
- Landscaping and Maintenance
- Pedestrian Plazas and Walkway Maintenance
- Pedestrian Amenities and Street Furniture
- Parking Garage Operation and Maintenance
- Security
- Trash Removal and Recycling
- Cultural Events and Programs
- Snow removal
- Roadway Repair and Maintenance
- Parks and Recreation
- Facility Maintenance and Operation
- Property and Facility Management
- Housing Authority
- Architectural Design Review
- Utility Provider (maintenance, operation)

The KRMOA generates revenues by four mechanisms: Member Assessments, Real Estate Transfer Fee (RETF), Civic Assessments and Overnight Lodging Assessments.

Member Assessments may only be used for the operation and maintenance of existing facilities, such as the public tennis courts and Kirkwood Meadows Drive, in addition to funding the Associations' staff and overhead costs.

The RETF, Civic and Overnight Lodging Assessments may be used for the operation and maintenance of existing facilities and/or programs, as well as capital improvements, such as a community recreation complex.

## **9.10 TAX REVENUES GENERATED BY KIRKWOOD**

Property tax, transient occupancy tax and sales tax revenues are currently the primary sources of revenue for Alpine, Amador and El Dorado counties from Kirkwood. Sales tax revenues are distributed directly to the state, a portion of which is reimbursed to the county of origin. However, the state does not specify the location from which the original revenues were received.



## **9.11 DEVELOPMENT PHASING**

The anticipated development schedule is as follows:

1. Village Center
2. Ski In/Ski Out South
3. Timber Creek Service/Day Skier Parking Area
4. Timber Creek Village
5. Ski In/Ski Out North
6. Kirkwood North

Buildout unit distribution estimates are shown in Table 4.2.

It is important to note that a portion of the proposed development may occur on private property by individual developers not associated with KMR. Therefore, the preferred phasing may be different than actual construction. Village development is emphasized so that a strong population concentration will be created in this area. This should provide support for the associated commercial uses in the pedestrian-oriented village. Development may occur in the Timber Creek area, the development timeline being driven by resort demands.

The Plan assumes that infrastructure development will occur concurrently with the demand for upgrades, rather than developing a massive infrastructure first. Market demand and housing needs drive which type of development projects are constructed and when.

## **9.12 CAPITAL IMPROVEMENT PHASING**

### **9.12.1 KMPUD Facilities Expansion**

The KMPUD WWTP is expected to be expanded as needs expand through buildout of the Specific Plan.

### **9.12.2 Mountain Utilities Facilities Expansion**

The Mountain Utilities power generation facility is expected to be expanded as demands increase.

As of August 2001, the power plant capacity is 4.2 MW, while the delivery capacity is approximately 3.6 MW.

Expansion will involve improvement to both generating and distribution equipment.

Subsequent expansion of electrical generating capacity can be from conventional diesel fired generators or alternate technology as applicable. Fuel cells, micro turbine generators, solar power are options which are possible. Distributed power, where the source of power (a fuel cell for example) is placed closer to the point of use is an option in Kirkwood.

All power expansion will be subject to the current regulations of the State of California and the U.S. Federal Government which govern the various aspects of producing safe, dependable, clean power for the Kirkwood area.

## **CHAPTER 10 – THE SPECIFIC PLAN AND SUBSEQUENT DISCRETIONARY PROJECTS**

### **10.1 KIRKWOOD SPECIFIC PLAN PROGRAM EIR**

The EIR being prepared for the Specific Plan is what is referred to as a Program EIR. A Program EIR can be prepared for a series of actions that can be characterized as one large project and are related with the issuance of rules, regulations and plans to govern the conduct of a continuing program. A Program EIR is most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required.

#### **10.1.1 Projects Exempt From Further Environmental Documentation**

Subsequent activities in the program must be examined in the light of the EIR to determine whether an additional environmental document must be prepared. If the county in which a project is proposed finds that no new effects could occur or no new mitigation measures would be required, the county can approve the activity as being within the scope of the project covered by that EIR and no new environmental document would be required.

#### **10.1.2 Subsequent Projects Requiring Additional Environmental Documentation**

If a later activity would have effects that were not examined in the EIR and the California Environmental Quality Act, a new initial study would need to be prepared leading to either an EIR, mitigated negative declaration, negative declaration or categorical exemption. A Program EIR can be used to simplify the task of preparing environmental documents on later parts of the program. The Program EIR can provide the basis in an initial study for determining whether the later activity may have any significant effects. The Program EIR can be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives and other factors that apply to the program as a whole.

## **CHAPTER 11 – SPECIFIC PLAN ADMINISTRATION AND ENFORCEMENT**

### **11.1 SPECIFIC PLAN COST RECOVERY**

The costs incurred for the preparation of this Plan were borne exclusively by KMR. Reimbursement agreements were established with El Dorado and Amador counties for staff time to review the Specific Plan and the associated EIR.

Alpine County as lead Agency recoups monies to pay for staff time to review the Plan and the associated EIR via contract with Kirkwood Mountain Resort and the EIR preparation consultants, as a percentage of the overall contract.

### **11.2 SPECIFIC PLAN ENFORCEMENT**

This Plan lays the foundation for the Policies and Objectives stated herein and must pass by resolution within each respective county. The Plan, upon approval, will become an ordinance in each of the three counties.

As an ordinance, it is the obligation of the appropriate county department/division/personnel to enforce the standards found therein, within the boundary of the respective county. For example, Amador County will be responsible for enforcing the provisions of the Erosion Control Ordinance for those development projects found within the Amador County portion of Kirkwood.

It is anticipated that the County Planning and Building Departments will shoulder the majority of enforcement responsibilities as they relate to development projects at Kirkwood.

## **ACKNOWLEDGMENTS**

The staff of the Kirkwood Mountain Resort prepared this Specific Plan, with the assistance of a number of consultants and review by various members of committees and boards. The intent of this Specific Plan is to provide relevant planning information that will guide Kirkwood toward a development that the residents of Alpine, Amador, and El Dorado counties will be proud of.

Peter Eichar, Penny Tirschman, R. Tom Brinkley II, Ed Morrow, Gary Derck and many assorted staff members of Kirkwood Mountain Resort worked as a team in the preparation of the Specific Plan.

Examples of other Specific Plans and Design Guidelines were relied on during the preparation of this Specific Plan. These included the Mountain House Master Plan (San Joaquin County, California, prepared by SWA Group) and the North Village Specific Plan (Town of Mammoth, California, prepared by Eldon Beck Associates). The book entitled, Design For Mountain Communities by Sherry Dorward, was also a helpful reference in preparation of the Specific Plan.

The staff of Alpine, Amador and El Dorado counties also assisted tirelessly in the preparation of this Specific Plan. We want to thank Brian Peters and Leonard Turnbeaugh, Alpine County; Susan Grijalva, Amador County; Peter Maurer, El Dorado County; and Tom Henie, Kirkwood Meadows Public Utilities District, for their time and counsel as this plan developed.

We could not have completed this document without your generous assistance.

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## GLOSSARY

1. Evapotranspiration: the process of water evaporating from the surface of a water body, in addition to the amount of water released by vascular plants through their stomata.
2. Fauna: animals found in a given region; this includes mammals, amphibians, birds, etc.
3. Flora: vascular plants, however can include non-vascular plants such as lichen and fungi.
4. MU: Mountain Utilities, (formerly Kirkwood Gas & Electric) a wholly-owned subsidiary of KMR.
5. Kirkwood: refers to all private land holdings located in the Kirkwood valley as addressed by this Kirkwood Specific Plan (see Figure 1.2).
6. KMPUD: Kirkwood Meadows Public Utility District.
7. KMR: Kirkwood Mountain Resort, the Resort operator.
8. Landscape: planting activities typically considered non-essential and thus ornamental in nature, plants which may or may not be native to the region. Landscape plants typically are not intended for erosion control purposes, however, all vegetation regardless of intention, slows down natural erosion processes.
9. Revegetation: planting activities associated with erosion control activities, and reestablishment of native species, not for ornamental planting, although some revegetation species may be quite showy. Revegetation activities usually follow the construction of major projects such as road cuts, utility line installation, structure erection, etc.
10. Resort, the: refers to the private land holdings owned by KMR and located in the Kirkwood valley as addressed by this Kirkwood Specific Plan.
11. Tri-TAC: Tri County Technical Advisory Committee; an advisory committee comprised of members of the planning/public works departments of Alpine, Amador and El Dorado Counties and the U.S. Forest Service (as ex officio members). This committee typically meets the first Friday of each month at Kirkwood and this meeting is open to the public.
12. Waters of the United States: include essentially all surface waters such as all navigable waters and their tributaries, all wetlands adjacent to these waters, impoundment's of these waters, and intermittent streams. These waters are identified by the following three components: 1) hydrology of area in question, 2) soil type, 3) and vegetation type(s) found in the immediate area.

13. Wetlands: areas characterized by growth of wetland vegetation (bulrush, cattails, rushes, sedges, willows, pickleweed, and iodine bush) where the soil is saturated during a portion of the growing season or the surface is flooded during some part of most years. Wetlands generally include swamps, marshes, bogs and similar areas.

14. Wildlife: refers to the animals found in a region, typically in reference to larger animals, such as mammals.

15. Xerophitic: vegetation which tends to be drought tolerant, that is, having low irrigation requirements.

# **2003 KIRKWOOD SPECIFIC PLAN**

## **APPENDIX 1**

### **EROSION CONTROL ORDINANCE**

#### **INTRODUCTION**

This ordinance is intended to supplement any grading and erosion control requirements that may be required for development project approvals. The requirements of this ordinance apply to all property within the Plan boundary and specifically, the following projects:

A. Projects where the graded portion of the site includes more than 10,000 square feet of area having a slope greater than 10 percent.

B. Where there is sufficient risk that more than 2,500 square feet of soil/earthen material will be unprotected or inadequately protected from erosion during any portion of the rainy season.

C. Where grading will occur within 20 feet of any watercourse or within the 100-year floodplain; and

D. Where the Building Department or Public Works Department of the applicable county determines that grading will or may pose a significant erosion or sediment discharge hazard.

These requirements are intended to avoid pollution of watercourses with nutrients, sediments or other earthen materials generated on or caused by surface runoff on or across the development area. Development at Kirkwood must comply with applicable regulations of Amador, Alpine, or El Dorado counties regarding grading permits and grading requirements of the Uniform Building Code.

#### **EROSION CONTROL PLANS**

##### **A. Intent**

It is the intent of this section that erosion control shall be properly designed, constructed, inspected, and maintained to minimize adverse environmental effects. If the Regional Water Quality Control Board requires a Surface Water Pollution Prevention Plan (SWPPP), then all of the requirements found below in Section B shall supplement that plan. Erosion control plans shall accompany building permit requests and shall be approved by the applicable county.

Enforcement of the Erosion Control Plan(s) shall be the responsibility of the appropriate staff of Alpine, Amador, or El Dorado County.

## **B. Minimum Requirements**

1. Each phase of a development project shall be planned so that only those areas of immediate concern are exposed for the shortest possible time. Erosion and sediment control shall be coordinated with the sequence of grading, development and construction operations.
2. Topsoil shall be removed and stockpiled for later use as a revegetative media on disturbed areas. Runoff from the stockpiled area shall be controlled to prevent erosion and sedimentation in receiving waters.
3. Sediment basins, retention structures and/or traps shall be used when there are no other suitable measures to control sediment.
4. Floodplains and other areas immediately adjacent to natural drainageways shall be preserved in their natural state unless specifically addressed at the time of subdivision approval.
5. Drainage and storm water runoff control systems and their components shall be designed to fit the hydrology of the area under full development and have adequate capacity to transport the additional flow from the project area.
6. Whenever possible, natural features, including vegetation, terrain, watercourses, wetlands and similar resources shall be preserved. Limits of grading shall be clearly defined and marked to prevent damage by construction equipment. Identified Wetlands and Waterways of the U.S. shall be protected to comply with requirements of the U.S. Army Corps of Engineers.
7. Standards and specifications shall be in general compliance with the Erosion and Sediment Control Guidelines for Developing Areas of the Sierras, published by the High Sierra Resource Conservation and Development Council.

## **C. Erosion Control Plan Contents**

The two main components of an Erosion Control Plan shall be a Drainage Plan and a Revegetation Plan.

Drainage Plans shall include the following:

1. Hydrology of all areas draining through the site.
2. Existing contours and existing drainage patterns.

3. Proposed contours and/or slope lines.
4. Proposed drainage paths and slope of all interceptor (cut-off) ditches - top of cut and toe of slope.
5. Erosion control devices and energy dissipaters. Runoff shall not be discharged from the site in quantities or at velocities substantially above those which occurred before grading, except into detention facilities whose design has been specifically approved by the Building Department or other appropriate County agency. The structural and hydraulic adequacy of all storm water containment or conveyance facilities shown on the Plan shall be verified by a civil engineer, and shall so attest on the plans. Sufficient calculations and supporting material to demonstrate such adequacy shall accompany the plans when submitted.
6. Size and location of sediment traps and basins and their spillway dimensions.
7. Drain inlet and outlet locations and grate sizes (net area).
8. Maintenance provisions for all erosion control systems. Specific sediment clean-out criteria shall be delineated.

Revegetation Plans shall include the following and comply with the Revegetation and Landscaping Guidelines:

1. Location of revegetation project.
2. Seed mixture and rate of application to be used.
3. Mulch and/or straw application rate, method of application and method of holding in place.
4. Type of fertilizer to be used (if appropriate), including time and rate of application.
5. Method and timing of irrigation, if irrigation is to be used for revegetation. All cut and fill slopes, as well as other disturbed areas, shall be seeded, fertilized and mulched after the first fall rains, but no later than November 1st.

Where grading has been completed between April 1 and November 1, revegetation shall occur by November 1, or at the recommendation of the Natural Resources Conservation Service. If revegetation is not feasible or cannot be expected to stabilize an erodible area with assurance, during any part of the rainy season, and the unstable area exceeds 2,500 square feet, additional erosion and sediment control measures or irrigation of planted slopes may be required as appropriate to prevent increased sediment discharge.

#### **D. Timing**

No site construction is to be performed during periods of wet weather (November 1 to April 1). Failure to implement the Erosion Control Plan by the specified date may subject the contractor to a "Stop Work Order" by the Building Official or designee of the appropriate County. In the event of a "Stop Work Order," either the contractor or county forces will fit the site with the appropriate erosion control features.

Emergency construction during wet weather shall be allowed only by written request to the Building Department of the appropriate county. Repair and maintenance of the Erosion Control Plan items shall be required during the wet season.

### **E. Costs**

All costs for erosion control shall be borne by the owner, including but not limited to, the cost of the work, engineering, inspection, clerical, materials, labor and legal costs.

## **2003 KIRKWOOD SPECIFIC PLAN APPENDIX 2 TREE ORDINANCE**

This ordinance has been established to provide procedures for tree removal and trimming for all trees within the Plan boundary. Trees on national forest lands are excluded from these guidelines; however, they are subject to USFS guidelines. These guidelines recognize the need to establish a permitting process and standards for the removal/trimming of trees at Kirkwood. It is not the intent of this ordinance to hinder development, but instead to promote harmony between land improvements and their surroundings.

This Ordinance in no way relieves the property owner and/or Licensed Timber Operator from adhering to the requirements of the California Department of Forestry and Fire Protection (CDF) for tree harvesting activities on private lands within the State of California.

### **A. DEFINITIONS**

1. **Approving Body:** The approving body shall be the Tri-County Technical Advisory Committee.
2. **DBH:** Diameter at breast height; diameter of tree measured at four and one-half feet (4 ½ ‘) above the ground on the high side of a tree.

### **B. PERMIT PROCEDURE**

1. No person, firm, corporation, public agency or utility provider shall destroy, remove, cut down, kill, damage, trim, top or prune any tree on any private property without a tree permit and authorization by the approving body.
2. The following are exempted from the above:
  - A) Trees that have been identified for removal as part of a conditional use permit, special use permit, building permit or other land use/development permits.
  - B) Trees that have been identified by a licensed arborist or forester as dead, dying or diseased. Trees that are in a hazardous condition presenting an immediate danger to health or property; trees cut in emergencies involving the lives of people and the public safety. In the event that a tree is removed without prior approval or verification from the licensed arborist or forester, a permit shall be applied for after the fact.

C) Trees that have been permitted by the California Department of Forestry and Fire Protection, either through exemption, conversion or an approved Timber Harvest Plan.

3. Any entity desiring to cut down, remove or trim/prune one or more trees shall apply for a tree permit through the approving body. The application shall be submitted by the lot owner and shall include the following:

A) Name, address and phone number of applicant and owner of record of the land on which the activity is to occur.

B) Written consent of the owner of record of the land, if other than the applicant.

C) The location of the land on which the removal/trimming is to occur.

D) Method of removal of the material and identification of measures to protect residual trees, vegetation and soils within the site

E) A plot plan drawn to scale showing accurate location, number, species, size (DBH) and approximate age of the trees to be removed/trimmed. The plan should also show the general location, characteristics and densities of the trees to be left on the site and any improvements on the property, and, all areas that are part of the active work area, including access routes, staging areas, log decks, and skidding or dragging routes.

F) A brief statement of the reasons for the activity.

G) An application fee of \$50.

H) Any additional information that may be requested by the approving body.

4. Notification of the proposed tree removal shall be provided to owners of all property within 300 feet of the parcel from which the tree(s) is proposed to be removed. Notice shall be in accordance with the standard notification procedure of the jurisdiction in which the action is proposed.

5. Prior to the issuance of a tree permit, the approving body shall ascertain whether the tree can be removed. The determination of the approving body in granting or denying a permit shall be based upon, but not limited to, the following:

A) Whether or not the preservation of the tree would unreasonably compromise the owner's development of the land.



- B) The condition of the tree with respect to disease, general health, danger of falling, etc.
  - C) The approximate age of the tree compared to its life span;
  - D) The number of existing trees in the area and the effect of the removal upon public health, safety, visual beauty and general welfare of the area;
  - E) The effect of the removal on soil erosion and stability, particularly near streams or steep slopes.
  - F) The potential for the tree to be a public nuisance or interfere with utility service;
  - G) Present and future visual screening potential;
  - H) Any other information the approving body finds pertinent to the decision including, if necessary, information obtained at a previous Tri-TAC meeting.
6. If a permit is denied, written notification shall be provided to the applicant including the reasons for denial.
7. A permit that is granted is valid for a period of 90 days unless otherwise specified. An extension of the permit time may be granted upon written request prior to the permit's expiration.
8. The approving body shall have discretion to require that a cash bond of up to \$500 be provided to the applicable county. The purpose of the bond is to insure compliance with the requirements of the approved permit. The decision of the TC-TAC in on whether or not to require a bond shall be based on the scope of the activities authorized under the permit and the potential for adverse environmental impacts if the terms of the permit are not followed.
9. The approving body may revoke the permit whenever there has been a false statement or misrepresentation in the application upon which the permit was based.

### **C. TREE REMOVAL PROVISIONS**

1. It shall be the responsibility of the person removing or trimming any tree to maintain a copy of the approved tree permit, building permit, or other permit of which the tree removal is a part, at the tree removal site.
2. Existing healthy trees, soils and native vegetation on the site shall be preserved

and protected by adequate means during any construction or felling of adjacent trees.

3. Damage to residual trees and vegetation shall be avoided. Damaged trees shall be repaired in accordance with Item #2 under the Penalties section of this Ordinance.

4. No tree shall be intentionally felled into a perennial or seasonal stream.

5. Any stump left in the ground shall be treated with approved chemicals or methods to prevent the spread of forest tree diseases. In addition, all stumps left in the ground shall be left at a height not more than 12 inches on the high side (uphill) of the stump.

6. Slash, debris and non-merchantable timber generated by the removal shall be disposed of in a manner approved by the approving body. Where material will be transported off site for disposal, documentation of disposal may be required.

7. All tree removal sites shall be winterized before the end of the construction season to prevent erosion and loss of soil from the site.

8. Activities permitted under this ordinance shall comply with all other applicable ordinances and regulations with particular attention to grading, soil erosion and sediment control requirements.

#### **D. DAMAGED OR HAZARDOUS TREES**

1. The approving body may determine, on the advice of a competent authority, that a tree is diseased, insect infested or hazardous to the public, and may declare the tree to constitute a public nuisance. Upon making such a determination, the approving body shall, by written notice, notify the owner of the land on which the tree or trees are located of the condition and his duty to remove it within a specified period. If the owner refuses or fails to do so, the approving body shall take the necessary steps to remove the nuisance and charge the owner the cost, which shall be a lien on the property.

2. All diseased and bug-infested trees shall be treated prior to removal by approved methods to prevent the spread of such disease or infestation.

3. For each damaged or hazardous tree removed, it may be required that five seedlings of the same or similar species be planted on the property. These seedlings shall be planted in locations specified by the licensed arborist or forester who determined the trees to be damaged or hazardous. The arborist or forester shall be particularly aware of the visual impact the removed trees will have on the

property and surrounding properties, and shall locate the seedlings accordingly. A minimum of sixty percent of the required seedlings shall be successfully established and thriving following two growing seasons after planting.

## **E. APPEAL PROCEDURES**

To appeal conditions or denial of a permit, the lot owner may appeal to the Planning Commission of the appropriate county (Alpine, Amador, or El Dorado). The county shall levy appropriate fees.

## **F. PENALTIES**

1. Any party that is in violation of the provisions of this ordinance shall be subject to conditions of restoration of the site or monetary penalties as follows:

A) For each tree removed without authorization, the replacement of the tree shall be based on a replacement value of \$30.00/inch at DBH for each illegally removed tree. The replacement shall consist of trees of the same or similar species. The approving body will determine the actual replacement size.

B) If a project site is not capable of supporting all the replacement trees, the violator shall pay the sum equivalent to \$30.00/inch at DBH for each illegally removed tree. All funds collected for violations shall be put into a Kirkwood Reforestation Fund. The Tri-County Technical Advisory Committee shall approve distribution of the funds.

2. Any damage to surrounding trees during the removal process shall be repaired with tree sealer and any necessary tree surgery.

Note: This Ordinance does not address the requirements for Timber Harvest Plans. THP's are required to comply with the Forest Practices Act (FPA) and California Board of Forestry rules. In most instances, THP's are required to be prepared by a Registered Professional Forester.

# **2003 KIRKWOOD SPECIFIC PLAN**

## **APPENDIX 3**

### **LANDSCAPING AND REVEGETATION ORDINANCE**

#### **LANDSCAPING AND REVEGETATION PRINCIPLES**

The following landscape and revegetation principles apply to property within the Plan boundary.

1. Minimize slope and soil disturbance during installation.
2. Minimize impacts to existing vegetation through protective fencing, etc.
3. Minimize watershed disturbance by approved erosion and siltation control practices.
4. Salvage, stockpile and re-incorporate topsoil where possible.
5. Install plant species that enhance native vegetation, providing harmonious transitions from unmodified areas.
6. Use native and/or adapted, non-invasive plant species.
7. Achieve a natural appearing landscape: randomly place plants for revegetation; plant massings or clusters for landscaping.
8. Temporary soil stabilization measures shall be maintained until vegetation is established.
9. Site specific and regional characteristics such as soil conditions, nutrients, precipitation, shading, and temperature shall be considered in the formulation of project revegetation and landscaping plans.
10. The specific planting time for revegetation purposes shall be selected to maximize plant survival.
11. All revegetation and landscaping plans shall include the design of an irrigation system to ensure success, if necessary.
12. Revegetated and landscaped areas shall be regularly maintained in a neat, clean, and healthy condition. Regular maintenance activities shall include, but may not be limited to:
  - a. Cultivation of planting beds on a regular basis
  - b. Regular pruning
  - c. Insect, disease, and pest control
  - d. Removal of leaves and pine needles
  - e. Maintenance of irrigation controllers and repair of system components as needed to maintain good working conditions
  - f. Periodic planting of new trees to maintain a healthy stock of trees at all times
13. All landscaping designs and revegetation plans for new developments shall be submitted to the appropriate county, if required, for review and approval prior to issuance of any building or grading permit.
14. Landscaped areas in the vicinity of roadways and intersections shall be designed to preserve adequate fields of vision for motorists. Landscaped areas within a public right-of-way shall be designed not to obstruct motorists' field of vision and shall meet with the approval of and be permitted by the governing regulatory agency (county or

CalTrans) prior to installation.

15. Plants with aggressive root systems shall not be permitted over or near underground utilities nor within a public right-of-way.

16. Ornamental plantings shall occur at entrances, plazas, courtyards, and in planters adjacent to buildings. Other plantings throughout the Plan boundary shall emphasize natural groupings and arrangement of vegetation.

17. The design for new plantings shall consider solar aspect and the view sheds of others so that existing patterns of sunlight and view are not obscured. New plantings that interfere with the view sheds or solar access of neighboring properties will not be permitted.

18. Plaza areas shall be landscaped with groups of climate adaptive conifers and aspens, hardy shrubs, and flowering ground covers, along with low maintenance drought-tolerant plant materials that will add interest at the pedestrian level, yet endure snow storage and provide year-round character and habitability.

19. Planter or landscaped areas shall be provided in areas where snow is likely to shed from roofs. The purpose is to keep pedestrians out of areas hit by any falling snow. Sturdy plant materials shall be used in these areas.

## **EVALUATION OF APPROPRIATENESS OF SPECIES**

The species selected for landscaping and revegetation shall have proven success in projects throughout the Lake Tahoe Basin and other sites in the Sierra Nevada having similar growing conditions.

Recommended erosion control seed mixes found herein are currently being applied by the following Tahoe Basin agencies: USFS, El Dorado County Department of Transportation (DOT), California Tahoe Conservancy, Placer County, and the City of South Lake Tahoe. Use of recommended turf species has been endorsed by such agencies as the Tahoe Regional Planning Agency (TRPA) and the Natural Resource Conservation Service (formerly Soil Conservation Service), and the USFS.

Selection criteria for native and adopted plants include the following:

1. Adapted to soils (varying from developed meadow soils to poor undeveloped granitics)
2. Adapted to local growing conditions
3. Adapted to local hydrologic conditions (drought-tolerant or tolerant of saturated meadow conditions)
4. Require minimal maintenance (irrigation, fertilization)
5. Available commercially
6. Affordable
7. Rapid erosion control
8. Easy to plant
9. Easy to establish
10. Provide screening and softening
11. Provide color throughout the season
12. Provide wildlife food

## **SITE PREPARATION**

Prior to commencing site operations, the contractor shall verify boundaries and treatments for the project. All vegetation intended to remain intact shall be protected. Any stockpiled material or useable fill shall be regraded, in accordance with Best Management Practices (BMP's). All unusable material shall be disposed of properly each working day.

The following measures shall be followed for the preparation of revegetation and landscaping sites, as needed to ensure success of the project.

### Temporary Stabilization

Temporary soil stabilization may be required if revegetation/landscaping is not possible prior to the onset of fall and winter storms. Several options are available and selection is dependent on the degree of erosion hazard (erosion potential), mobilization requirements, availability of appropriate equipment, materials and labor, longevity of treatment, time, and budget. The following applications are acceptable methods for temporary stabilization.

1. Organic Tackifier/ Organic Tackifier over blown straw. This may be applied directly over disturbed soils at 100 - 150 lbs./acre, according to erosion potential. Material shall be of an organic plant derived substance.
2. Organic Tackifier with wood fiber mulch/Organic Tackifier with wood fiber over straw. This may be applied directly over disturbed soils at 100 - 150 lbs./acre, according to erosion potential.
3. Inorganic tackifiers consisting of silicate powders and/or co-polymers may be applied directly or over straw. May require up to 48 hours to cure (must remain dry during cure period.)

### Installation Of Tree Protection

Tree protection may be desirable for larger trees (defined as 20 inches or greater diameter at breast height, D.B.H.), and those susceptible to equipment damage. Protective fencing shall be installed prior to site grading.

### Installation Of Sediment Barriers

Sediment barriers are effective in controlling run-off and finer grades of sediment. They are useful around inlet/sewage structures, ditches and stream environment zones. Barriers shall be installed prior to grading, as necessary to control sedimentation of receiving waters. Permanent barriers shall be constructed with

natural, and when practicable, indigenous earthen materials. The following materials may be used for *temporary* barriers:

1. Straw bales
2. Sandbag placement
3. Filter fencing
4. Filter, siltation berms

For a comprehensive description and discussion of sediment barrier construction techniques, consult the Water Quality Management Plan for the Lake Tahoe Region: Volume II. Handbook of BMP's, Tahoe Regional Planning Agency.

### Soil Loosening

Large, unstable rocks, stumps and debris shall be removed. Rocks less than six inches (6") in diameter shall be left in place. Rocks may be stockpiled and used at a later date. Final grade of revegetated slopes shall be non-uniform and natural in appearance. Areas designated for landscaping may require fine grading in preparation for seeding. Soil disturbance shall be minimized and limited to those areas that are intended for treatment.

1. Flat areas: Following grading, remaining compacted soils shall be ripped to a depth of four (4) to six (6) inches, with appropriate mechanized equipment or hand tools.
2. Slopes: All compacted soils on slopes greater than 2:1 shall be loosened with hand tools to a depth of not less than two (2) inches, except where prevented by bedrock or roots.

## **SEED MIXTURES AND PLANTING SPECIFICATIONS**

### Landscaping and Revegetation Seed Mixtures

#### 1. Drier Sites and Slopes (Sun)

Revegetation seed mix # 1 is recommended for drier sites, (see Table # 1). Note that revegetation seed mix #1 includes shrub, wildflower and grass seed. The mixture of different plant species will vary by site conditions and personal objectives. Native wildflower types may also be included in these areas; however, low water consuming flowers such as Lewis flax are recommended.

#### 2. Moist Meadow Site (Shade)

Revegetation seed mix #2 or restoration seed mix # 3 is recommended for moist meadow sites (See Tables #2 and #3). Sod may be acceptable when it contains a related seed-mixture. Irrigation requirements may limit the square footage of allowable sod installed, per growing season and/or project.

These seed mixtures may be customized to include other native wildflower species,

at the approval of the USFS, and the county of concern. Tables 1, 2 and 3 give the quantities and species of seed, according to acreage.

**TABLE # 1: REVEGETATION SEED MIX #1 - DRY TO MODERATE SITE**

<b>Botanical Name</b>	<b>Common Name/Variety</b>	<b>Lbs./acre</b>	<b>% Min. PLS (1)</b>
<u>Agropyron trachycaulum</u>	Slender wheatgrass "San Luis"	13	80
<u>Bromus marginatus</u>	Mountain Brome, "Bromar"	10	76
<u>Dactylis glomerata</u>	Orchardgrass, "Paiute"	5	76
<u>Festuca ovin</u> spp. <u>duriscula</u>	Hard fescue, "Durar"	6	80
<u>Poa ampla</u>	Big bluegrass, "Sherman"	6	65
<u>Linum lewisii</u>	Lewis flax, "apar"	.5	71
<u>Achillea millefolium</u>	Yarrow	.5	40
<u>Purshia tridentata</u>	Bitterbrush, "Lassen"	3	76
<u>Artemisia tridentata</u>	Sagebrush	2	30

(1) PLS - Pure Live Seed

**TABLE # 2: REVEGETATION SEED MIX #2 - MODERATE TO MOIST MEADOW SITES**

<b>Botanical Name</b>	<b>Common Name/Variety</b>	<b>Lbs./acre</b>	<b>% Min. PLS</b>
<u>Agropyron trachycaulum</u>	Slender wheatgrass "San Luis"	8	80
<u>Bromus marginatus</u>	Mtn. Brome, "Bromar"	10	76
<u>Deschampsia caespitosa</u>	Tufted hairgrass	2	76
<u>Festuca ovina</u> spp. <u>duriuscula</u>	Hard fescue, "Durar"	3	80
<u>Festuca rubra</u>	Creeping red fescue, "Pennlawn"	3	76
<u>Lotus corniculatus (1)</u>	Birdsfoot trefoil	1	83



<u>Poa pratensis</u>	Kentucky bluegrass	3	68
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(1) Must be inoculated seed.

**TABLE # 3: RESTORATION SEED MIX #3 - MODERATE TO MOIST MEADOW SITES**

<b>Botanical Name</b>	<b>Common Name/Variety</b>	<b>Lbs./acre</b>	<b>% Min. PLS</b>
<u>Deschampsia caespitosa</u>	Tufted hairgrass	3	76
<u>Festuca ovina</u> spp. <u>duriuscula</u>	Hard fescue, "Druar"	3	80
<u>Festuca rubra</u>	Creeping red fescue, "Pennlawn"	4	76
<u>Lotus corniculatus (1)</u>	Birdsfoot trefoil	1	83
<u>Poa ampla</u>	Big bluegrass, "Sherman"	3	65
<u>Linum lewisii</u>	Lewis flax, "Apar"	1	71
<u>Achillea millefolium</u>	Yarrow	1	40
<u>Eschscholzia californica</u>	California poppy	1	--
<u>Poa pratensis</u>	Kentucky bluegrass	3	68

(1) Must be inoculated seed.

**Seed Specifications**

Seed shall be delivered to the site tagged and labeled in accordance with the State Agricultural Code.

Seed shall be of a quality that has a minimum Pure Live Seed (PLS) as specified in Tables 1, 2 and 3 above. Weed seed shall not exceed 0.5% of the PLS and inert material. All seed is subject to inspection. Species and/or varieties may be substituted upon the approval of a Plant Materials Specialist.

For availability of seeds and locations of retail outlets, consult the California Department of Conservation Office of Mine Reclamation booklet entitled "Nursery Sources for California Native Plants" or contact the U.S. National Resource Conservation Service.

**Fertilizer Specifications**

Slow-release commercial fertilizer shall be composed of ammonium phosphate sulfate coated for slow release of nutrients. Fertilizer shall be Osmocote 17-7-12 or

approved equal. Fertilizer shall be uniform in composition, dry and free flowing. It shall be delivered in dry unopened bags. Fast release fertilizer (16-20-0) or approved equal) may be used for lawn installation or top dressed where needed for establishment of erosion control and restoration mixes. Care shall be taken when applying fertilizers near stream environment zones.

#### Straw Mulch Specification

Mulch shall be rice, wheat, barley straw or an acceptable alternative. All bales shall be free of mold and noxious weed seed.

#### Hydromulch Specification

Wood fiber shall be wood cellulose fiber that contains no germination or growth inhibiting factors. It shall be produced from non-recycled wood such as wood chips or similar material. The fiber shall be colored green with a non-toxic dye to assist the operator in applying the slurry evenly.

#### Tackifier Specification

Material shall be of an organic, plant-derived substance such as Reclamare 2400, Ecology M-Binder, or approved equal.

#### Straw Blanket Specification

Straw blankets shall consist of 70% wheat straw and 30% coconut, photodegradable netting on both sides and held together with cotton thread or approved equivalent.

#### Plant Container Size Specifications

1. Revegetation: Maximum container size shall be one quart. Minimum size shall be nine cubic inches in volume and eight inches in depth. Plants shall be well rooted in the containers, and the root ball should be easily removed intact.
2. Landscaping: Preferred size for flowers is maximum one gallon, for shrubs and trees, one to five gallons. Larger container sizes for some species of trees may be acceptable if they are planted in the early spring, before foliage growth has occurred.

#### Plant Health

All trees shall have straight trunks of uniform taper, larger at the bottom. Trunks shall be free of damaged bark, with all minor cuts and abrasions showing healing tissue. Foliage, roots and stems of all plants shall be of vigorous health and normal habit of growth for its species. All plants shall be free of insect infestations and diseases. Top growth shall be proportionate to bottom growth. "Leggy" or floppy growth shall be pruned back during propagation or two weeks prior to installation.

## TREES AND SHRUBS

### Screening Trees

When trees are removed and need to be replaced or visual screening is desired, trees listed on the recommended tree and shrub list (Tables 5 and 6) would be suitable, depending on moisture conditions. Use 5 - 10 gallon containerized stock. Trees should be installed in spring. Supplemental watering is required for the first 2 - 3 years following planting.

### Recommended Tree and Shrub Species

Recommended species include, but are not limited to those listed below. A variety of adapted species may also be suitable, but should be carefully selected on a site-specific basis. It is important to purchase stock that is acclimated to the Kirkwood area, i.e., purchased from a nursery located at a similar elevation and climate.

### **TABLE #4 - TREES AND SHRUBS: DRY TO MODERATE SITES**

#### **Shrubs**

Bitterbrush	<u>Purshia tridentata</u>
Buckwheat	<u>Eriogonum wrightii</u>
California fuchsia	<u>Zauschneria californica</u>
Creambush	<u>Holodiscus</u> sp.
Currant (Golden, Wax, Sierra)	<u>Ribes</u> sp.
Huckleberry Oak	<u>Quercus vaccinifolia</u>
Lupine (Brewer's or Gray's)	<u>Lupinus grayi, breweri</u>
Manzanita	<u>Arcostaphylos</u> sp.
Mtn. Pride penstemon	<u>Penstemon newberryi</u>
Mountain mohogany	<u>Cercocarpus ledifolius</u>
Rabbitbrush	<u>Chrysothamnus nauseosus</u>
Sagebrush	<u>Artemisa tridentata</u>
Serviceberry	<u>Amelanchier alnifolia</u>
Squawcarpet	<u>Ceanothus prostratus</u>
Sulphur flower	<u>Riogonum umbellatum</u>
Tobaccobrush	<u>Ceanothus velutinus</u>
Whitethorn	<u>Ceanothus cordulatus</u>
Woods rose	<u>Rosa woodsii</u>

#### **Trees**

Incense cedar	<u>Calocedrus decurrens</u>
Jeffrey pine	<u>Pinus jeffreyi</u>
Red fir	<u>Abies magnifica</u>
White fir	<u>Abies concolor</u>

## **TABLE #5 – TREES AND SHRUBS: MOIST MEADOW SITES**

### **Shrubs**

Dogwood	<u>Cornus stolonifera</u>
Elderberry	<u>Sambucus sp.</u>
Mtn. Spiraea	<u>Spiraea densiflora</u>
Ninebark	<u>Physocarpus capitatus</u>
Serviceberry	<u>Amelanchier alnifolia</u>
Sierra current	<u>Ribes nevadense</u>
Sierra gooseberry	<u>Ribes roezlii</u>
Snowberry	<u>Symphoricarpos sp.</u>
Thimbleberry	<u>Rubus parviflorus</u>
Willow	<u>Salix sp.</u>

### **Trees**

Aspen	<u>Populus tremuloides</u>
Black cottonwood	<u>Populus trichocarpa</u>
Chokecherry	<u>Prunus virginiana</u>
Lodgepole pine	<u>Pinus contorta</u>
Mtn. Alder	<u>Alnus tenuifolia</u>
Mtn. Ash	<u>Sorbus scopulina</u>
Mtn. Maple	<u>Acer glabrum</u>

## **IRRIGATION**

To ensure the success of the revegetation and landscaping efforts, it may be required to install or provide consistent irrigation to some or all of the planted material. This is especially true for trees and shrubs that may take up to three full growing seasons before they become established and are able to survive without supplemental watering. Seed mixtures, however, when planted correctly and at the right time of year, typically do not require irrigation, but is not discouraged.

Irrigation systems need not be complicated or expensive to meet the goal of aiding a plant in establishing its root system sufficiently to survive without supplemental water. Depending upon the landscape design, a simple garden hose may suffice, however, the homeowners must be dedicated and present at Kirkwood for much of the growing season to ensure success. For this reason, a drip irrigation system is recommended to aid in establishment. These systems are simple to install, minimize evaporation, and concentrate the water exactly where it is needed. Further, these systems need not be removed once the landscape has become established, thereby giving the homeowner the option of supplementing irrigation needs during seasons of low precipitation.

It must be recognized that although irrigation is not a strict requirement, most, if not

all landscaping activities in the high sierra requires irrigation for successful establishment. Success of the landscaping plan, i.e., establishment of plant materials, is required.

# **2003 KIRKWOOD SPECIFIC PLAN**

## **APPENDIX 4**

### **DESIGN ORDINANCE**

#### **PURPOSE**

The purpose of the Kirkwood Design Ordinance is to establish design standards that provide a basis for evaluating the design of proposed development in Kirkwood. The objectives of the design standards are to:

- Promote high aesthetic quality building design, which is consistent with indigenous mountain architecture.
- Promote functional building design and site planning that responds to the climatic conditions.
- Preserve and protect the beauty of the natural environment within the Kirkwood region.
- Promote protection of views, sun exposure, and privacy by proper site planning of structures.
- Reduce visual impacts of development by controlling the selection of exterior materials, colors and lighting.
- Establish and promote harmonious building design while not unreasonably restricting individuality.
- Promote energy efficient design.
- Enhance public safety and protection throughout the community through appropriate design.
- Promote long-term cost effective construction consistent with aesthetic standards.
- Conserve and enhance the value of land and improvements through an orchestrated, organized and thoughtful approach to construction and development of private, public, recreational, and circulation elements of the community.

#### **REGULATORY ENFORCEMENT**

This Design Ordinance is enforceable by the County of concern. The Tri-County

Technical Advisory Committee (Tri-TAC), Kirkwood Resort Master Owners' Association, and/or individual subdivision or association CC & R's may establish additional design regulations. The Tri-TAC's charge is to ensure conformance of development with County regulations, including the requirements of the Kirkwood Specific Plan.

California State law requires that an architect, licensed by the State of California, prepare design documents for most multi-family residential and commercial buildings. See applicable State Statutes for specific information.

## **SITE PLANNING STANDARDS**

### **Multi-family and Multi-family and Commercial Building Siting**

Building siting within The Village shall conform to the pre-established building footprints as shown in Figure 4.4, Chapter 4, of the Plan.

The design of the buildings shall generally respect the pre-established footprints, but may be adjusted up to 15% of the footprint area to allow for refinements of such design factors such as access, sun/shade, architectural composition and building massing. Such adjustments will require the specific approval of the Kirkwood Resort Master Owners Association's Design Review Board and the County of jurisdiction.

Due to heavy snowfall experienced in the area, all site plans must provide a snow removal plan or indicate areas for storage of snow which will be discharged or removed from roofs and removed from walkways, drives, and parking areas.

Areas where snow or ice may shed from roofs must be shown on the Site Plan. Methods to protect pedestrians and vehicles from injury or damage from falling snow and ice must be incorporated in the design.

Siting studies should include all property lines, and/or footprint boundaries, and shall consider such influences as shade and shadow, views, solar exposure, natural vegetation, rock outcroppings, and watercourses and drainage patterns.

Each "building footprint" identified in The Village shall be considered to be the same as if it were an existing structure, in building code and fire code analysis for new development.

All easements, services access, utility connections and components, trash storage enclosures, site grading, drainage, walkways, retaining walls, lighting and any other site features shall be clearly indicated on the Site Plan(s).

## **Single-family/Duplex Building Siting**

Tennis courts, swimming pools, and other areas of active use shall be located and designed in a manner to provide a sense of separation from adjacent properties.

All easements, services access, utility connections and components, trash storage enclosures, site grading, drainage, walkways, retaining walls, lighting and any other site features shall be clearly indicated on the Site Plan(s).

## **Topographic Survey**

A topographic survey, indicating contours at not greater than two foot intervals, adjacent road and/or plaza elevations, adjacent building locations, existing improvements, if any, and natural features, such as streams, ponds, and trees shall be prepared by a licensed land surveyor or civil engineer for every project in Kirkwood.

## **Drainage and Erosion Control**

All proposed development site plans within Kirkwood must indicate surface drainage patterns. Modifications to the existing natural drainage patterns must have specific approval of the appropriate governing agencies having jurisdiction.

Control of water discharge from impervious surfaces, in order to minimize the risk of erosion, shall be demonstrated on the improvement plans. Techniques appropriate to the condition of use, such as retention ponds, french drains, percolation fields, drip-line trenches, energy dispersement basins, or infusion technology shall be utilized prior to discharge of collected runoff into natural watercourses.

In areas where drainage swales are created to direct runoff, erosion control blankets, or an acceptable alternative, shall be used in conjunction with revegetation to slow velocity of runoff and decrease erosion.

Due to the extreme daily temperature changes experienced in the Kirkwood area as well as sharp temperature contrasts between shade and sun exposures, it is mandatory that snow melt and runoff be designed to avoid or minimize ice build-up in pedestrian and vehicular areas.

Maximum cut and fill slopes shall not exceed 2:1 without the implementation of recommendations of a Soils Engineer for slope stabilization. On cut slopes of 2:1 or greater, a mulch or tackifier is required. On 1:1 cut slopes, the recommendations of a qualified geotechnical engineer shall be followed.



## **Parking**

The design of parking facilities shall mitigate impacts of vehicular noise and headlight trespass on adjacent properties. Parking requirements are found in Section 5 of the Plan. Subdivision CC & R's may augment these requirements.

### **Disabled/Handicapped Parking Requirements**

Parking areas shall include parking spaces accessible to the disabled in the following manner:

- A. Number of Spaces, Design Standards: Parking spaces for the disabled shall be provided in compliance with Section 1129B of the California Building Code of Regulations.
- B. Reservation of Spaces Required: Disabled accessible spaces required by this Chapter shall be reserved by the property owner/tenant for use by the disabled throughout the life of the approved land use.
- C. Upgrading of Markings Required: If amendments to State law change standards for the marking, striping, and signing of disabled parking spaces, disabled accessible spaces shall be upgraded in compliance with the new State standards. Affected property owners shall complete upgrading within 60 days of being notified in writing by the Department of New State Standards.
- D. Fulfilling of Requirements: For parking lots with 10 or more spaces, disabled accessible parking spaces required by this Ordinance shall count toward fulfilling off-street parking requirements.

### **Development Standards for Off-Street Parking**

Off-street parking areas shall be designed and constructed in compliance with the following standards.

- A. Location: Off-street residential parking areas shall be provided on the subject parcel, outside of any public right-of-way. However, parking may be located on a parcel that may or may not be directly abutting the parcel served. Such off-site parking shall be subject to a non-exclusive covenant running with the land, recorded by the owner of the parking lot, guaranteeing that the required parking will be maintained for the life of the use or activity served.
- B. Access to Parking Areas and Parking Stalls: Site access driveways shall be located and designed in compliance with the following criteria:

1. Internal Maneuvering Area: Parking areas shall provide suitable maneuvering room so that vehicles enter an abutting street in a forward direction from a multi-family or multi-family + commercial development. Parking lots shall be designed to prevent access at any point other than at designated access drives provided such a design does not restrict snow removal.
  2. Parking Space Location: No parking space shall be located so that a vehicle will maneuver within 20 feet of a vehicular entrance to the site, measured from the property line, except for single-family dwellings and duplexes.
  3. Vertical Clearance: A minimum unobstructed clearance height of 10' 4" shall be maintained above areas accessible to vehicles, unless accessibility is only required for private automobiles, in which case a minimum unobstructed clearance height of 8' shall be maintained.
- C. Adjacent Site Access: Non-residential developments should be designed and constructed to provide shared vehicle and pedestrian access to adjacent non-residential properties for convenience, safety and efficient circulation. The owners of the abutting properties, as approved by the county of concern, guaranteeing the continued availability of the shared access between the properties, shall record a joint access agreement running with the land.
- D. Parking Space and Lot Dimensions.
1. Minimum parking dimensions for covered and uncovered parking spaces are indicated in Table F.1.

**TABLE F.1  
MINIMUM PARKING STALL DIMENSIONS**

<b>Standard Stall</b>		<b>Compact Stall</b>	
<u>Length</u>	<u>Width</u>	<u>Length</u>	<u>Width</u>
20 feet; 18 feet with bumper overhang	9 feet	16 feet; 14 feet with bumper overhang	8 feet

**Tandem Parking Stalls**

Eighty percent (80%) of the parking spaces within a covered parking garage shall be

regular, single-loaded (non-tandem spaces).

Ten percent (10%) of this 80% can be compact. The remaining 20% of the parking spaces may be tandem (double loaded, valet style). Fifty percent (50%) of this 20% may be compact.

Summary: 80% of the spaces are single loaded (10% compact), 20% may be tandem (50% compact).

**TABLE F.2  
MINIMUM PARKING STALL AND PARKING LOT DIMENSIONS**

**One-Way Traffic and Single-Loaded Aisles**

Parking Angle (Degrees)	Stall Depth, with Bumper Overhang	Aisle Width (Travel Lane)	Total Bay Depth
30	17 feet	13 feet	30 feet
45	19 feet	13 feet	32 feet
60	20 feet	16 feet	36 feet
75	20 feet	20 feet	40 feet
90	20 feet	22 feet	42 feet

**One-Way Traffic and Double-Loaded Aisles**

Parking Angle (Degrees)	Stall Depth, with Bumper Overhang	Aisle Width (Travel Lane)	Total Bay Depth
30	18 feet	13 feet	49 feet
45	19 feet	13 feet	51 feet
60	20 feet	16 feet	56 feet
75	20 feet	20 feet	60 feet
90	20 feet	22 feet	62 feet

## Two-Way Traffic and Double-Loaded Aisles

Parking Angle (Degrees)	Stall Depth, with Bumper Overhang	Aisle Width (Travel Lane)	Total Bay Depth
30	18 feet	22 feet	58 feet
45	19 feet	22 feet	58 feet
60	20 feet	22 feet	62 feet
75	20 feet	22 feet	62 feet
90	20 feet	22 feet	62 feet

1. Bumper Overhang Areas: A maximum of two feet of the parking stall depth may be landscaped with low-growing, hearty materials in lieu of paving, allowing a two-foot bumper overhang while maintaining the required parking dimensions. A two-foot bumper overhang is also allowed over an adjacent sidewalk if a minimum clear distance of four feet is maintained on the sidewalk at all times.

2. Parallel parking spaces: Parallel parking spaces shall have a minimum width of 8 feet and a minimum length of 22 feet. Aisle widths shall be 12 feet for one-way traffic and 22 feet for two-way traffic.

### E. Directional Arrows and Signs:

1. In parking facilities containing 40 or more parking spaces, aisles, approach lanes and maneuvering areas shall be clearly marked with directional arrows and lines to ensure the safe and efficient flow of vehicles.

2. Tri-TAC may require the installation of the traffic signs in addition to directional arrows to ensure the safe and efficient flow of vehicles in a parking facility.

3. The exit from a parking area that provides parking for 40 or more vehicles shall be clearly marked with a vehicle "STOP" sign.

### F. Grades of Entrances, Spaces, and Driveways:

1. Entrance – Four or Fewer Dwellings: Driveways shall have a maximum grade of 10 percent measured along the driveway centerline, for a distance of not less than 20 feet from the ultimate right-of-way line of the

street or alley.

2. Entrance – Five or More Dwellings and All Other Uses: Driveways shall have a maximum grade of 8 percent, measured along the driveway centerline, for a distance of not less than 20 feet from the ultimate right-of-way line of the street or alley.
  3. Parking Spaces: Parking spaces and abutting access aisles shall have a maximum grade of seven percent, measured in any direction.
  4. Interior Driveways: Ramps or driveways for four or less dwelling units (in a single building, NOT on an individual site), within the interior of a parking area (beyond 20 feet from ultimate right-of-way line) shall have a maximum grade of 10 percent. Ramps or driveways for five or more dwelling units and all other uses within the interior of a parking area shall have a maximum grade of 8 percent.
  5. Vertical Clearance: Covered parking spaces shall have a vertical clearance of at least eight feet above the parking lot surface for all uses except where emergency access is required.
- G. Landscaping: Landscaping around surface parking lots shall be provided in compliance with the requirements of Landscape and Revegetation Guidelines in effect at the time.
- H. Lighting: With the exception of single-family residences, parking areas which are designated for overnight parking shall have lighting capable of providing adequate illumination for security and safety. Lighting standards shall be energy-efficient and in scale with the height and use of the on-site structure(s). Any illumination, including security lighting, shall be directed downward, away from adjacent properties and public rights-of-way in compliance with exterior lighting requirements herein.
- I. Maintenance of Parking Facilities: Parking facilities shall be properly maintained at all times. Surface materials shall be free of holes and cracks. Gravel, asphalt grindings or other porous materials may be used in lieu of asphalt or concrete. Painted markings (e.g., parking space striping, pedestrian crossings, directional markings, loading area identification, fire aisles, etc.) shall be maintained to be clearly visible to motorists and pedestrians. Landscaped areas shall be kept free of litter and shall be maintained to ensure planting material.
- J. Single-family Residential Garages --- Minimum Size: Garages shall be completely enclosed on four sides and have a solid roof. The minimum interior dimensions shall be 10 feet in width and 20 feet in length for a single-

car garage and 20 feet in width for a two-car garage.

- K. Residential Guest Parking: Guest parking in residential zoning districts shall be so designated and restricted, with appropriate signage/pavement markings, for the exclusive use of the guests.
- L. Striping and Identification: Except for Day Skier Parking lots, parking spaces shall be clearly outlined with four-inch wide lines painted on the surface of the parking facility. Compact and valet spaces shall be clearly identified for compact vehicle and valet usage respectively. Spaces for the disabled shall be striped and marked according to the applicable State standards. All parking lot striping shall be permanently maintained in good condition.
- M. Surfacing: Parking spaces and maneuvering areas for all vehicles (including motorcycles) shall be paved and permanently maintained with asphalt, concrete or other all-weather surfacing, such as asphalt grindings or gravel, approved by the appropriate county.
- N. Tandem Parking: Tandem parking may be allowed to satisfy off-street parking requirements for single-family dwellings and guest/commercial accommodations with a parking management plan.

**Driveways and Site Access:**

Driveways providing site access shall be from an improved street, alley or other right-of-way, and shall be designed, constructed, and maintained as follows:

- A. Number of Driveways: One driveway shall be allowed for each parcel two acres or less in size, unless the TRI-TAC determines that more than one driveway is required to accommodate traffic volumes on specific projects. Additional driveways shall not be allowed if it is determined to be detrimental to traffic flow on the adjacent street(s). Whenever a property has access to more than one street, access shall be generally limited to the lowest volume street where the impact of a new access will be minimized.
- B. Driveway Spacing: Driveways shall be separated along the street frontage as follows:
  - 1. Single Family and Duplex Residential Development: Driveways shall be separated by at least six feet, unless a shared, single driveway is approved by the TRI-TAC. The six-foot separation does not include the transition or wing sections on each side of the driveway.
  - 2. Multi-Family and Non-Residential Development: Where two or more driveways serve the same or adjacent multi-family or non-residential

development, the centerline of the driveways shall be separated by a minimum of 50 feet. Exceptions to this standard shall be subject to the approval of the Department of Public Works of the county of concern.

C. Driveway Width and Length:

1. Single-Family Dwellings:

a. Driveways providing access to garages or parking areas that are set back more than 20 feet from the property line shall have a minimum width of 12 feet and a maximum width of 14 feet at the street property line.

b. Driveways providing access to garages or parking areas that are set back 20 feet or less from the street right-of-way shall not exceed the width of the garage door opening plus 2 feet, or, for parking lots, the width of three parking stalls.

c. When a garage is perpendicular (90 degrees) to the driveway, an adequate unobstructed back-out area shall be provided.

d. All newly constructed residences shall be served by a driveway constructed to within at least 50 feet of each dwelling unit.

e. Driveways exceeding 150 feet, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800 feet, turnouts shall be provided no more than 400 feet apart.

f. Dead-end driveways in excess of 400 feet in length shall be provided with a turnaround at the closed end. Grades on turnarounds shall be no more than 8 percent. The turnaround shall be built at the edge of the fire lane within 50 feet of the dwelling unit but no closer than 10 feet.

g. Driveway curves shall be constructed with a curvature radius of not less than 50 feet, measured at centerline. For all curve radii less than 100 feet, an additional four feet of surfacing width shall be provided.

h. The driveway shall be capable of supporting a 40,000-pound legally loaded vehicle or be provided with a minimum of four inches of compacted Class II aggregate base.

i. The Kirkwood Meadows Fire Protection District, in compliance

with the District's ordinances and policies, may modify the above standards.

2. Multi-Family Projects:
    - a. Driveways for multi-family uses with four or less units shall have a minimum paved width of 18 feet.
    - b. Driveways for multi-family uses with more than four units shall have a minimum paved width of 20 feet.
  3. Non-Residential Uses: Driveways for non-residential uses shall have a minimum paved width of 12 feet for one-way driveways and 24 feet for two-way driveways. The maximum driveway width shall be 30 feet subject to approval of the TRI-TAC and the Department of Public Works of the county of concern.
  4. Reduced Width: TRI-TAC may reduce the driveway width for multi-family residential and non-residential uses to 18 feet, based on recommendations from the Department of Public Works of the county of concern that the driveway will be subject to low traffic volumes only.
- D. Clearance from Obstruction: The nearest edge of a driveway curb cut shall be at least three feet from the nearest property line, the centerline of a fire hydrant, utility pole, traffic signal, light standards, or other similar facilities. Planted trees shall be a minimum of 10 feet from the driveway access, measured at the trunk. Driveways shall have an overhead clearance of 14 feet in height except within a parking structure, which may be reduced to seven feet, six inches.
- E. Traffic Safety Sight Area: Owners are encouraged to maintain structures, landscaping, and snow storage areas at a height not to exceed 30 inches within a traffic safety sight area where possible.

### **Service Areas**

Each building shall have a service and trash area, which are screened from public view. All containers shall be inaccessible to animals.

### **Exterior Lighting Standards**

The basic guideline for exterior lighting is that the lighting shall be subdued, understated, indirect, and does not contribute to regional light pollution. As many areas as possible should be treated in a rural, unlit fashion to keep the night landscape as dark as possible. A professional engineer, lighting consultant, or



architect should design all exterior lighting for public spaces.

Area lighting shall have concealed or obscured light sources and shall be white or a natural color.

In general, lighting within commercial areas should originate from within the shop windows where possible, and not be dependent on freestanding exterior light fixtures. Direct light sources should be used only for pedestrian safety, accent of architecture, landscape or artwork, or for the definition of entries and walkways. Flashing, blinking, or moving lights shall not be used. Gas lamps are an acceptable form of exterior lighting and signage illumination in lieu of an electric source.

A. Design Criteria:

1. External light fixtures, poles, and their foundations should be simple in design and compatible with and complementary to the style of surrounding development. Simple and functional designs are considered appropriate in most situations. Lighting standards should be of a scale that is compatible with their surroundings. Pedestrian-scale lighting (8 to 12 feet high) should be installed in areas where foot traffic is prevalent. Lighting fixtures for parking lots and private roadways should not be installed at a height greater than 16 feet, as measured to the base of illumination, that is, the light fixture.
2. Color-corrected lamps of appropriate intensity should be used in exterior lighting. High-efficiency lamps that alter the colors of objects at night are discouraged. Incandescent, fluorescent, color-corrected sodium vapor, and mercury lamps should be used because they provide light with an appropriate color spectrum.
3. Lighting intensity should be the minimum required to serve the tasks for which the fixtures are intended.
4. Exterior lighting should be considerate of both the neighbors and the community as a whole. Each new lighting scheme should actively strive to reduce negative light impacts. Light trespass is the ability to see the source of the light at a parcel's property line. If a light from a project casts a shadow at the property line, the light is considered to be trespassing. Lighting should be kept within the project boundaries. Fixtures like the "shoe box" design are capable of providing accurate light patterns and can often be used for lighting parking lots without light spilling onto the neighboring property.

B. Exterior Lighting: Exterior lighting shall be:

1. Architecturally integrated with the character of the structure(s);
2. Directed downward and away from adjoining properties and public rights-of-way; and
3. Energy-efficient, and fully shielded or recessed so that direct glare and reflections are confined to the maximum extent feasible, within the boundaries of the subject parcel.

C. Permanent Lighting: Permanently installed lighting shall not blink, flash, or be of unusually high intensity or brightness. Lighting fixtures shall be appropriate in height, intensity, and scale to the use they are serving.

D. Shielding Requirements: Each outdoor lighting fixture shall be designed and installed so that no light rays will be emitted by the fixture at angles above a horizontal plane passing through the lowest point of the fixture. Exemptions to this shielding requirement include the following:

1. All neon outdoor lighting fixtures;
2. All outdoor lighting fixtures on facilities or lands controlled, operated, owned, or protected by public entities or public agencies, or the ski resort (mountain operations);
3. Emergency lighting operated by a public utility during the course of repairing or replacing damaged facilities;
4. Emergency lighting and fixtures necessary to conduct rescue operations, provide emergency medical treatment, or address any other emergency situations;
5. Fixtures producing light directly by the combustion of fossil fuels (e.g., gas lamps or kerosene lanterns);
6. Internally illuminated signs;
7. Lighting fixtures located at the entrance or exit of structures and pedestrian level lighting having an intensity not exceeding 75 watts; and
8. Night skiing, tubing and recreation parks, and snow grooming equipment.

E. Interior Lighting: Interior lighting shall not cause excessive exterior glare.

## **Landscaping and Plant Materials**

Please refer to the requirements of Landscape and Revegetation Guidelines.

### **Snow Storage Standards**

All development and proposed land uses that are planned with off-street parking and circulation areas, except individual single-family dwellings and duplexes, but including the entire single-family subdivision, shall be designed and constructed to provide snow storage areas in compliance with the minimum standards of this Section, and any further requirements of the county of concern.

A. Application Content Requirements: All land use permit applications subject to this Section shall include identification of required snow storage areas on the required site plan.

B. Minimum Storage Area Required: Unenclosed parking areas, including circulation drives and aisles, shall provide an area for snow storage equal to at least 30 percent of the total parking and driveway area. The reviewing authority may reduce the area of snow storage based on a long-term snow hauling plan that demonstrates the property owner has sufficient off-site area to store excess snow from the property and an acceptable method to transport the snow from the property to the off-site storage area.

C. Location: Snow storage areas:

1. Shall be located contiguous to the sides or rear of parking areas, away from the primary street frontage, if possible.
2. Shall be located to maximize solar exposure to the greatest extent feasible. Areas shaded by structures or vegetation shall be avoided.
3. Shall be located so that snow moving equipment is not required to enter the public streets to move snow to the storage area, except when snow is to be hauled off-site.
4. May be located within parking areas but may not be counted towards meeting parking and snow storage requirements for the use (minimum parking standards must be maintained).
5. May be located within required landscaping areas but the areas shall be planted with landscaping tolerant of snow storage or be native vegetation.
6. Shall provide an adequate area adjacent to roadways designated to

facilitate storage of snow removed from roadways to allow access of emergency vehicles.

7. Under no circumstances shall open drainage ways be used for snow storage.

D. Minimum Dimensions: The minimum dimension of a snow storage area shall be 20 feet in any direction.

E. Drainage: Snow storage areas shall be designed to provide adequate drainage to prevent ponding and the formation of ice, especially within pedestrian areas and driveways. Drainage from snow storage areas shall be directed towards on-site drainage retention/treatment facilities.

## **ARCHITECTURAL STANDARDS**

### **Maximum Height Limitations**

#### **Single-family/Duplex**

Maximum height restrictions for Single-family/duplex residential zones (SR) are 35 feet from the base elevation to the highest point of the structure. The base elevation shall be taken as the average of the ground elevations at each of the four major house corners. Should a structure have more than four prominent corners, a rule of reason shall be employed to determine the base elevation. For lots with building envelopes that have a slope which exceeds 25% (building envelope only, not the entire lot), the maximum height shall be set at 40 feet from the base elevation. Should a proposed home be located within an existing subdivision that has no established building envelopes (i.e., Kirkwood Meadows West), the average slope shall be calculated for the area that would be built upon, i.e., the building site and not the entire lot.

#### **Multi-family**

For Multi-family residential and Multi-family and Commercial zones (MF, MF-C) (no proposed plaza deck), the maximum height restriction is 65 feet from the base elevation to the highest point of the structure.

For Multi-family and Commercial (MF-C) buildings located in either the Kirkwood Village (east and west) or in the Timber Creek Village, wherein there is a proposed plaza deck, the maximum height restriction is 55 feet from the plaza deck to the highest point of the structure.

Amador County has set special height limits for multifamily and multifamily-commercial structures at the Timber Creek Lodge area and at the Ski In Ski Out

North area. Amador set maximum height of 45 feet above a Plaza deck and 55 feet above grade level if there is no deck. Multi family structures in Ski In Ski Out North shall have a maximum height of 45 feet if built in the area of the current Chair 9 parking area.

The Maximum Height Limit for Multi-family residential and Multi-family and Commercial zones shall be the maximum possible distance from the base elevation to the highest point of a structure, except that:

- Chimneys, flues, vents or similar structures may extend up to ten feet above the specified Maximum Height Limit.
- Spires, bell towers and like architectural features may extend over the specified height limit, however, a special use permit shall be required by Tri-TAC and approved by the appropriate County.

Any deviation from these height restrictions would require a variance from the appropriate County. Variance applications shall require review and recommendation from the Tri-County Technical Advisory Committee. Separate review and approval may be required pursuant to C.C.& R.'s and other architectural review and control guidelines.

## **Color**

Color shall support the overall design theme for Kirkwood. From a distance, improvements within Kirkwood shall blend with the natural landscape.

## **Fireplaces**

Fireplaces, wood burning stoves and other solid fuel burners shall be allowed within only those subdivisions of Kirkwood which have county/state approvals which allow the burning of wood, otherwise gas or electric services must be utilized.

## **Signs**

All signs shall conform to the Sign Ordinance in effect at the time.

## **CONSTRUCTION REGULATIONS**

### **Permits**

Construction shall not commence until project approval has been granted by Tri-TAC, and the Building Department or the appropriate agency of the applicable county has issued a building permit. Once commenced, construction should

proceed in an expeditious and continuous manner, until the work is complete, except when weather conditions preclude work from progressing.

### **Noise and Hours**

Construction activities shall be limited to the hours between 7:00 a.m. and 7:00 p.m., unless extended hours of operation are granted from Tri-TAC and the county of jurisdiction. The owner/owner's agent shall take necessary precautions and notify adjacent property owners, businesses, local traffic, pedestrians, etc. prior to any blasting activities, if necessary.

### **Construction Staging Areas**

All construction staging, including but not limited to, material storage, equipment storage, construction trailers, etc., must take place within a designated area within the perimeter of the project site unless an alternate staging area is approved by adjacent property owners and or the appropriate county agency, (as applicable). The owner/contractor shall present to the reviewing entity a layout of the staging area which will include, but is not limited to the following: material and equipment storage area, job office location, access to and from site during construction, etc. The staging area shall be fenced or appropriately identified and maintained by the owner/contractor for as long as the area is in use.

### **Parking**

The owner or developer of a proposed project shall submit to Tri-TAC for approval, as part of the project application, a parking plan indicating the location of parking for use by construction workers.

### **Pedestrian Protection**

Construction projects adjacent to pedestrian areas, including but not limited to walkways, plazas, restaurants, etc., shall provide fencing to direct pedestrians away from potential hazards related to the construction site. Pedestrian protection adjacent to the site shall be the responsibility of the owner/contractor. When construction work occurs adjacent to or within the roadways, appropriate signage and flag persons must be provided for the public's safe passage.

### **Trash Containment and Removal**

Trash and construction debris shall be kept in containers of a type that has been approved by Tri-TAC and/or the county. Containers shall be emptied on a regular basis to insure sufficient room to store trash at the end of each working day. It shall be the responsibility of the general contractor to remove and dispose of, at an authorized county landfill, any excess trash and construction debris. Storage of

trash and construction debris outside of an approved container shall not be permitted under any circumstances.

### **Tree and Property Protection**

Construction practices must include extreme care during grading and excavation to avoid damage to existing trees, shrubs and their root structures. Trees to be removed for excavation of the driveway, building, etc. shall be identified with surveyor's ribbon, and the remaining trees are to be protected by fencing. All trees to be removed shall also be identified on the site plan. Excavation shall not commence until this process has been completed.

All construction equipment and activity, including stockpiling of materials and topsoil, must be kept within the perimeter of the lot unless other arrangements with adjacent property owners have been made. Any adjacent property, including roads or common grounds damaged during construction shall be promptly restored and/or revegetated. If such restoration is not completed promptly, the reviewing entity will contract for the improvements, and said cost will become a lien upon the property until reimbursement of such costs has been made by the property owner.

### **Temporary Structures**

An appropriate job office or trailer may be located on the site during the construction period in the approved designated staging area.

### **Erosion Control**

All disturbed areas of the site shall be protected from erosion during and after the construction period. An erosion control plan will be presented as part of the site plan. Erosion control measures must be taken during construction to insure soil stabilization, sediment control, and timely revegetation prior to the onset of winter and final completion of construction. The owner shall require the contractor to implement all erosion control techniques based on the approved erosion control site plan.

It is the responsibility of the homeowner to comply with the requirements of the Erosion Control Ordinance.

### **DEFINITIONS**

Design Ordinance - Standards incorporated into the Kirkwood Specific Plan and adopted by the Counties of Alpine, Amador and El Dorado. The Design Ordinance and individual CC&Rs may impose different conditions upon various Lots or Parcels in light of topography, visibility or other factors. The Design Ordinance shall create the template for the standards and procedures for architectural review and

guidelines for architectural design, placement of buildings, color schemes, exterior finishes and materials, landscaping, drainage, lighting, tree removal, fences and similar features specific to a particular area or association. The Design Ordinance established by individual Associations shall not be in derogation of the minimum standards established by this Plan.

Duplex – a multi-family residence consisting of two dwelling units, attached on one lot. There is no requirement for the size relation of the two units to each other, that is, each unit may be of equal or differing size, provided that the entire structure conforms to the prescribed building envelope, land use classification, and subdivision restrictions, inclusive of any square footage requirements.

Fence - fences, walls and other similar barriers, whether of living or inert material.

Hotel Unit - a one or two room space, or one room plus a loft, together with a separate bath, and *without full kitchen facilities*, used primarily for short-term accommodations.

Improvement - any change from natural grade, all structures, buildings, landscaping and appurtenances thereto of every type and kind. Including but not limited to buildings, outbuildings, walkways, trails, the paint on all exterior surfaces, waterways, sprinkler pipes, irrigation systems, storm drainage systems, garages, swimming pools, hot tubs, spas, tennis courts and other recreational facilities. Roads, driveways, parking areas, fences, screening walls, retaining walls, stairs, decks, hedges, windbreaks, plantings, planted trees and shrubs, fire breaks, poles, signs, exterior air conditioning and water softener fixtures or equipment, and solar equipment, or interior modifications requiring a building permit.

Kirkwood – That place commonly referred to as Kirkwood Ski Resort, inclusive of the 732.5 acres of private land located in the Counties of Alpine, Amador and El Dorado.

Kirkwood Specific Plan – The document that plans the residential, commercial and infrastructural development of the private lands of Kirkwood, and all the conditions, exclusions, procedures, etc., found therein.

Kirkwood Plant List – known species types that are capable of enduring the long winters at Kirkwood. This list can be found within Appendix 3–Landscape and Revegetation Guidelines, of the Specific Plan.

Lot - (1) any separate plot of real property shown on any Final Map for a residential or commercial subdivision other than a Condominium project, or shown on or described by any Final, recorded Parcel Map, lot-line adjustment, resubdivision, or certificate of compliance, or the like, for a residential subdivision, which separate plot is an area, a portion of which is intended to be improved with one single-family or multi-plex dwelling; and (2) any condominium unit (residential or commercial) shown



upon any recorded condominium plan. The term lot shall not include Common Area, subassociation common area, or a separate plot to be dedicated.

Maximum Height Limit - shall be the maximum possible distance from the defined base elevation, average lowest final grade or the plaza deck, to the highest point of a structure.

Member - a person entitled to membership in an Owners Association, whether it is a sub association or member of the Kirkwood Resort Master Owners Association.

Mountain Area - the existing Kirkwood Ski Mountain and as it may be expanded (by whatever name it may be known) located in part on land owned by the Mountain Operator, and in part on public lands administered by the U.S Department of Agriculture, United States Forest Service.

Owner - the Person or Persons, holding a fee simple interest of record to a lot or parcel, excluding those persons holding title as security for the performance of an obligation other than sellers under executory contracts of sale.

Parcel - Any separate plot of land, which is shown on any recorded subdivision map, or shown on or described by a Final Map, recorded parcel map, lot-line adjustment, resubdivision or certificate of compliance, or the like, which is not a lot, common area, subassociation common area or a separate lot to be dedicated.

Person - The term Person shall mean an individual, a corporation, a partnership, a limited liability company or limited liability partnership, an association, a trust or any other entity or organization, including a government or political subdivision or agency or instrumentality thereof.

Record, Filed, Recorded, Recordation - with respect to any document, the recordation or filing of such document with the Recorder's Office in the appropriate County.

Residential Subdivision - any development within Kirkwood consisting of detached single-family homes, any residential Condominium Project, any duplex, triplex, four-plex, etc., cluster home, townhouse, or any other type of residential subdivision or residential "planned development" (as the term "planned development" is used under California Law). The term Residential Subdivision does not include an apartment project, which is neither a Condominium Project nor divided into a separate Lot for each dwelling unit.

Residential Unit - a single dwelling unit in a Residential Subdivision, such as a single-family house or a dwelling unit in a manor home or townhouse or duplex or Condominium Project. The term Residential Unit shall not include a dwelling unit in an apartment project that is neither a Condominium Project nor divided into a

separate Lot for each dwelling unit.

Single Family Lot - designates a lot which may not be further subdivided and which may be used for the construction of only one Dwelling Unit, unless such lot is designated as a duplex lot, by which ever mechanism the appropriate County deems proper, then there would be two residential units associated with the lot.

Sub Associations - for some portions of Kirkwood (particularly a portion developed as a planned unit development or Condominium Project) a separate owners' association may have been formed to administer and maintain aesthetic, recreational or other Improvements that are peculiar to that particular portion. Formation will be by separate articles of incorporation. Each such association is referred to herein as a Sub Association. The word "Sub Association" refers to areas of Kirkwood with respect to which membership in a Sub Association is appurtenant.

# **2003 KIRKWOOD SPECIFIC PLAN**

## **APPENDIX 5**

### **EMPLOYEE HOUSING ORDINANCE**

This ordinance implements the provisions of the Kirkwood Specific Plan concerning the development of employee housing at Kirkwood.

#### **Section 1    Purpose and Intent**

This ordinance is intended to help provide for the housing needs of employees who work within Kirkwood Resort area. Thus, the ordinance seeks to achieve the following broad objectives:

- A. Provide a diversity of employee housing opportunities within the Kirkwood Resort area ranging from dormitory/hostel accommodations to more traditional residential units.
- B. Provide quality employee housing within the Kirkwood Resort area that is well planned and integrated into the community and neighborhood where it is located.
- C. Insure that employee housing provided pursuant to these regulations is occupied by persons who are employed by, or in work in direct support of, businesses or agencies whose primary purpose is to provide services within the Kirkwood Resort area
- D. Allow for the option of providing employee housing in nearby communities where transportation to and from Kirkwood is provided to the employees.

#### **Section 2    Requirement to Provide Employee Housing**

- A. Overall Resort Requirement: Employee housing for 30 percent of the average peak season full time equivalent (FTE) employees within the Kirkwood Resort shall be provided as specified in this ordinance.
- B. Project Level Requirement: The project level requirement is intended to insure that overall resort employee housing requirement is satisfied as development of the resort proceeds over time. The project level requirement may be adjusted over time through future revisions to this ordinance which are based on the annual report and audit that evaluates progress toward meeting the overall resort requirement.
  - 1. Multi family projects: Each multi family project shall be required to provide one (1) employee housing unit for every ten (10) guest bedrooms within

the multi family project. For the purposes of this section only, guest bedroom shall include loft areas intended for use as sleeping quarters.

2. Single family and duplex projects: Each single family and/or duplex project shall be required to provide one (1) employee unit for every three potential residential units contained within the project.
3. Commercial projects: Each commercial project shall be required to provide one (1) employee housing unit for every 3000 square feet of gross leasable commercial floor area contained within the project.
4. Mixed use projects: Each mixed use project shall be required to provide employee housing units based on the sum of the requirements for the residential and commercial components of the project.

### **Section 3 Employee Housing Unit Credits**

Credit for providing the required employee housing shall be granted for on site and off site housing as stated below.

- A. On Site Employee Housing: Credit for providing on site employee housing shall be granted as follows:
  1. Existing employee housing: Employee housing units in existence as of the date of adoption of this ordinance and listed in Exhibit E-1.
  2. New employee housing (use restricted): Employee housing unit credit for employee housing units restricted pursuant to Section 4A and located within the Kirkwood Resort shall be granted as follows:
    - a. One (1) credit per bedroom in single family, duplex and multi family dwelling units containing two or more bedrooms with a minimum of 300 square feet of living space per bedroom, including each bedroom's proportional share of common living areas within the dwelling unit.
    - b. One (1) credit per studio or one-bedroom units containing a minimum of 375 square feet.
    - c. One (1) credit per bedroom in dormitory accommodations with a minimum size of 150 square feet per bedroom.
    - d. One (1) credit per bedroom in hostel or shared suite style accommodations with minimum size of 200 square feet of living space per bedroom, including each bedroom's proportional share of the common living areas associated with the bedroom.
  3. Ownership Units (not use restricted): A maximum of twenty employee housing unit credits shall be granted for non deed restricted units located

within the Kirkwood resort area that are owned and occupied by qualified employees. Credit shall be granted according to the same provisions as allowed for new employee housing in subsection 2 above. Proof of employment shall be required to verify that occupancy complies with this section.

- B. Off site employee housing: Up to twenty-five percent (25%) of the overall employee housing requirement may be met by housing provided outside of the Kirkwood Resort area as follows:
1. Off site units must be master-leased or otherwise reserved for the exclusive use of peak season employees.
  2. Kirkwood Mountain Resort must provide or arrange for regular daily shuttle service to and from the Kirkwood Resort area for all employees for which it will receive credit for providing housing.
  3. Credit shall be granted on the same basis as new employee housing units specified in Section 3A2 above except that off site units do not have to be deed restricted.
  4. Off site employee housing within the Tahoe Basin must be new construction of which Kirkwood Mountain Resort is either the primary developer or a substantial development partner that results in additional housing stock within the Tahoe Basin. Within the Tahoe Basin, leasing, remodeling, retrofitting or otherwise using existing housing stock will not result in credit toward employee housing pursuant to this ordinance.

#### **Section 4 Requirement to Restrict Employee Housing Units**

- A. On site employee units: All use restricted on site employee units shall be restricted for use as employee housing through a Declaration of Employee Housing Covenants and Restrictions ("Declaration") in the form as set forth in Exhibit E-2. The Declaration shall be signed by the owner of the unit and shall be recorded in the Official Records of the Recorder for the county in which the unit is located. Each deed, deed of trust or other conveyance of interest in the restricted unit shall contain a reference to the recorded Declaration. Such reference shall clearly state that the unit is restricted for use as an employee housing unit during the peak season. Occupancy of on-site restricted units is limited to employees and permitted family members.
- B. Off site employee units: All off site employee units shall be restricted for use as employee housing during the peak season through a lease provision or other equivalent restriction acceptable to the Tri County Technical Advisory Committee. The lease or restriction shall clearly state that the unit is reserved

and restricted for use by employees within the Kirkwood Resort area during the peak season and their permitted family members.

## **Section 5    Periodic Reporting and Audits**

On or before September 30 of each year, Kirkwood Mountain Resort shall provide a report to the Tri County Technical Advisory Committee containing the following information:

- A. The average peak season employment for the preceding peak season, including a break down of full time and part time positions as defined in this ordinance.
- B. The projected average peak season employment for the upcoming peak season.
- C. The number of employees housed in employee housing units during the preceding peak season.
- D. An inventory of all on site employee units and off site employee units utilized as employee housing units during the preceding peak season, including number of bedrooms and square feet of living space per unit.
- E. An inventory of all on site and off site employee units expected to be utilized as employee housing units during the upcoming peak season, including number of bedrooms and square feet of living space per unit [information on off site units to be provided to the extent it is available at the time the report is required].
- F. Vacancy rates of on site employee units during the three preceding peak seasons.
- G. An inventory of current development status within the Specific Plan area to include the total number of guest rooms and commercial space by project, and the total number of single family/duplex units.

The purpose of periodic reporting and auditing is to insure that the required employee housing is being provided in compliance with the specific requirements of this ordinance, and to review longer term trends and market conditions with respect to housing for the Kirkwood Resort area employees. Based on review of the periodic reports and audits, the Tri County Technical Advisory Committee may make recommendations for modification of the requirements of this ordinance. However, the requirements in this ordinance can only be changed by amendment of this ordinance.

## **Section 6   Enforcement**

If, based on the annual report or other credible evidence provided to the Tri County Technical Advisory Committee, it is determined that the provisions of this ordinance have not been satisfied, or that use of employee housing does not comply with the restrictions of this ordinance, one or more of the following actions may be taken:

- A.     Failure to provide the minimum number of employee units: If the annual report shows that less than 90 percent of the required number of employee housing units was provided during the preceding ski season, the counties with jurisdiction may withhold building permits for new construction within the Kirkwood Specific Plan area. The withholding of building permits pursuant to this section shall be temporary and shall only be in place until Kirkwood Mountain Resort provides measures acceptable to the counties with jurisdiction that will result in 100 percent of the required employee housing being provided during the upcoming ski season.
  
- B.     Non compliance with occupancy restrictions: If credible evidence is provided indicating that the provisions of an occupancy restriction for an employee housing unit have been violated, the agency with jurisdiction shall follow the enforcement provisions of the specific restriction. Continuing failure to comply with occupancy restrictions may result in suspension of employee housing credits for the unit in question.
  
- C.     Other violations shall be processed in accordance with the applicable laws and regulations of the county with jurisdiction.

## **Section 7   Definitions**

- A.     Average peak season employment shall mean the average number of full time equivalent employees per payroll period who are employed during the peak season within the Kirkwood Resort area.
  
- B.     Employee shall be a person who is employed by a business or agency whose primary purpose is to provide services within the Kirkwood Resort area and may include any of the following:
  - 1.     An employee or agent of Kirkwood Mountain Resort LLC, or its successors.
  - 2.     An employee or agent of any other person or entity when such employee's or agent's principal place of work is within the Kirkwood Resort area, and a direct connection can be made between the services provided by said employee and the operation of commercial activities located within the Kirkwood Resort area.

3. An employee or agent of any state, local or federal governmental agency, when such employee's principal place of work is within the Kirkwood Resort area.
- C. Employee Housing Unit shall mean any type of dwelling unit that is encumbered by a lease provision, recorded covenant, deed restriction, or other restriction, or otherwise recognized as provided in this ordinance.
- D. Full time employee shall mean an employee or agent within the definition of employee as stated above, when he or she is to perform services for his or her employer or principal on an average of thirty-two (32) or more hours per week.
- E. Full time equivalent (FTE) employee shall mean the following:
- |                      |         |
|----------------------|---------|
| Full time employees: | 1.0 FTE |
| Part time employees: | 0.5 FTE |
- F. Kirkwood Resort shall mean the area contained within the boundaries of the Kirkwood Specific Plan area and the permit boundaries of the Kirkwood Ski Area as defined by the U.S. Forest Service.
- G. Kirkwood Resort Area shall mean the area located within a five (5) mile radius of the intersection of Kirkwood Meadows Drive and State Route 88.
- H. Multifamily Residential Project shall mean any project involving the concurrent or phased development of three (3) or more residential or transient dwelling units, including, without limitation, residential condominiums, apartments, multiple family dwellings, hotels, motels or Bed & Breakfast facilities but excluding single family dwellings and duplexes. Any phased development shall be aggregated and treated as one single project.
- I. Part time employee shall mean an employee or agent within the definition of employee as stated above, when he or she is to perform services for his or her employer or principal an average of more than sixteen (16) but less than thirty-two (32) hours per week.
- J. Peak season shall mean the four-month period commencing December 1 and ending March 31 of the next calendar year.
- K. Permitted Family Members shall mean the spouse and children, whether natural or by adoption, of the relevant employee.