

square feet of commercial based on 2.5 lbs/day/per 100 sq. ft. of commercial). Waste generation rates have not been calculated for the other uses (golf course and related facilities, and equestrian center) since specific detailed data needed for these estimates is not available at this stage of the development process. In addition to the waste generation described above, there will also be construction related debris. The amount of construction debris has not been estimated at this time; therefore, there is a potential for additional impacts to the existing solid waste facilities as a result of this increase. It is estimated that 79 percent (2,436 tons) of the estimated waste generation from the project will go to the Western Regional Landfill. The landfill is currently estimated to remain open until 2036 with a cumulative capacity of 36,350,000 cubic yards. Foresthill residents have the option to subscribe to Auburn Placer Disposal Service for curbside pickup and recycling or pay a mandatory parcel fee for the operation of the Foresthill Transfer Station that allows full access to that facility. Residential curbside greenwaste collection and household hazardous waste collection are not available at this time.

The Forest Ranch Concept Plan has the potential to impact the Foresthill Transfer Station in the event that residents elect not to subscribe to garbage collection service and rely on the transfer station. This has the potential to result in an additional 8.5 tons per day to the transfer station that accepts approximately 36 tons per day. The 8.5 tons per day is nearly 24% of the amount accepted at the facility. Requiring garbage collection service will not reduce impacts on the transfer station to a less than significant level since it is anticipated that residents will still utilize the transfer station on an occasional basis. Improvements to the transfer station would alleviate this impact. There are also potential impacts to the Western Placer Waste Management Authority Materials Recovery Facility and the Western Regional Sanitary Landfill.

Based on the above, the impact of development of the Forest Ranch Concept Plan on solid waste collection and disposal is considered *potentially significant*.

Implementation of the following measures will reduce impacts on solid waste facilities to a *less than significant* level:

- 3.4-8 *Developments located within the Forest Ranch Concept Plan area shall pay a fair share contribution to an established assessment district to provide for facilities and services to maintain adequate cemeteries, libraries, health services, road maintenance and snow removal, and solid waste collection and disposal services for the FDCP.*

3.5 PARKS AND RECREATION

3.5.1 INTRODUCTION

This section of the EIR describes and analyzes parks and recreation facilities and programs in the Plan area. The existing facilities and services are identified, and the impact of the proposed FDCP upon these facilities and programs is evaluated. This section also identifies existing and potential future service providers, as well as feasible mitigation measures that could reduce or avoid potential significant effects.

3.5.2 SETTING

Parks and recreation are an important part of the quality of life in the Foresthill Divide. The purpose of the Parks and Recreation section of the FDCP is to ensure that adequate recreation facilities are provided to both the residents of and visitors to the Plan area. This includes both “passive” recreational facilities (such as open space and picnic areas) and “active” facilities (such as ball fields). Trails for pedestrians, equestrians, and bicyclists are an important feature of the Plan area, and are heavily used both by local residents and visitors. Increasing connections between trails and filling in existing gaps in the trail network are a theme of the FDCP.

Rural living is natural and unstructured in comparison to urban lifestyles and the amenities that accompany urban lifestyles. In terms of recreation, rural communities are more likely to appreciate and utilize open space and “passive” recreational opportunities. Passive recreation is by no means passive in nature, but is distinguished from improved parklands and recreational facilities such as basketball and tennis courts, baseball and soccer fields, skate ramps, and swimming pools. Passive recreation includes boating, hiking, camping, picnicking, horseback riding, snowshoeing, and cross-country skiing. Passive recreation is considerably less infrastructure-intensive, and generally less intrusive on the natural environment.

Development of new linkages between trails and connecting trail systems have been identified as a priority in the FDCP. Existing public utility easements are one potential resource for creating such linkages.

EXISTING PARK AND RECREATION FACILITIES AND PROGRAMS

Forest Recreation

There is both high demand for and high availability of passive recreational opportunities on the Foresthill Divide. The Tahoe National Forest is laced with trails for use by pedestrians, equestrians, bicyclists, and off-road vehicle enthusiasts. The Foresthill Trail Alliance is active in the maintenance and acquisition of trails within more populated areas of the Foresthill Divide. The Community Plan Team has indicated that there is a need and desire for more developed recreational facilities in the Plan area.

Residents of the Plan area have access to a variety of outstanding regional recreational opportunities. The proximity of U.S. Forest Service (USFS) lands, U.S. Bureau of Land Management (BLM) lands, and U.S. Bureau of Reclamation (BOR) lands provides residents and visitors with areas for hiking, boating, fishing, off-highway vehicle (OHV) usage, swimming, and camping. Within the Plan area, Big Reservoir (Morning Star Reservoir) and Oxbow Recreation Area are federally owned recreation areas that offer camping, boating, winter recreation, hiking, and OHV facilities. These locations and facilities are summarized in Table 3.5-1, along with recreational facilities located outside but near the Plan area that are used by residents of the Divide, and have access through the Plan area. The North and Middle Fork American River supports a large commercial rafting business during the summer months, bringing significant volumes of traffic through the community of Foresthill. Due to the proximity to publicly owned lands, including the Granite Chief Wilderness, Foresthill has tremendous potential as a “take-off” point to back-country lakes and recreation areas.

Auburn State Recreation Area (SRA) is located within the westernmost portion of the Plan area, along the North and Middle Fork of the American River extending east from Auburn. The SRA covers over 35,000 acres, and includes Lake Clementine and 13 other areas with fully developed facilities for environmental education, camping, boating, mountain biking, whitewater rafting, gold-panning, OHV riding, and hiking. The Auburn SRA is administered by the California Department of Parks and Recreation under a contract with the U.S. Bureau of Reclamation.

Community Recreation

Closer to the community of Foresthill, residents can enjoy a small variety of recreational opportunities. All organized recreational programs in the community are operated and managed by volunteer boards. Foresthill Community Park (Leroy E. Botts Memorial Park) is a 15 acre community park located on Harrison Street between Church Street and Gold Street. The park facilities are heavily used, especially on weekends. Park facilities include softball and baseball fields, a tot lot, picnic area, horseshoe pits, restrooms, and a gazebo and barbecue pit. There is a public swimming pool that is operated by volunteers but which has substantial maintenance needs. Within the Todd’s Valley area, there are 41.1 acres of unimproved parklands. The Todd’s Valley Pond is a 26.7 acre site that includes a fishing pond. Two additional park sites located in the Plan area are unmaintained, unimproved open space totaling 14.4 acres. Foresthill Elementary School and Foresthill Divide Middle School, 6 acres and 16 acres respectively, provide additional open space and fields that are widely used after hours for community sports programs.

As the Foresthill Divide continues to grow with anticipated increases in population, recreation will continue to be an important and necessary part of the rural mountain lifestyle and visitor experience. The new Foresthill High School and the adjacent elementary school site will contribute an additional 30 acres to community recreation facilities. Consideration should be given to the expansion of recreational opportunities and facilities, including the management of recreation within the Plan area. There have been community-driven proposals to form a Foresthill Recreation District to be managed by the Foresthill PUD through a joint powers agreement between the PUD and the elementary school district. Identification of a stable funding source to operate and maintain facilities, as well as deferred maintenance costs, is

essential to the establishment of a viable JPA. A locally managed Recreation District could greatly benefit the community as it absorbs new growth.

Trails

The Foresthill Divide Community Plan area offers an extensive, multi-use trail system that provides recreational opportunities for those enjoying hiking, biking, running, horseback riding and cross-country skiing. Trails are concentrated along the Middle and North Fork of the American River, and northeast of Foresthill within the Tahoe National Forest.

The trail system in the Plan area is strongly supported and widely used by residents and visitors alike. The community survey conducted for the Foresthill Divide Community Plan indicated that trails and trail access are a high priority to local residents. The rural community character is complemented by a network of trails that provides residents with opportunities for recreation and a pleasant alternative to motorized transportation. According to the Forest Service, some of the trails have been used for thousands of years by Native Americans and, in more recent times, by miners traveling to and from their claims. Trails are an integral part of the Foresthill Divide and have historical, cultural, and recreational importance.

Forest Service trails on the Foresthill Divide are under the jurisdiction of the Foresthill Ranger District and are maintained by the Tahoe National Forest. As shown in Table 3.5-2, the Forest Service trail system offers over 30 miles of trails for recreational use within the Plan area. Many of the trails are available to equestrians and mountain bikers as well as hikers, and are located in the French Meadows and North Fork of the American River areas.

Table 3.5-1 Summary of Recreational Areas and Facilities In or Near the Plan Area

Recreation Area	Acreage	Campground	Boating/ Fishing	Swimming	Picnic Area	Gold Panning	Trails	Sports Fields	OHV Area
Auburn State Recreation Area	35,000	X	X	X	X	X	X		X
Big Reservoir Area/Morning Star	N/A	X	X				X		
Big Trees Grove*	N/A				X		X		
China Wall Recreation Area*	N/A						X		X
Foresthill Elementary School	6							X	
Foresthill Community Park (Leroy E. Botts)	15				X			X	
Foresthill Middle School	16							X	
Sugar Pine Reservoir	N/A	X	X	X			X		
Todd's Valley Pond and 2 sites	41.1		X				X		
French Meadows*/Hellhole Reservoir*		X	X				X		
Poppy Campground		X							
Giant Gap		X							
Shirttail Creek		X							

*Located outside Plan area

Source: Quad Knopf, 2000.

Table 3.5-2 Trails On or Near the Foresthill Divide

Trail	Length	Location
American River Trail	7.6 mi.	Tahoe National Forest, North Fork American River Area
Bearcroft Trail	2 1/4 mi.	Tahoe National Forest, North Fork American River Area
Big Trees Interpretive Trail	3/8 mi.	Tahoe National Forest, Foresthill Area
Codfish Falls Trail	3 mi.	Ponderosa Way Bridge along North Fork American River
Confluence Trail	1.8 mi.	Mammoth Bar Rd. to the Confluence
Euchre Bar Trail	7.5 mi.	Tahoe National Forest, North Fork American River Area
Fire Break Trail	1.5 mi.	Lake Clementine Rd. to east end of Foresthill Bridge
Forest View Trail	1.5 mi.	Tahoe National Forest, Foresthill Area
Green Valley Trail	2 1/4 mi.	Tahoe National Forest, North Fork American River Area
Italian Bar Trail	2.3 mi.	Tahoe National Forest, North Fork American River Area
Olmstead Loop Trail	8.5 mi.	Starts at Firehouse in Cool (ptn. in El Dorado Co.)
Lower half of CA St.	9 mi	between Peachstone Trail and bottom of Driver's Flat Rd.
Lower McKeon-Ponderosa Trail	3 mi.	from gate to the Middle Fork
McGuire Trail (segment of WST)	3 7/8 mi.	Tahoe National Forest, French Meadows Area
McKeon-Ponderosa Loop Trail	3 mi.	Starts below White Oak Flat
Michigan Bluff to Deadwood Trail	6 mi.	Tahoe National Forest, Foresthill Area
Mosquito Ridge Trail	1.25 mi.	Tahoe National Forest, Foresthill Area
Mumford Bar Trail	3 1/4 mi.	Tahoe National Forest, North Fork American River Area
Mumford Bar Trail	12 mi.	10 miles North of Foresthill
North Fork of the Middle Fork Trail	1.1 mi.	Tahoe National Forest, Mosquito Ridge area
Old Lake Clementine Trail	1.7 mi.	Old Foresthill Road Bridge to Lake Clementine Rd.
Pointed Rocks Trail	1.4 mi.	No Hands Bridge towards Cool to Knickerbocker Area
Quarry Road Trail	5.6 mi.	Hwy 49 Bridge to Main Bar on Middle Fork (ptn. El Dorado Co.)
Sailor Flat Trail	3.3 mi.	Tahoe National Forest, North Fork American River Area
Stagecoach Trail	1.8 mi.	Auburn to Old Foresthill Bridge, along North Fork
Todd's Valley Trail	2 mi.	Todd's Valley Area
Upper half of CA St.	9 mi	between Foresthill and Peachstone Trail
Volcano Canyon (segment of WST)	6 mi.	between Michigan Bluff and Foresthill
Western States Trail (WST)	100 mi.	Squaw Valley to Auburn

Source: Foresthill Trails Alliance, National Forest Service, California Dept. of Parks and Recreation.

In addition to federally managed and maintained trails, private roads and logging roads provide opportunities for trail-related recreation. The Foresthill Trails Alliance (FTA), a non-profit community organization that acquires and preserves trails on the Foresthill Divide, works to secure easements through public and private property in support of a regional trails system. The

FTA promotes legislation to permanently preserve and protect established and new trails. The FTA maintains portions of the 100-mile Western States Trail that runs from Squaw Valley to Auburn. A world-class running event and a world-class equestrian event are held along the Western States trail every summer. Continued access to this trail is very important to residents of the Divide. Sections of the Auburn Placer Disposal Service transfer station site could also be utilized as a staging area, providing additional access to the trail.

Strong community support in combination with the leadership of the FTA has helped with maintenance of existing trails and the development of additional trails. Identification of additional trails and their maintenance are a high priority among local residents. The 10-mile Foresthill Divide Loop Trail was completed in 1999 with the help of volunteer community labor. The Foresthill Divide Loop Trail, managed by the California Department of Parks and Recreation, is located on BOR land that was acquired for the Auburn Dam, a project that has never been constructed. The Foresthill Bridge was designed to span the reservoir that would have resulted had the Auburn Dam been completed. The trail parallels both sides of Foresthill Road. A new 3-mile multi-use trail segment has been constructed that extends the trail toward Auburn from Lower Lake Clementine Road. Currently referred to as the “connector trail,” a formal name has not yet been designated by the California Department of Parks and Recreation. The County Department of Facility Services Parks Division and Foresthill community have worked together to create a trails plan for the Foresthill Divide Community Plan (see Figure III-5 of the FDCP). Additionally, the Parks Division is currently working on an Environmental Impact Report for a trail that would run from the confluence of the Middle Fork and the North Fork of the American River to Ponderosa Bridge on the North Fork. The Foresthill Divide Community Plan Trails Map identifies a connection from that trail to the eastern edge of the Plan area. The FTA is in favor of building the trail and hoping a route can be found that minimizes any environmental impact. The Monte Verde Estates development has constructed a trail segment through the development that provides access to public land. This trail segment ends at the fence at the border of the public land. The FTA is working with the California Department of Parks and Recreation to try to eventually link to a further extension of the Foresthill Divide Loop Trail behind the Monte Verde Estates development.

Although a small trail staging area has been established near the Foresthill Landfill site, expansion of recreational use at this location is constrained by policy of the Environmental Engineering Division to prohibit any structures or recreational activities on the actual footprint of the closed landfill site and the fact that rugged terrain results in limited area suitable for development of recreational facilities proximate to the landfill site. However, limited public use of the landfill site vicinity is a creative solution to the closure of a solid waste facility, and is an asset to the existing trail system on the Foresthill Divide.

An informal network of trails also exists in the Foresthill community and in Todd's Valley/McKeon-Ponderosa Road. In Foresthill, a trail exists along some portions of Foresthill Road, although it is not continuous.

Over 50 miles of old mining ditches remain on the Foresthill Divide from hydraulic mining and drift mining practices of the 1800's. The Foresthill Historical Society has inventoried 55 ditches, and noted that “the mining ditches might be good sites for potential trails since they usually are

on mostly flat routes and are of great historical interest.” The construction of trails alongside the ditches would enhance the existing trail system, preserve areas of historical interest, and facilitate pedestrian connectivity within the community.

Policies and programs relevant to the development of a park and recreation facilities, including trail systems, found within the Placer County General Plan, the Foresthill Divide Community Plan Trails Plan and the proposed FDCP are listed below:

GOALS AND POLICIES

Placer County General Plan Policies

5.A.1. The County shall strive to achieve and maintain a standard of 5 acres of improved parkland and 5 acres of passive recreation area or open space per 1,000 population.

5.A.2. The County shall strive to achieve the following park facility standards:

- a. 1 tot lot per 1,000 residents
- b. 1 playground per 3,000 residents
- c. 1 tennis court per 6,000 residents
- d. 1 basketball court per 6,000 residents
- e. 1 hardball diamond per 3,000 residents
- f. 1 softball/little league diamond per 3,000 residents
- g. 1 mile of recreation trail per 1,000 residents
- h. 1 youth soccer field per 2,000 residents
- i. 1 adult field per 2,000 residents
- j. 1 golf course per 50,000 residents

5.A.3. The County shall require new development to provide a minimum of 5 acres of improved parkland and 5 acres of passive recreation area or open space for every 1,000 new residents of the area covered by the development. The park classification system in Table 5-1 [of the General Plan] should be used as a guide to the type of the facilities to be developed in achieving these standards.

5.A.4. The County shall consider the use of the following open space areas as passive parks to be applied to the requirement for 5 acres of passive park area for every 1,000 residents.

- a. Floodways
- b. Protected riparian corridors and stream environment zones
- c. Protected wildlife corridors
- d. Greenways with the potential for trail development
- e. Open water (e.g., ponds, lakes, and reservoirs)
- f. Protected woodland areas
- g. Protected sensitive habitat areas providing that interpretive displays are provided (e.g., wetlands and habitat for rare, threatened or endangered species.)

Buffer areas are not considered as passive park areas if such areas are delineated by setbacks within private property. Where such areas are delineated by public easements or are held as common areas with homeowner/property owner access or public access, they will be considered as passive park areas provided that there are opportunities for passive recreational use.

5.A.5. The County shall require the dedication of land and/or payment of fees, in accordance with state law (Quimby Act) to ensure funding for the acquisition and development of public recreation facilities. The

fees are to be set and adjusted as necessary to provide for a level of funding that meets the actual cost to provide for all of the public parkland and park development needs generated by new development.

- 5.A.16. The County should not become involved in the operation of organized, activity-oriented recreation programs, especially where a local park or recreation district has been established.
- 5.A.21. The County shall encourage the development of public and private campgrounds and recreational vehicle parks where environmentally appropriate. The intensity of such development should not exceed the environmental carrying capacity of the site and its surroundings.
- 5.A.23. The County shall require that park and recreation facilities required in conjunction with new development be developed in a timely manner so that such facilities are available concurrently with new development.
- 5.B.1. The County shall encourage development of private recreation facilities to reduce demands on public agencies.
- 5.C.4. The County shall require the proponents of new development to dedicate rights-of-way and/or the actual construction of segments of the countywide trail system pursuant to trails plans contained in the County's various community plans.

Foresthill General Plan Goals and Policies

Parks and Recreation

Goal 2: Ensure adequate recreation facilities to meet the needs of present and future residents.

- 1. Provide for adequate riding and hiking trails.
- 4. Continue to require Park Dedication fees to ensure funding for future park needs.

Foresthill Divide Community Plan Goals and Policies

The proposed FDCP includes the following goals and policies related to parks and recreation:

Goal 3.E.1. Provide recreation facilities/opportunities for the residents of the Plan area.

Policies

- 3.E.1-1 The County shall strive to achieve and maintain a standard of 5 acres of improved parkland and 5 acres of passive recreation area or open space per 1,000 population.
- 3.E.1-2 In accordance with the park development standards, the County shall strive to achieve the following park facility standards:
 - a. 1 tennis court per 2,000 residents
 - b. 1 swimming pool in the Plan area
 - c. 1 community center in the Plan area
 - d. 1 softball field per 5,000 residents
 - e. 1 basketball court per 5,000 residents
 - f. 1 neighborhood park per elementary school neighborhood
 - g. 1 community park per community
 - h. 1 volleyball court per 5,000 residents

- 3.E.1-3 The County shall require the dedication of land and/or payment of fees, in accordance with state law (Quimby Act), to ensure funding for the acquisition and development of public recreation facilities. The fees are to be set and adjusted as necessary to provide for a level of funding that meets the actual cost to provide for all of the public parkland and park development needs generated by new development.
- 3.E.1-4 The County shall ensure that park design is appropriate to the recreational needs and, where feasible, provides access capabilities to all residents, employees, and visitors of Placer County.
- 3.E.1-5 The County shall require the inclusion of new subdivision lands in a type of financing district (such as a County Service Area or Landscape and Lighting District) to generate sufficient funds to operate and maintain new public park facilities provided in the area.

Goal 3.E.2. Develop and maintain centralized recreational facilities providing a variety of parks and programs to serve the needs of present and future residents and visitors.

Policies

- 3.E.2-1 New residential development shall provide park facilities in accordance with Placer County standards. The creation of community parks (15+ ac.) is more desirable than several small, isolated facilities.
- 3.E.2-2 The Foresthill Divide has an abundance of public passive open space and outdoor recreational opportunities and facilities, i.e., Tahoe National Forest and Auburn State Recreation Area. Development dedication fees would be more appropriately used for development of new parks, facilities or easements for new trails. By way of implementation of the Park Dedication Ordinance (Quimby Act), “in-lieu” fees or construction of desired recreation facilities shall be given priority over acquisition/acceptance of land.
- 3.E.2-3 Expand the powers of the Foresthill Public Utility District, or pursue the creation of a local recreation district to provide public services, administer and generate funds for the acquisition, development and maintenance of parks and recreational programs. The implementation of this policy is a high priority of the community.
- 3.E.2-4 Encourage expansion of the Joint Powers Agreement between Placer County, the Foresthill Union School District, Placer Union High School District and a Local Recreation District, if so approved, to provide recreational facilities and programs for the community. Some possibilities of this program would be the development of the new High School-Elementary School site, jointly funding the development of ballfields, swimming pool complex, a stadium, auditorium and a library-computer complex.
- 3.E.2-5 Coordinate and promote recreation programs provided by the U.S. Forest Service, State Parks and any other public agencies. An example is China Wall, a cooperative project of the U.S. Forest Service, State of California Green Sticker Fund and the Placer County Department of Public Works.
- 3.E.2-6 Support and coordinate with volunteer groups that assist with providing recreational facilities and programs.

Goal 3.E.3. Encourage and support the development of private recreational opportunities and facilities. Identify and ensure adequate land properly zoned for this use within the community.

Policies

- 3.E.3-1 Encourage the development of private campgrounds and recreational vehicle parks where appropriate.

3.E.3-2 Encourage local private enterprise to develop and implement other private recreational facilities and/or programs.

Goal 3.E.4. Develop a system of interconnected hiking, riding and bike trails suitable for active recreation, transportation and circulation from the confluence of the American River to Sugar Pine Reservoir. Trails are a high priority within the Foresthill Community Plan area.

Policies

3.E.4-1 Provide trails linking together school facilities, parks, community buildings and other public and commercial areas within and between residential developments.

3.E.4-2 Provide links to a major countywide trail system.

3.E.4-3 Use public utility corridors such as power line easements, water district easements and other roadways whenever possible when planning and constructing new trails.

3.E.4-4 Require proponents of new development to dedicate right-of-way and/or construct segments of trail linking the development to existing and planned trails. Trails could serve as required passive open space (see Placer County Trail Development Policy).

3.E.4-5 Trails shall be separated from the traveled roadway whenever possible by curbs, barriers, landscaping and spatial distance. Safety is a high priority, also with emphasis on aesthetics.

3.E.4-6 Explore methods of providing off-highway vehicle (OHV) use, particularly to the youth of the community.

3.E.4-7 The Foresthill Divide Community Plan Trails Plan identifies all trails currently in use in the Plan area as well as proposed trails.. The plan should be refined to identify public and private property dedicated easements. and staging areas with consideration of provision of signs and maps.

3.E.4-8 No trail shall be constructed unless there is a provision for short and long term maintenance. The funding mechanism must be in place and provide for funding to include the cost of administration, overhead, trail plan development and reviews, field inspections, construction and maintenance.

Goal 3.E.5. Acquire additional open space in the Plan area.

Policies

3.E.5-1 The County, or a local recreation district, should pursue all opportunities for the acquisition of surplus Federal or State lands for recreation.

3.5.3 IMPACT EVALUATION CRITERIA

Based on Appendix G of the CEQA Guidelines, a significant environmental impact would occur if the proposed FDCP would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities.

- Need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or park standards.
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Include recreational facilities or require the construction or expansion of recreation facilities which might have an adverse physical effect on the environment.
- Be inconsistent with the adopted the *Placer County General Plan* policies and standards.

3.5.4 IMPACTS AND MITIGATION MEASURES

Impact 3.5-1 Provision of adequate parks and recreation facilities and programs to both residents of and visitors to the FDCP area.

Discussion/Conclusion: The Plan area already includes large areas of public parks and public open space, including the 35,000-acre Auburn State Recreation Area, Sugar Pine Reservoir, Big Reservoir (Morning Star Reservoir), and Oxbow Recreation Area, all of which accommodate multiple recreational uses. Other public open space owned and/or operated by the U.S. Forest Service, U.S. Bureau of Land Management, and U.S. Bureau of Reclamation are located in proximity to the Plan area. Organized recreational programs are available through the school districts and in the community of Foresthill. The Plan area also includes an extensive network of trails, and includes policies and implementation measures to expand and provide linkages within the trail network. Construction of the new high school has brought additional athletic facilities and programs to the community, including a baseball field, football field, track, and gymnasium.

However, two unimproved, unmaintained park sites are located in the Plan area, and the public swimming pool has substantial deferred maintenance needs. The lack of a stable local funding source to operate and maintain facilities, as well as deferred maintenance costs, are issues that have been raised by the community and the FDCP Team.

The proposed FDCP includes goals and policies to provide recreation facilities and opportunities for the Plan area, and establishes population-based standards for public park acreage and park facilities. The Plan also addresses the issue of funding and local management of facilities. Policy 3.E.1-5 calls for the County to require the inclusion of new subdivisions in a financing district (such as a County Service Area or Landscaping and Lighting District) to generate sufficient funds to operate and maintain new public parks. Policy 3.E.2-3 calls for expanding the powers of the Foresthill PUD or pursuing the creation of a local recreation district to provide public services, administer and generate funds for the acquisition, development and maintenance of parks and recreational programs. It is noted that implementation of this policy is a high priority of the community. Policy 3.E.2-4 encourages expansion of the Joint Powers Agreement between Placer County, the Foresthill Union School District, and a Local Recreation District to provide recreational facilities and programs for the community. The development of private recreational facilities is also encouraged.

Because the proposed FDCP provides for the creation of funding sources to develop and maintain new parks and recreational facilities associated with new development, and because the Plan also includes policies and implementation measures to address existing deficiencies, this impact is *less than significant*.

Mitigation Measure

No mitigation measures are required.

Discussion/Conclusion with Incorporation of the Forest Ranch Concept Plan: The Forest Ranch Concept Plan area includes a large portion of open space; an 18-hole golf course and related recreational uses (e.g., restaurants, meeting rooms, swimming pool, driving range on 195 acres, or 7% of the project site); and a possible equestrian center. The concept plan also includes “community and wilderness trails.” The golf course would be open to the public. The availability of other facilities for public use (i.e., swimming pool, meeting rooms) is not addressed.

The Placer County General Plan establishes a standard of 5 acres of improved parkland and 5 acres of passive recreation area or open space per 1,000 population (Policy 5.A.1). The General Plan requires new development to provide a minimum of 5 acres of improved parkland and 5 acres of passive recreation area or open space for every 1,000 new residents of the area covered by the development (Policy 5.A.3). The park classification system shown in Table 5-1 of the General Plan should be used as a guide to the type of the facilities to be developed in achieving these standards.

It is estimated that a total of 4,255 persons would reside in the Forest Ranch Concept Plan area at buildout (see Impact 3.1-1), based on an average household size of 2.66 persons for the non-age restricted units, and 1.7 persons per household for the age restricted units, 22 acres of active recreational facilities must be provided. In addition, payment of park impact fees for single family dwellings and for the age restricted housing will be required (because the project is considered a “planned development”). The County will determine which option better serves the community at the time of a subsequent development application (i.e., specific plan and tentative maps). However, because the evaluation of the Forest Ranch project is at the policy level, land use/park land maps have not been prepared that show an area, which meets the requirement for 22 acres of improved parkland. This lack of improved, active parkland in the concept plan area is a *potentially significant* impact.

The General Plan also encourages the development of private recreation facilities to reduce demands on public agencies (Policy 5.B.1). The Forest Ranch Concept Plan area provides private recreation facilities.

The General Plan also supports development of a countywide trail system. The Concept Plan includes trails. The General Plan requires the proponents of new development to dedicate right-of-way and/or the actual construction of segments of the countywide trail system pursuant to

trails plans contained in the County's various community plans (Policy 5.C.4). The 1981 Foresthill General Plan does not include a trails plan.

All organized recreational programs in the community are operated and managed by volunteers, and existing community park facilities are heavily used. There is no park district or special district which manages parks and operates recreational programs in Foresthill, and there is no senior center in the community of Foresthill. It is estimated that a total of 4,255 persons would reside on the project site at buildout, of whom approximately 2,890 would be age 55 and older. This population would have different recreational needs than the younger population. While many of these needs for recreational programs could be met within the Concept Plan site, the Concept Plan does not propose the operation of recreational programs for senior (or for youth and younger adults). Impacts due to a lack of adequate recreational programs are *potentially significant*.

Implementation of the following measures will reduce impacts on parks and recreational facilities and programs to a *less than significant level*:

- 3.5-1a *The developer of the Forest Ranch Concept Plan area shall be required to develop and maintain active recreation facilities in conformance with Goal 1.C.3 Standards 1.C.3-1 through 1.C.3-4 of FDCP Appendix "E" (Forest Ranch Specific Plan Area Development Standards).*
- 3.5-1b *Trail classifications shall be shown on all Forest Ranch plans in accordance with the Foresthill Divide Community Plan Trails Plan.*
- 3.5-1c *A County Service Area, Zone of Benefit under CSA #28 (the County-wide County Service Area), community services district, expansion of powers of the Foresthill P.U.D., master homeowners association, parks and recreation district, assessment district, or other entity for sustainable park maintenance shall be formed or completed for the Concept Plan site prior to recordation of the first final subdivision map. A park maintenance tax assessment or other funding mechanism with a provision for increases indexed to the Consumer Price Index shall be approved by the landowners (voters) of the Concept Plan site, to be developed prior to recordation of the first final subdivision map.*

3.6 NATURAL RESOURCES/CONSERVATION/OPEN SPACE

3.6.1 INTRODUCTION

This section of the EIR addresses the topics of soils, vegetation, wetlands, fish and wildlife, geology and geologic hazards, topography and slope, paleontology, hydrology and surface flows, water quality, water resources, hazards and hazardous materials, and agricultural/timber resources. These topics are discussed under the umbrella of Natural Resources/Conservation/Open Space.

The purpose of the analysis of hydrology and surface flows and water resources is to assess potential impacts that may occur during and after implementation of the FDCP. This section also describes and addresses impacts on water resources proposed to supply the domestic water needs for the Plan area.

The discussion of biological resources is based on implementation of the proposed FDCP. The analysis is based on data collected during field reconnaissance and existing documentation of biological resources in this area. This section addresses the vegetation communities present and the wildlife and plant species occurring, or potentially occurring, in the Plan area, as well as the suitability of habitats in the Plan area to support special-status species and sensitive habitats, including potential jurisdictional waters of the United States. This section also includes a discussion of potentially significant impacts on biological resources and mitigation measures necessary to reduce impacts to a less than significant level.

This section also presents an overview of the geologic and seismic setting of the Plan area. The existing geologic conditions and geologic hazards that may be encountered within the Plan area are evaluated. Potential impacts are identified based on existing characteristics of the soils, geology, and seismicity of the region, and mitigation measures are proposed.

Surveys and analysis of biological resources were completed by Foothill Associates. Analysis of timber resources was conducted by Peregrine Environmental.

3.6.2 SETTING

PURPOSE

The purpose of the Natural Resources/Conservation/Open Space section of the FDCP is to identify existing natural resources which make up the physical environment of the FDCP area, and to develop goals and policies that provide for their preservation, use and enhancement. The Conservation Element is one of the seven mandatory General Plan elements. All of the topics required to be addressed in a Conservation Element by State law are covered in the Placer County General Plan. The Conservation section of the FDCP addresses topics specific to the Plan area, which are of particular interest to residents of the Divide. Conservation of the unique natural resources in the Plan area is an important feature of the FDCP.

The Open Space Element is one of the seven mandatory General Plan elements. All of the topics required to be addressed in an Open Space Element by State law are covered in the Placer County General Plan. The purpose of the Open Space section of the FDCP is to address topics specific to the Plan area, which are of particular interest to residents of the Divide. Open space is a dominant feature of the Plan area, and its preservation is a central feature of the FDCP.

DISCUSSION

The 109 square mile FDCP area is comprised of many diverse biological communities, including the coniferous forest, montane hardwood, chaparral, blue oak woodland, annual grassland, riparian and rural residential/limited commercial habitats. Each community has its own geologic associations, soil associations, diversity in topography, and richness in resources. The Plan area is generally forested, providing excellent fish and wildlife habitat, watersheds, timber resources, vegetation, and overall natural beauty. Collectively, the natural resources within the Foresthill Divide are the primary asset of the Plan area, and should be preserved and managed as such.

The geology and topography of the area is varied and unique. In addition to soil conditions and types, geology and topography are the most limiting factors to development of the Foresthill Divide. The Plan area generally consists of metavolcanic and metasedimentary rock that is prone to severe erosion and incidents of rockfall. The Plan area is rich in minerals, and continues to be mined primarily for gold and silver. The geology of the Plan area is likely to contain paleontological resources, similar to those in adjacent areas.

The water resources within the Plan area are of exceptional quality and quantity. Surface waters originate in the Sierra Nevada, just above the Plan area, and create the Middle and North Forks of the American River. The North Fork of the American River is designated Wild and Scenic within the Plan area. Groundwater resources have supported individual wells within the Plan area, but are not as plentiful or constant as surface waters.

The Plan area supports a diverse assemblage of plant and wildlife species throughout numerous habitats including coniferous forest, montane hardwood, chaparral, blue oak woodland, annual grassland, ruderal/barren, river/stream, open water habitats, and developed areas. Nine special-status plant species have the potential to occur within the Plan area. These plants are afforded special protection in the California environmental review process, and are considered sensitive local resources in Placer County. Habitats supporting conditions suitable for these species should be considered sensitive, and as such should be surveyed prior to project development. If some or all of these species are found in areas proposed for development, the appropriate resource agencies should be contacted, and if possible those areas should be avoided.

Special-status avian species may utilize the Plan area for foraging and nesting habitat. The nests of raptors, as well as the nests of migratory bird species, are protected under the Migratory Bird Treaty Act (MBTA). Active raptor nests are also afforded additional protection in the California Fish and Game Code, Section 3503.5. Proposed development within areas supporting suitable nesting habitat for any or all of these species must be surveyed prior to construction to determine the presence or absence of these species nesting within the site. If any or all of these species are found actively nesting within an area proposed for development, no construction activities may

occur within 500 feet of the nest location. Construction activities may resume within this buffer zone after the young have fledged from the nest and the nest is abandoned for that breeding season.

Several special-status mammal species have the potential to occur within the Plan area. These species may utilize the Plan area for shelter, foraging, and breeding habitat. Because these species are sensitive to federal, state, and/or local resource agencies, focused surveys for these species should be conducted prior to the approval of any project that may remove or fragment suitable habitats for these species. If any or all of these species are observed during the focused surveys, or if evidence of these species is found within the survey area, the appropriate resource agency should be contacted, and effective management strategies should be developed to protect these species and their associated habitats.

Numerous special-status amphibian species could utilize the rivers, streams, and/or open water habitats throughout the Plan area. Others may utilize annual grassland habitat with adjacent seasonal wetlands and habitats supporting suitable soil conditions throughout the Plan area. The status of these species is of concern to federal, state, and/or local resource agencies. Consequently, prior to approval of projects proposing to affect suitable habitat for these species, a focused survey should be conducted to determine the presence/absence of these species within the project area. If one or any of these species is found within the survey area, the appropriate resource agency should be contacted, and species-specific management strategies should be developed to ensure the protection of the species and their associated habitat.

Three special-status invertebrate species have the potential to occur within the Plan area. The spiny rhyacophilan caddisfly is known from one stream within the Plan area, and may occupy additional streams and rivers in reaches supporting cool flowing water conditions. Projects having the potential to affect the water quality of these water features could affect this species. Consequently, surveys for this species should be conducted prior to the approval of projects that may affect water quality in the Plan area. If this species is found within the Plan area, measures should be taken, in consultation with the United States Fish and Wildlife Service (USFWS), to ensure that water quality is not altered in a manner that would adversely affect this species.

Yates' snail could potentially occur on limestone outcroppings or in caves within the Plan area. Prior to the approval of proposed projects within the Plan area, a survey should be conducted to determine if suitable habitat for this species occurs within the project site. If suitable habitat is found, a focused survey for this species should be conducted to determine the presence/absence of this species in the project area. If this species is determined to occur onsite, and the proposed development cannot avoid these areas, consultation with the USFWS would be required to determine appropriate conservation/management strategies for this species.

To date, no known occurrences of Valley elderberry longhorn beetle are recorded within the Foresthill Divide vicinity, and no known focused surveys for elderberry shrubs have been conducted within the Plan area. Prior to approval of a proposed project within the Plan area, a focused survey for elderberry shrubs should be conducted to determine the presence/absence of shrubs on the project site. If the shrubs are found, these locations should be avoided. If shrubs

cannot be avoided, consultation with the USFWS will be required to determine appropriate mitigation strategies.

Jurisdictional waters of the U.S. occur in the Plan area. Several streams, ponds, and intermittent drainages are also located within the Plan area boundary. These water features have not been delineated, and additional jurisdictional wetlands or waters of the U.S. may occur within the Plan area. Encroachment into areas protected under United States Army Corps of Engineers (Corps) jurisdiction will require authorization from the Corps, and may require Regional Water Quality Control Board (RWQCB) water quality certification and a California Department of Fish and Game (CDFG) Streambed Alteration Agreement.

Wildlife movement corridors are essential to the distribution of wildlife, providing a means of movement throughout ranges that are encroached by human disturbances. Because a majority of the habitats within the Foresthill Divide are relatively undisturbed, these areas provide a means for wildlife movement throughout the Plan area. Further development within these areas will fragment this habitat, and may result in obstructing this movement corridor. The effect on deer migration and wildlife movement should be analyzed prior to the approval of any proposed development project within the Plan area. The analysis should include consultation with the CDFG and local resource agencies to properly evaluate the current wildlife movement and deer migration patterns in the Plan area.

While agriculture and timber were once dominant forces in the Placer County economy and way of life, their relative importance has diminished in monetary terms. Other areas with better climate conditions for agriculture, as well as residential development of areas once used for farms, have contributed to the decline in commercial agriculture in the Plan area. However, both agricultural and timber resources remain important in terms of the history and current culture of the FDCP area, as well as providing open space and contributing to the scenic qualities of the Plan area.

Soils

Soils mapping of the Foresthill area was completed in 1980 by the Natural Resources Conservation Service. Soils found on the Foresthill Divide are widely varied, depending upon a combination of environmental factors, including underlying rocks, climatic conditions, topography, type of native vegetation, and the development stage of the soil. The primary soil groups on the Foresthill Divide are Aiken loam and Aiken cobbly loam, Cohasset loam, Mariposa complex, Mariposa-Josephine complex, Maymen-rock outcrop complex and Sites loam.

The Aiken loam, Aiken cobbly loam, and Cohasset loam are deep, well drained soils that form in residuum on volcanic ridges, between elevations of 2000 to 4000 feet. The Sites soil is formed in residuum from metasedimentary and metabasic rock. Permeability is moderately slow. The Cohasset and Sites soils are particularly well suited for timber production, as indicated by the Ponderosa Pine.

The Mariposa-Josephine complex is encountered between 1500 and 4000 feet in elevation. Mariposa is common to the ridges and south and west-facing slopes, while Josephine is common to the north and east-facing slopes. The complex is well-drained with moderately slow permeability, and moderate to high erosion hazard.

The Maymen-Rock outcrop complex occurs in the Plan area from 1200 to 3500 feet in elevation, and generally consists of 50 percent Maymen soil, 20 percent Rock outcrop, and 25 percent Mariposa gravelly loam. The Maymen is a shallow, gravelly loam that is somewhat excessively drained, and permeability is moderate. Timber production and residential development is limited on the complex due to the slope, shallowness, and rock outcroppings.

Physical and chemical properties of soils may limit construction-related uses of these soils. According to the Placer County General Plan Background Report, construction can be limited due to erosion hazards, hydrologic groups' shrink-swell potential, and risk of corrosion to concrete and uncoated steel.

The California Department of Conservation has instituted the Farmland Mapping and Monitoring Program (FMMP) which produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status. Current land use information is gathered using aerial photographs, a computer mapping system, public review, and field reconnaissance. The FMMP identifies four categories of Important Farmlands: Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, and Farmlands of Local Importance. The California Department of Conservation (CDC) defines these four categories as follows:

- **Prime Farmland** is land which has the best combination of physical and chemical features, and is able to sustain long term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance** is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
- **Unique Farmland** consists of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance** is considered of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

As shown in Table 3.6-1, soil units that meet the criteria for Prime Farmland and Farmland of Statewide Importance (as identified in the U.S. Department of Agriculture's Land Inventory and

Monitoring Project) occur within the Plan area. These farmlands are located primarily at the top of the Foresthill Divide, along the Foresthill Road Corridor.

Table 3.6-1 Farmland Soils of Placer County

Symbol	Name	Prime Farmland	Statewide Importance	Occurring
100	Aiken loam, 2 to 9% slopes	X		X
101	Aiken loam, 9 to 15% slopes		X	X
105	Alamo variant clay, 2 to 15% slopes		X	
106	Andregg coarse sandy loam, 2 to 9% slopes		X	
107	Andregg coarse sandy loam, 9 to 15% slopes		X	
109	Andregg coarse sandy loam, rocky, 2 to 15% slopes		X	
122	Boomer loam, 2 to 15% slopes		X	X
134	Cohasset loam, 2 to 9% slopes	X		X
135	Cohasset loam, 9 to 15% slopes		X	X
140	Cometa sandy loam, 1 to 15% slopes		X	
142	Cometa-Ramona sandy loams, 1 to 15% slopes		X	
149	Horseshoe gravelly loam, 2 to 9% slopes	X		
157	Josephine loam, 2 to 9% slopes	X		
158	Josephine loam, 9 to 15% slopes		X	X
162	Kilaga loam	X		
174	Ramona sandy loam, 0 to 2% slopes	X		
175	Ramona sandy loam, 2 to 9% slopes	X		
183	Sierra sandy loam, 2 to 9% slopes	X		
186	Sites loam, 2 to 9% slopes	X		X
191	Sobrante silt loam, 2 to 15% slopes		X	
192	Xerofluvents, sandy		X	
193	Xerofluvents, occasionally flooded	X		
195	Xerofluvents, hardpan substratum		X	

Source: U.S. Department of Agriculture Natural Resources Conservation Service.

Three soil units that meet the criteria for Prime Farmland and Farmland of Statewide Importance occur within the Forest Ranch Concept Plan area. These consist of areas identified as Aiken loam, 2 to 9 percent slopes (Prime Farmland), Aiken loam, 9 to 15 percent slopes (Farmland of Statewide Importance), and Cohasset loam, 2 to 9 percent slopes (Prime Farmland).

The majority of the Plan area is characterized as having moderate to severe shallow soil areas; however, there are many areas with deeper soils that can be identified as suitable for development on septic systems. The northeastern- and southeastern-most portions of the Plan area are not designated as shallow soil areas. These lands are federally owned lands used primarily for timber production. Developed areas along Foresthill Road have moderately shallow soils, and the remaining soils on the Divide are considered severely shallow.

Vegetation

Predominant habitats comprising the Foresthill Divide Community Plan area include coniferous forest, montane hardwood, chaparral, blue oak woodland, annual grassland, ruderal/barren,

river/stream, and open water (ponds, reservoirs, etc). Land uses in the Foresthill Divide region include low density residential and commercial. A majority of the Plan area is undeveloped. The habitats are mapped in Figures IV-1 and IV-2 of the FDCP, and the dominant vegetation species associated with these habitats are described below.

Coniferous Forest

Coniferous forest represents the dominant vegetation community found within the Foresthill Divide Community Plan area. This habitat is comprised of three major vegetation associations: Jeffrey pine, Ponderosa pine, and Sierran mixed conifer. Jeffrey pine and Ponderosa pine associations are predominantly comprised of pure stands of Jeffrey pine (*Pinus jeffreyi*) and Ponderosa pine (*Pinus ponderosa*), respectively. Sierran mixed coniferous forest associations support these species, in addition to madrone (*Arbutus menziesii*), Douglas fir (*Pseudotsuga menziesii*), and black oak (*Quercus kelloggii*). Understories within coniferous forest habitats vary. Jeffrey pine and Ponderosa pine associations support sparse understory growth, dominated by mountain misery (*Chamaebatis foliolosa*). Sierran mixed conifer canopies support a diverse assemblage of plant species, including snowberry (*Symphoricarpos mollis*), mule ears (*Wyethia mollis*), mountain pride (*Penstemon newberryi*), poison oak (*Toxicodendron diversilobum*), and mountain misery.

Montane Hardwood

Montane hardwood habitats are widespread throughout the Plan area. This vegetation type is divided into two vegetation associations: montane hardwood and montane hardwood-conifer. Dominant trees found in these associations include blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizenii*), madrone, and black oak. Pines, including Foothill pine (*Pinus sabiniana*) and Ponderosa pine are also found in the montane hardwood-conifer associations. Numerous species of shrubs and herbaceous species are associated with montane hardwood habitats. Such species include ceanothus (*Ceanothus* spp.), poison oak, manzanita (*Arctostaphylos* spp.), wild oats (*Avena* sp.), silk tassel bush (*Garrya* sp.), mules ears (*Wyethia angustifolia*), farewell-to-spring (*Clarkia purpurea*), brodiaea (*Brodiaea* sp.), and horsetail (*Equisetum arvense*). Additional understory species include rose clover (*Trifolium hirtum*), Italian ryegrass (*Lolium multiflorum*), coyotebrush (*Baccharis pilularis*), and dogtail (*Cynosurus echinatus*).

Chaparral

Three vegetation associations, chamise-redshank chaparral, montane chaparral, and mixed chaparral, are found in the chaparral habitats within the Plan area. Chaparral habitat is characterized predominantly by shrubs such as manzanita (*Arctostaphylos viscida* ssp. *viscida*), chamise (*Adenostoma fasciculatum*), coffeeberry (*Thamnus californica*), red shank (*Adenostoma sparsifolium*), and toyon (*Heteromeles arbutifolia*). Herbaceous species including coyotebrush, cudweed (*Gnaphalium* sp.), and St. John's wort (*Hypericum* sp.) also occur here.

Blue Oak Woodland

Blue oak woodland is interspersed throughout the Plan area. This habitat consists of a relatively open canopy dominated by blue oak; however, scattered foothill pines are also associated with this habitat in several locations within the Plan area. The understory supports numerous non-native grasses and forbs, including brodiaea, yellow star thistle, soft chess (*Bromus hordeaceus*), wild oats, and riggut grass (*Bromus diandrus*).

Annual Grassland

Annual grassland habitats support relatively low plant diversity and are dominated by non-native grasses and other herbaceous species. Dominants include dogtail, soft chess, wild oat, Italian ryegrass, rose clover, St. John's wort, and yellow star thistle. In several locations throughout the Plan area, the annual grassland habitat supports seasonal wetland vegetation, including cattails (*Typha latifolia*) and curly dock (*Rumex crispus*). This vegetation is found predominantly in areas supporting hydric soil conditions and/or seasonal water flow.

Urban

Minimal vegetation is associated with the urban portions of the Plan area. Typically, non-native plants are incorporated into the landscape design of commercial and residential parcels. Plant species commonly found in urban habitats include lily of the Nile (*Agapanthus africanus*), Italian cypress (*Cupressus sempervirens*), and sweet gum (*Liquidambar styraciflua*).

Ruderal/Barren

Ruderal/barren habitats within the Plan area consist of gravel substrate and are nearly devoid of vegetation. This habitat is highly disturbed and provides marginal plant habitat. Sparse vegetation, dominated by invasive non-native species, occurs in some areas within this habitat.

River/Stream

River and stream habitats are open water features, and consequently support relatively sparse vegetation; however, throughout the Plan area, riparian vegetation grows adjacent to these habitats. The associated riparian vegetation is dominated by plant species that have adapted to the wet soil conditions found along stream margins. Riparian vegetation located within the Plan area includes willow (*Salix* sp.), madrone, California wild grape (*Vitis californica*), Himalayan blackberry (*Rubus discolor*), and wild cucumber (*Marah* sp.).

Open Water

Sugar Pine Reservoir and Big Reservoir are used for water storage and recreation, and also provide valuable habitat for wildlife. Vegetation within these habitats is relatively sparse, and consists predominantly of scrub and emergent vegetation around reservoir margins. Open water habitats in the Forest Ranch Concept Plan area include the Nick Welch Spring and an unnamed pond, located in the northeastern portion of the Concept Plan area.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under the California Environmental Quality Act (CEQA), Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. Additionally, sensitive habitats are protected under the specific local objectives and policies listed in the Placer County and Foresthill General Plans. Sensitive habitats within the FDCP area include potential jurisdictional waters of the United States, wildlife movement corridors, and riparian habitats. These habitats are discussed below.

Jurisdictional Waters of the United States

The United States Army Corps of Engineers (Corps) regulates discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act (CWA). “Discharge of fill material” is defined as the addition of fill material into waters of the U.S., including, but not limited to, the following: placement of fill that is necessary for the construction of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33 CFR § 328.2(f)]. In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways, depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 CFR §328.3(b)]. Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the “normal circumstances” for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 CFR §328.4(c)(1)]. The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 CFR §328.3(e)].

Jurisdictional waters of the U.S. within the Plan area include the Middle and North Forks of the American River and associated tributaries, Sugar Pine Reservoir, and Big Reservoir. Additional streams, ponds, and intermittent drainages within the Plan area are potential jurisdictional waters

of the U.S. Additional water features deemed jurisdictional by the Corps, such as wetlands, ponds, or intermittent drainages, may occur within the Plan area; an official Corps delineation of features within the Plan area would result in the identification of such features.

Wildlife Movement Corridors

Wildlife movement corridors are established routes for wildlife and are essential to the distribution of species populations. As a result, wildlife movement corridors are considered a sensitive habitat by the California Department of Fish and Game (CDFG). Often, these corridors occur in meadow or riverine habitats, providing a clear route for movement in addition to supporting ample food sources and shelter. Movement corridors may also consist of a region of undisturbed open space that connects two larger parcels of undisturbed land. A majority of the habitats within the Plan area is not developed and provides a means of movement and migration through the area. Further development of the Plan area will diminish the quality of these movement corridors and will ultimately restrict wildlife movement throughout the Foresthill Divide region.

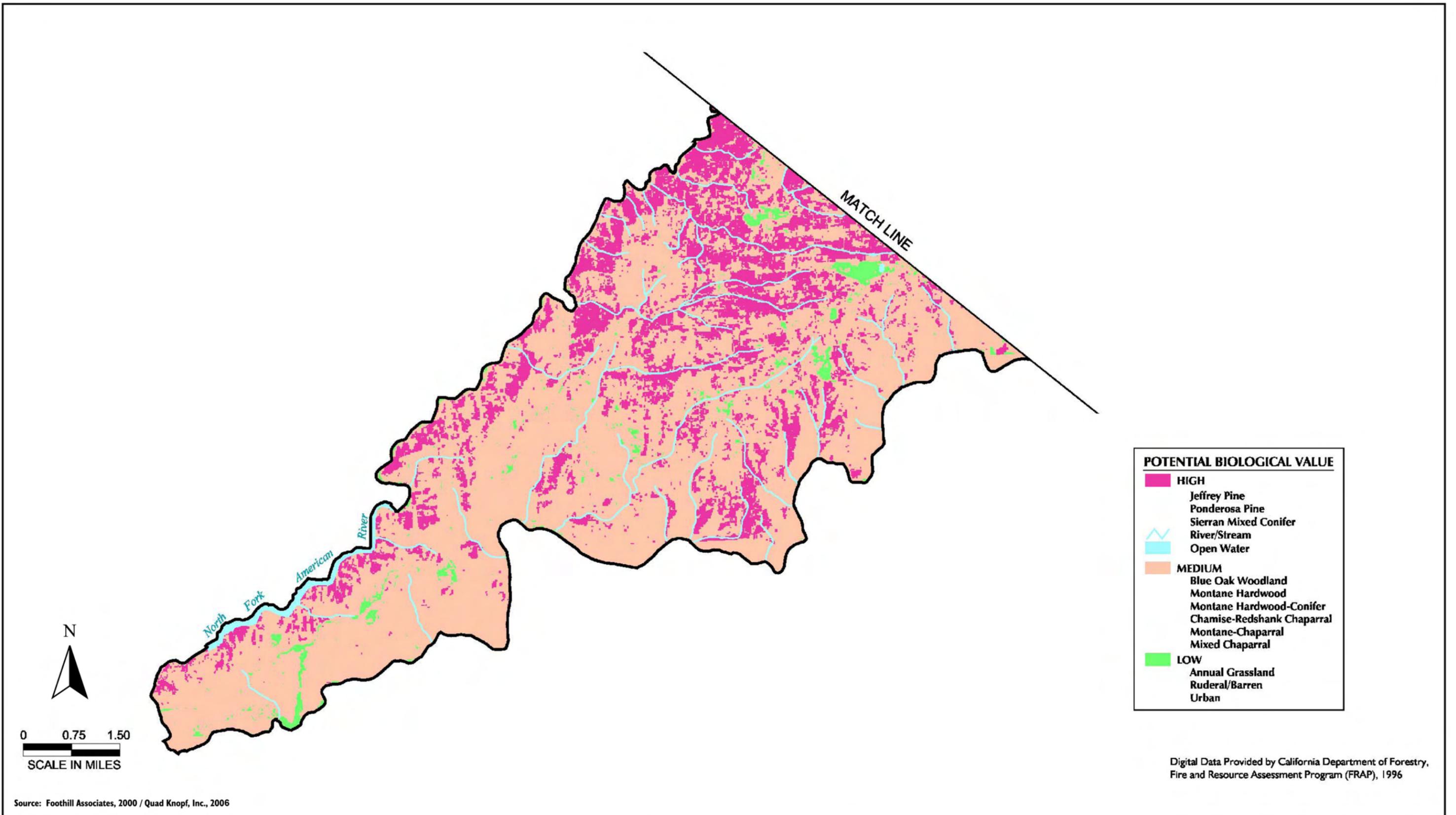
Riparian Habitat

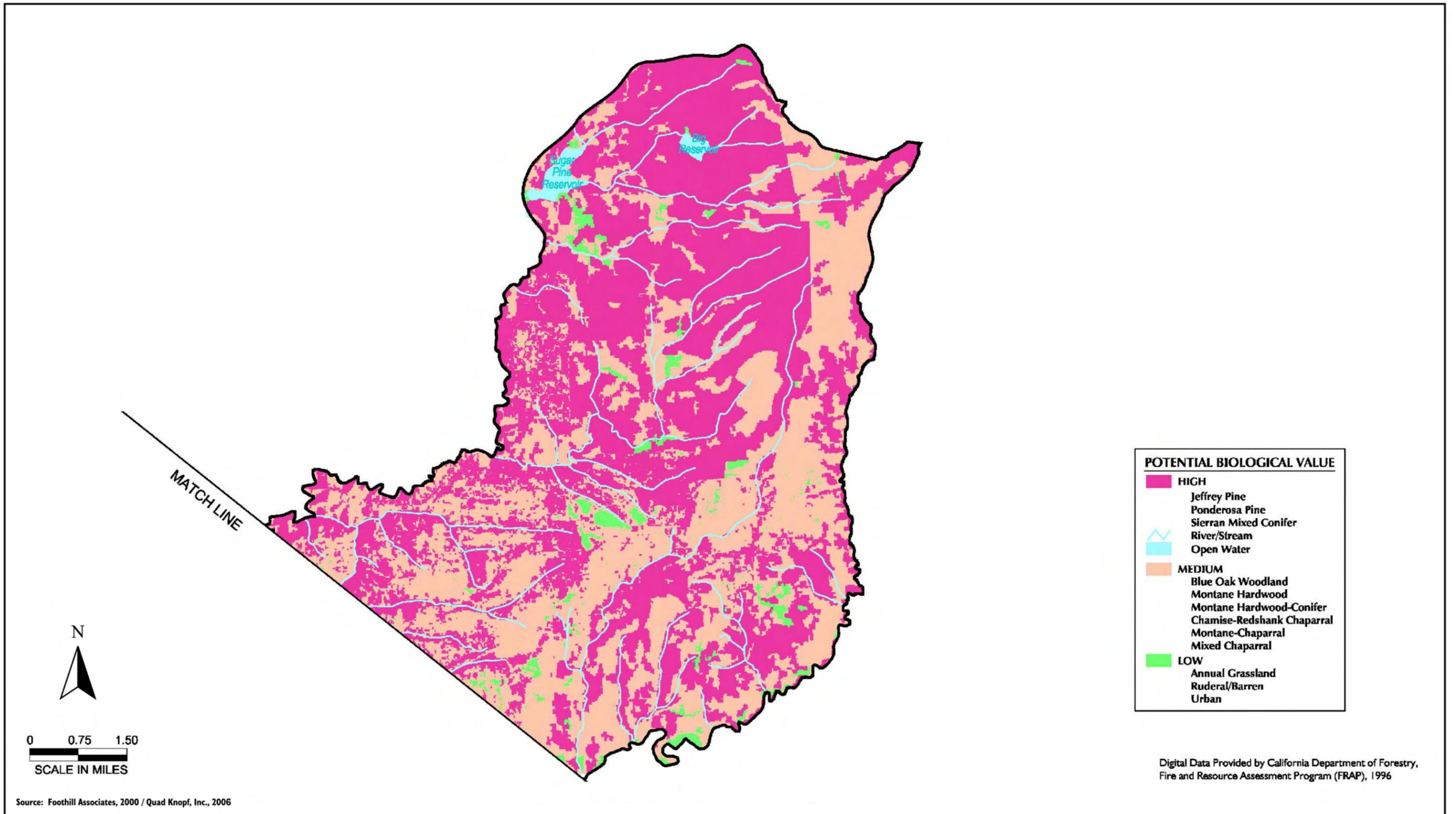
Riparian habitats support a diverse assemblage of plant species and provide shelter, foraging, and breeding habitat for numerous species of wildlife. Riparian habitats, associated with streams and intermittent drainages, are interspersed throughout the Plan area. Riparian habitats are not afforded special protection under federal law; however, these habitats are considered special resources in Placer County and are protected under the Placer County General Plan and the Foresthill Divide Community Plan. Additionally, the continued decline of riparian habitats is of concern to the CDFG and CNPS.

Riparian corridors occur in development areas. Five development areas were reviewed, including Foresthill, Todd's Valley, Baker Ranch, Yankee Jim's and Michigan Bluff. Development areas are illustrated on Figures IV-3 and IV-4 of the FDCP. A review of topographic maps and aeriels indicate riparian corridors occurring within potential development areas that include Todd's Creek, Gas Canyon, Big Snyder Gulch, Slug Gulch, Peach Stone Gulch, Devil's Canyon, and North Branch Owl Creek. Streams and riparian corridors located outside development areas may also be affected by development.

Biological Value of Habitats

The value of the jurisdictional waters of the U.S., wildlife movement corridors, and riparian habitat is illustrated in Figures 3.6-1 and 3.6-2. These resources have been categorized into high, medium, and low to illustrate the significance of future impacts. This rating system illustrates the relative importance of the sensitive habitats in the Plan area. Jeffrey and Ponderosa Pine, Sierran Mixed Conifer, and streams/waterbodies all have high biological value, mainly due to the number of potentially occurring special-status species, which exceeds ten. Medium biological value was given to Montane Hardwoods and Chaparral, Blue Oak Woodland, and Mixed Chaparral. These areas have between six and ten potentially occurring special-status species. Areas with low biological value include developed, annual grassland, and ruderal/barren land.





These areas typically have between one and five potentially occurring special-status species. The Plan area is rich in biological resources, and riparian corridors are found throughout the entire Plan area. As a result, a significant portion of the Plan area has a high value.

Cumulative Effects on Common Species

The FDCP area supports habitat for numerous common resident and migratory wildlife species (e.g., California ground squirrel, raccoon, opossum, blacktail jackrabbit, black bear). The continuous expansion of urban development encroaches into habitats utilized by these species. Although efforts to minimize encroachment into currently undisturbed habitats are encouraged, these common species are not formally protected under the federal or state Endangered Species Acts.

Special-Status Plant Species

Special-status species are species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Listed and special-status species are defined as:

- Listed or proposed for listing under the State or federal Endangered Species Acts;
- Protected under other regulations (e.g., local policies);
- California Department of Fish and Game (CDFG) Species of Special Concern;
- Listed as species of concern by the California Native Plant Society (CNPS), or
- Otherwise receive consideration during environmental review (CEQA)

Federal Endangered Species Act/California Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The State of California enacted a similar law, the California Endangered Species Act (CESA), in 1984. The state and federal Endangered Species Acts are intended to operate in conjunction with CEQA and the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. The United States Fish and Wildlife Service (USFWS) is responsible for implementation of the FESA, while the California Department of Fish and Game (CDFG) implements the CESA. During review of development projects, each agency is given the opportunity to comment on the potential of the projects to affect listed plants and animals.

Species of Special Concern

In addition to formal listing under FESA and CESA, plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern” developed by the CDFG. It tracks species in California whose numbers, reproductive success, or habitat may be threatened.

California Native Plant Society Listings

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

- List 1A: Plants Believed Extinct
- List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- List 3: Plants About Which We Need More Information – A Review List
- List 4: Plants of Limited Distribution – A Watch List

Special-Status Plant Species Presence in the Community Plan Area

Table 3.6-2 identifies the plant species listed in the USFWS species list for the Auburn, Colfax, Dutch Flat, Foresthill, Georgetown, Greenwood, Michigan Bluff, and Westville 7.5-minute USGS quadrangles, all of which have occurred in the vicinity of the Plan area. Additionally, plant species listed in the California Natural Diversity Data Base (CNDDDB) as occurring within a radius taken five miles from the northeast and southwest corners of the Plan area (referred to as the 5-mile radius) are included in Table 3.6-2. Species listed as having no potential for occurrence are species either not expected to occur within the Plan area based on the known range of the species, or not expected to occur due to lack of suitable habitat within the Plan area. Listed and special-status plant species that are known to occur, or may potentially occur, within the Plan area are listed in Table 3.6-3 and described below. The plant species described below were considered for this analysis based on field surveys and review of the CNDDDB database, USFWS species lists for the Placer County vicinity, CNPS literature, and existing documentation for the Foresthill Divide vicinity.

Listed and Special-Status Plants

The CNDDDB lists eleven special-status plant species as occurring within the 5-mile radius of the Plan area; however, based on literature review, soil analysis, and species range information, it was determined that suitable habitat for only nine species occurs within the Plan area. These species include Butte County fritillary (*Fritillaria eastwoodiae*), Layne's ragwort (*Senecio layneae*), nissenan manzanita (*Arctostaphylos nissenana*), Stebbins's phacelia (*Phacelia stebbinsii*), saw-toothed lewisia (*Lewisia serrata*), woolly violet (*Viola tomentosa*), Red Hills soaproot (*Chlorogalum grandiflorum*), Pine Hill flannelbush (*Fremontodendron decumbens*), and Stebbins's morning glory (*Calystegia stebbinsii*). Additionally, four of these species (Layne's ragwort, nissenan manzanita, saw-toothed lewisia, and Stebbins's phacelia) are also listed in the USFWS species list for the Foresthill Divide vicinity. Discussed below are the special-status plant species that have the potential to occur within the Plan area.

Butte County fritillary. Butte County fritillary is a federal species of concern and is listed with the CNPS as a 1B species. Butte County fritillary occurs in cismontane woodlands, chaparral, and

lower montane coniferous forests on serpentinite, red clay, and sandy loam soils. This species is found in elevations ranging from 130 to 4,900 feet above mean sea level (MSL). One record of this species occurs south of Sugar Pine Reservoir on the northwestern boundary of the Plan area. Suitable soil conditions for this species are present within the Plan area. Potential habitat for this species occurs within the chaparral, montane hardwood, blue oak woodland, and coniferous forest habitats in the Plan area, and consequently this species may occupy these habitats.

Layne's ragwort. Layne's ragwort is listed federally threatened, listed rare in California, and is considered a 1B species with the CNPS. This species occupies chaparral and cismontane woodland habitats within ultramafic soils. Layne's ragwort is known from elevations ranging between 650 to 3,200 feet above MSL. Six records of this species are listed with the CNDDDB within the 5-mile radius of the Plan area, in El Dorado County. The chaparral and blue oak woodland habitats within the Plan area support suitable habitat for this species. As a result, this species may occupy these habitats within the Plan area.

Nissenan manzanita. Nissenan manzanita is a species of concern to the federal resource agencies and is listed with the CNPS as a 1B species. This species occurs in elevations ranging from 1,400 to 3,600 feet above MSL in closed-cone coniferous forest and chaparral habitats. The CNDDDB lists four records of this species within the 5-mile radius of the Plan area, in El Dorado County. Suitable habitat for this species exists in the chaparral and coniferous forest habitats within the Plan area; consequently, this species could occupy these habitats.

Stebbins's phacelia. Stebbins's phacelia is a species of concern to federal resource agencies and is listed with the CNPS as a 1B species. Stebbins's phacelia occurs on metamorphic rock outcrops in a variety of habitats including lower montane coniferous forest, cismontane woodland, and riparian woodland. This species occurs in elevations ranging from 1,900 to 6,700 feet above MSL. The CNDDDB lists 28 records of this species within the 5-mile radius of the Plan area in Placer and El Dorado counties. Because potential habitat for this species exists within the Plan area, this species may occur here.

Saw-toothed lewisia. Saw-toothed lewisia is a federal species of concern and is listed with the CNPS as a 1B species. This species occurs on metamorphic rock cliffs in broadleafed upland forest, lower montane coniferous forest, and riparian forest habitats in elevations ranging from 2,900 to 4,700 feet above MSL. Saw-toothed lewisia is only known in California from El Dorado and Placer counties. One record of this species is listed with the CNDDDB within the 5-mile radius of the Plan area. Suitable habitat for this species occurs onsite, and this species could occur within the Plan area.

Woolly violet. Woolly violet, a CNPS 1B listed species, occurs in lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest habitats. This species is known from elevations ranging from 3,300 to 6,500 feet above MSL, and is associated with gravelly soils within open canopy forests. Three occurrences of this species are listed with the CNDDDB within the 5-mile radius of the Plan area. Due to the presence of suitable habitat, woolly violet could occur within the Plan area.

Red Hills soaproot. Red Hills soaproot is a federal species of concern and is a CNPS 1B listed species. This species occurs in chaparral, lower montane coniferous forest, and cismontane woodland habitats within 540 to 2,500 feet above MSL. This species requires serpentinite and gabbro derived soil conditions. One record of Red Hills soaproot is listed with the CNDDDB within the five-mile radius of the Plan area. The chaparral, blue oak woodland, montane hardwood, and coniferous forest habitats within the Plan area represent suitable habitat for Red Hills soaproot, and this species could occur, within suitable soil conditions, in these habitats in the Plan area.

Pine Hill flannelbush. Pine Hill flannelbush is federally listed as endangered and is a state listed rare species. This species is also listed by the CNPS as a 1B species. Pine Hill flannelbush occurs in chaparral and cismontane woodland habitats on gabbroic or serpentinite soils. This species is known from ten occurrences within El Dorado County and one record in Nevada County. Two records of this species are listed with the CNDDDB in El Dorado County within the 5-mile radius of the Plan area. Because this species is extremely rare, it is unlikely that it occurs within the Plan area; however, without conducting focused surveys for this species, the possibility that Pine Hill flannelbush may occur within the Plan area cannot be ruled out.

Stebbins's morning glory. Stebbins's morning glory is federally and state listed as endangered. This species is also listed by the CNPS as a 1B species. Open chaparral and cismontane woodlands represent suitable habitat for this species; however, Stebbins's morning glory is restricted to serpentinite or gabbroic soil conditions within these habitats. This species is known from El Dorado and Nevada counties and is listed with the CNDDDB as occurring within the 5-mile radius of the Plan area. Because suitable habitat exists in the chaparral and blue oak woodland habitats in the Plan area, and suitable soil conditions are present, this species could occur here.

Table 3.6-2 Listed and Special-Status Species Potentially Occurring in the Region

Common Name	Scientific Name	Regulatory Status (Federal, State, CNPS)	Potential for Occurrence
Plants			
Brandegee's clarkia	<i>Clarkia biloba brandegeae</i>	1B	YES
Butte County fritillary	<i>Fritillaria eastwoodiae</i>	SC; --; 1B	YES
Layne's ragwort	<i>Senecio layneae</i>	FT;CR;1B	YES
Nissenan manzanita	<i>Arctostaphylos nissenana</i>	SC; --; 1B	YES
Pine Hill flannelbush	<i>Fremontodendron californicum</i> <i>ssp. Decumbens</i>	FE;CR;1B	YES
Red Hills soaproot	<i>Chlorogalum grandiflorum</i>	SC;--;1B	YES
Red-anthered rush	<i>Juncus marginatus</i> var. <i>marginatus</i>	--; --; 2	NO
Saw-toothed lewisia	<i>Lewisia serrata</i>	SC; --; 1B	YES
Scadden Flat checkerbloom	<i>Sidalcea stipularis</i>	SC; CE; 1B	NO
Stebbins' morning glory	<i>Calystegia stebbinsii</i>	FE; CE;1B	YES
Stebbins' phacelia	<i>Phacelia stebbinsii</i>	SC; --; 1B	YES
Woolly violet	<i>Viola tomentosa</i>	--; --; 1B	YES
Wildlife			
Invertebrates			
Spiny rhyacophilan caddisfly	<i>Rhyacophila spinata</i>	SC; --; --	YES

Common Name	Scientific Name	Regulatory Status (Federal, State, CNPS)	Potential for Occurrence
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT;--;--	YES
Yates' snail	<i>Ammonitella yatesi</i>	SC; --; --	YES
Amphibians/Reptiles			
California horned lizard	<i>Phrynosoma coronatum frontale</i>	SC; CSC (Protected);-- ; --	YES
California red-legged frog	<i>Rana aurora draytonii</i>	FT; CSC (Protected);-- ; --	YES
Foothill Yellow-Legged Frog	<i>Rana boylei</i>	SC; CSC (Protected); - -	YES
Mountain yellow-legged frog	<i>Rana muscosa</i>	SC; CSC (Protected); - -	YES
Northwestern pond turtle	<i>Clemmys marmorata marmorata</i>	SC; CSC (Protected);-- ; --	YES
Western spadefoot toad	<i>Scaphiopus hammondii</i>	SC; CSC (Protected);-- ; --	YES
Fish**			
Central Valley fall/late fall-run chinook salmon	<i>Oncorhynchus tshawytscha</i>	C; CSC;--	NO
Central Valley spring-run chinook salmon	<i>Oncorhynchus tshawytscha</i>	FT (PX); CT;--	NO
Central Valley steelhead	<i>Oncorhynchus mykiss</i>	FT;--;--	NO
Delta smelt	<i>Hypomesus transpacificus</i>	FT; CT;--	NO
Green sturgeon	<i>Acipenser medirostris</i>	SC; CSC;--	NO
Longfin smelt	<i>Spirinchus thaleichthys</i>	SC; CSC;--	NO
Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	FT; CSC;--	NO
Winter-run chinook salmon	<i>Oncorhynchus tshawytscha</i>	FE; CE;--	NO
Birds			
Peregrine falcon	<i>Falco peregrinus</i>	D; CE;--	YES
Bald eagle	<i>Haliaeetus leucocephalus</i>	FT; CE;--	YES
Bank swallow	<i>Riparia riparia</i>	--;CT;--	NO
Black swift	<i>Cypseloides niger</i>	SC (MNBMC); --; --	YES
California spotted owl	<i>Strix occidentalis occidentalis</i>	SC (MNBMC); CSC; - -	YES
Little willow flycatcher	<i>Empidonax traillii brewsteri</i>	--;CSC;--	NO
Northern goshawk	<i>Accipiter gentilis</i>	SC (MNBMC); CSC (sensitive); --	YES
Tricolored blackbird	<i>Agelaius tricolor</i>	SC; CSC;--	YES
Western burrowing owl	<i>Athene cucularia</i>	SC;CSC;--	YES
White-faced ibis	<i>Plegadis chihi</i>	SC;CSC;--	NO
Mammals			
Fringed myotis bat	<i>Myotis thysanodes</i>	SC;--;--	YES
Greater western mastiff bat	<i>Eumops perotis californicus</i>	SC; CSC;--	YES
Long-eared myotis bat	<i>Myotis evotis</i>	SC;--;--	YES
Long-legged myotis bat	<i>Myotis volans</i>	SC;--;--	YES
Pacific fisher	<i>Martes pennanti pacifica</i>	SC; CSC (full species); --	YES
Pine marten	<i>Martes americana</i>	SC; --; --	YES
San Joaquin pocket mouse	<i>Perognathus inornatus</i>	SC;--;--	NO
Sierra Nevada red fox	<i>Vulpes vulpes necator</i>	SC; CT; --	YES

Common Name	Scientific Name	Regulatory Status (Federal, State, CNPS)	Potential for Occurrence
Sierra Nevada snowshoe hare	<i>Lepus americanus tahoensis</i>	SC; CSC; --	YES
Small-footed myotis bat	<i>Myotis ciliolabrum</i>	SC;--;--	YES
Spotted bat	<i>Euderma maculatum</i>	SC; CSC;--	YES
Yuma myotis bat	<i>Myotis yumanensis</i>	SC; CSC;--	YES

FE = federal endangered FT = federal threatened SC = federal species of concern D = delisted PX = critical habitat

C = candidate for listing MNBMC = Migratory Nongame Birds of Management Concern

CE = state endangered CT = state threatened CR = state rare CSC = California species of special concern

1B = CNPS list plants rare, threatened, or endangered in California or elsewhere 2 = CNPS lists plants rare, threatened, or endangered in California, but more numerous elsewhere

*Not enough information is available to accurately address the potential for this species to occur within the planning.

** Information pertaining to anadromous fishes based on communication with the CDFG.¹⁹

Source: Foothill Associates, 2000.

Table 3.6-3 Listed and Special-Status Species Potentially Occurring Within the Plan Area or Vicinity

Common Name	Scientific Name	Habitat Requirements	Potential for Occurrence
Plants			
Brandegge's clarkia	<i>Clarkia biloba brandegeae</i>	Chaparral and cismontane woodlands below 2,900 feet.	Species could occur in suitable habitats within the planning area.
Butte County fritillary	<i>Fritillaria eastwoodiae</i>	Chaparral, cismontane woodland, and lower montane coniferous forest habitats.	Species could occur in suitable habitats within the planning area.
Layne's ragwort	<i>Senecio layneae</i>	Chaparral and cismontane woodland habitats on serpentinite or gabbroic soil conditions	Suitable habitats occur within the planning area.
Nissenan manzanita	<i>Arctostaphylos nissenana</i>	Closed cone coniferous forest and chaparral habitats	Suitable habitats occur within the planning area.
Stebbins's phacelia	<i>Phacelia stebbinsii</i>	Cismontane woodland, lower coniferous forest, and meadow habitats	Suitable habitats occur within the planning area.
Saw-toothed lewisia	<i>Lewisia serrata</i>	Lower coniferous forest, broadleafed upland forest, and riparian forest habitats	Suitable habitats occur within the planning area.
Woolly violet	<i>Viola tomentosa</i>	Lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest habitats on gravelly soil conditions	Suitable habitats occur within the planning area.
Red hills soaproot	<i>Chlorogalum grandiflorum</i>	Cismontane woodland, chaparral, and lower montane coniferous forest habitats on serpentinite or gabbroic soil conditions	Suitable habitats occur within the planning area.
Pine Hill flannelbush	<i>Fremontodendr on decumbens</i>	Chaparral and cismontane habitats on gabbroic or serpentinite soil conditions	Species could occur in suitable habitats within the planning area.
Stebbins's morning-glory	<i>Calystegia stebbinsii</i>	Open chaparral and cismontane woodland habitats on serpentinite or gabbroic soil conditions	Species could occur in suitable habitats within the planning area.
Wildlife			
Invertebrates			
Yates' snail	<i>Ammonitella yatesi</i>	Limestone caves and outcroppings, typically on northfacing slopes	Species could occur in suitable habitats within the planning area.

Common Name	Scientific Name	Habitat Requirements	Potential for Occurrence
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	Elderberry shrubs (host plant)	No shrubs found onsite during field reconnaissance; however, elderberry shrubs may occur within the planning area.
Spiny rhyacophilan caddisfly	<i>Rhyacophila spinata</i>	Cool, running water	Species could occur in the streams within the planning area.
Amphibians			
California red-legged frog	<i>Rana aurora draytonii</i>	Requires slow moving streams, ponds, or marsh habitat with emergent vegetation	Species could occur in and along the streams and open water within the planning area.
Mountain yellow-legged frog	<i>Rana muscosa</i>	Lakes, streams, and ponds in elevations ranging from 1,370 to 3,650 meters in the Sierra Nevada	Species could occur in the streams and open water habitats within the planning area.
Western spadefoot toad	<i>Scaphiopus hammondi</i>	Require shallow temporary pools with adjacent grassland habitat	Species could occur in seasonal wetlands associated with annual grassland habitats within the planning area.
Foothill yellow-legged frog	<i>Rana boylei</i>	Requires shallow flowing water supporting cobble sized substrate	Species could occur within the streams located within the planning area.
Reptiles			
California horned lizard	<i>Phrynosoma coronatum frontale</i>	Requires friable soils; occupies a wide variety of habitats	Species may be associated with friable soils in chaparral, montane hardwood, blue oak woodland, annual grassland, barren, or coniferous forest habitats within the planning area.
Northwestern pond turtle	<i>Clemmys marmorata marmorata</i>	Requires permanent water source with nearby basking sites	Species could occur along slower reaches of streams within the planning area or in the open water habitats onsite.
Birds			
Northern goshawk	<i>Accipiter gentillis</i>	Middle to high elevation mixed coniferous forest habitats	Species could forage and nest in woodlands, montane hardwood, and coniferous forest habitats within the planning area.
Western burrowing owl	<i>Athene cunicularia hypugea</i>	Open grassland habitat; often nests in abandoned ground squirrel burrows within grasslands	Potential habitat for this species occurs in the annual grassland habitats within the planning area.
American peregrine falcon	<i>Falco peregrinus anatum</i>	Nests in a wide variety of habitats including woodlands, dense coniferous forests, and coastal habitats	Species could forage and nest in woodlands, montane hardwood, and coniferous forest habitats within the planning area.
Black swift	<i>Cypseloides niger</i>	Nests on cliffs in the central and southern Sierra Nevada; also known from coastal Santa Cruz and Monterey Counties and the San Bernardino and San Jacinto mountains	Species could occur in suitable habitats within the planning area.
California spotted owl	<i>Strix occidentalis occidentalis</i>	Old growth forests with multiple layered canopies; associated with mixed coniferous, redwood, and Douglas fir forest habitats	Species could forage and nest in the mixed coniferous forest and montane hardwood habitats within the planning area.

Common Name	Scientific Name	Habitat Requirements	Potential for Occurrence
Bald eagle	<i>Haliaeetus leucocephalus</i>	Nests in the northernmost counties of California within dense conifer stands and woodlands	Suitable wintering habitat for this species occurs in the montane hardwood and coniferous forest habitats within the planning area.
Tricolored blackbird	<i>Agelaius tricolor</i>	Nests in emergent wetlands in dense cattails, blackberry, and willows throughout the Central Valley and California coast	This species could occur in seasonal wetlands within the annual grassland habitats in the planning area.
Mammals			
Greater western mastiff bat	<i>Eumops perotis californicus</i>	Occurs in open coniferous forests, deciduous woodlands, annual grassland, chaparral, and scrub habitats	Potential habitat for this species occurs in the blue oak woodland, coniferous forest, annual grassland, chaparral, and montane hardwood habitats within the planning area.
Spotted bat	<i>Euderma maculatum</i>	Occurs in wide variety of habitats including arid deserts, grasslands, mixed coniferous forests; roosts in rock crevices, cliffs, caves	Potential habitat for this species occurs in the blue oak woodland, coniferous forest, annual grassland, chaparral, and montane hardwood habitats within the planning area.
Sierra Nevada snowshoe hare	<i>Lepus americanus tahoensis</i>	Found only in the Sierra Nevada in mixed conifer, subalpine conifer, red fir, Jeffrey pine, lodgepole pine, and aspen forests	Potential habitat for this species occurs in the coniferous forest and montane hardwood habitats within the planning area.
Small-footed myotis bat	<i>Myotis ciliolabrum</i>	Occurs in a wide variety of habitats; roosts in caves, crevices, and buildings	Potential habitat for this species occurs in the blue oak woodland, coniferous forest, annual grassland, chaparral, and montane hardwood habitats within the planning area.
Long-eared myotis bat	<i>Myotis evotis</i>	Woodland and forest habitats; known to roost in rock crevices, under bark, and tree snags	Potential habitat for this species occurs in the blue oak woodland, coniferous forest, annual grassland, chaparral, and montane hardwood habitats within the planning area.
Fringed myotis bat	<i>Myotis thysanodes</i>	Known to roost in caves, mines, and rock crevices within a variety of habitats	Potential habitat for this species occurs in the blue oak woodland, coniferous forest, annual grassland, chaparral, and montane hardwood habitats within the planning area.
Long-legged myotis bat	<i>Myotis volans</i>	Occurs in woodlands and forest habitats generally over 4,000 feet; roosts in rock crevices, under bark, in tree snags, and cliffs	Potential habitat for this species occurs in the blue oak woodland, coniferous forest, annual grassland, chaparral, and montane hardwood habitats within the planning area.

Common Name	Scientific Name	Habitat Requirements	Potential for Occurrence
Yuma myotis bat	<i>Myotis yumanensis</i>	Occurs in a wide variety of habitats; roosts in caves and rock crevices	Potential habitat for this species occurs in the blue oak woodland, coniferous forest, annual grassland, chaparral, and montane hardwood habitats within the planning area.
Sierra Nevada red fox	<i>Vulpes vulpes necator</i>	Lodgepole pine, mixed conifer, montane riparian, and ponderosa pine forests within the Sierra Nevada	Potential habitat for this species occurs in the coniferous forest and montane hardwood habitats within the planning area.
Pacific fisher	<i>Martes pennanti pacifica</i>	Dense, closed canopy coniferous forests and riparian habitats in the Sierra Nevada, Cascades, and Klamath Mountains	Potential habitat for this species occurs in the coniferous forest and montane hardwood habitats within the planning area.
Pine marten	<i>Martes americana</i>	Various habitats along the north coast and within the Sierra Nevada, Klamath, and Cascades mountain ranges	Potential habitat for this species occurs in the coniferous forest and montane hardwood habitats within the planning area.

Source: Foothill Associates, 2000.

Special-Status Animal Species

Special-status animal species are species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Definitions of listed and special-status species are provided above. In addition to the regulatory agencies and status listed in that section, raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”

Listed and Special-Status Animals

The CNDDDB lists nine special-status wildlife species as occurring within the 5-mile radius of the Plan area. Potential habitat is present within the Plan area for all nine species: spiny rhyacophilan caddisfly (*Rhyacophila spinata*), Yates’ snail (*Ammonitella yatesi*), California horned lizard (*Phrynosoma coronatum frontale*), California red-legged frog (*Rana aurora draytonii*), mountain yellow-legged frog (*Rana muscosa*), northwestern pond turtle (*Clemmys marmorata marmorata*), black swift (*Cypseloides niger*), Pacific fisher (*Martes pennanti pacifica*), and northern goshawk (*Accipiter gentillis*). Eleven additional special-status species recorded in the USFWS species lists for the Auburn, Colfax, Dutch Flat, Foresthill, Georgetown, Greenwood, Michigan Bluff, and Westville quadrangles have the potential to occur within the Plan area. These species include Valley elderberry longhorn beetle (*Desmocerus californicus*

dimorphus), foothill yellow-legged frog (*Rana boylei*), western spadefoot toad (*Scaphiopus hammondi*), western burrowing owl (*Athene cunicularia hypugea*), American peregrine falcon (*Falco peregrinus anatum*), California spotted owl (*Strix occidentalis occidentalis*), bald eagle (*Haliaeetus leucocephalus*), tricolored blackbird (*Agelaius tricolor*), Sierra Nevada showshoe hare (*Lepus americanus tahoensis*), Sierra Nevada red fox (*Vulpes vulpes necator*), and pine marten (*Martes americana*). Additionally, numerous species of bats listed in the USFWS species list, including spotted bat (*Euderma maculatum*), long-eared myotis (*Myotis evotis*), fringed myotis (*Myotis thysanodes*), long-legged myotis (*Myotis volans*), Yuma myotis (*Myotis yumanensis*), small-footed bat (*Myotis ciliolabrum*), and greater western mastiff bat (*Eumops perotis*), are known from the vicinity of the Plan area and are described below. Raptors and other migratory birds are protected by state and/or federal resource agencies and are also described below.

Spiny rhyacophilan caddisfly. The spiny rhyacophilan caddisfly is a federal species of concern. This species occupies streams and rivers and is associated with reaches supporting a continually flowing current and cool temperature conditions. One record of this species is listed with the CNDDDB from Ladys Canyon, which is located within the southeastern boundary of the Plan area. Suitable habitat for this species is present in the Plan area, and consequently additional populations of this species may occur here.

Yates' snail. Yates' snail is a federal species of concern. This species occupies caves and outcroppings derived from limestone and is commonly found on north-facing slopes. One record of this species is listed with the CNDDDB approximately one mile from the southwestern boundary of the Plan area. Several locations within the Plan area support rock outcroppings and depending whether these locations are derived from limestone, these areas could support suitable habitat for this species.

California horned lizard. California horned lizard is a species of special concern to the USFWS and the CDFG. In northern California, this species occurs in loose friable soils within grassland, woodland, and coniferous forest habitats below 2000 feet. This species was not observed during field reconnaissance; however, this species is listed with the USFWS as having once occurred in the Plan area vicinity, and four records are listed within the 5-mile radius of the Plan area. Suitable habitat for this species exists in the Plan area, and consequently this species could occur here.

California red-legged frog. The California red-legged frog is federally listed as threatened and is a species of concern to the CDFG. This species is found primarily in slow moving streams, marshes, and ponds in elevations below 4,000 feet. California red-legged frog is extremely rare and declining within the Sierra Nevada. Recent surveys have found this species at only two locations in the Sierra, one population in Butte County and one population in El Dorado County. However, this species historically occurred throughout lower elevations in the Sierra, and isolated populations may still be extant. This species was not observed during field reconnaissance; however, suitable habitat for this species occurs in the intermittent drainages and streams within the Plan area. A population of this species has been recently listed with the CNDDDB in the Michigan Bluff vicinity, which is located within the Plan area. This species is also listed with the USFWS as having once occurred in the Foresthill Divide vicinity. Due to the

presence of suitable habitat within the Plan area, and the recent discovery of this species within the Michigan Bluff area California red-legged frog are likely to occur within the Plan area.

Mountain yellow-legged frog. Mountain yellow-legged frogs are a species of concern to federal and state resource agencies. This species is found associated with lakes, streams, and ponds in elevations ranging from 1,200 to 7,500 feet above MSL. Historically, this species' range spanned the Sierra Nevada and portions of Los Angeles and San Bernardino Counties; however, currently the southern populations of this species are limited to the San Jacinto and San Gabriel Mountains. In northern California, this species is currently found throughout the Sierra Nevada from Plumas County southward to Tulare County. The USFWS lists this species as once occurring in the vicinity of the Foresthill Divide, and one record of mountain yellow-legged frog is recorded with the CNDDDB within approximately one mile of the Plan area. Given this species' current distribution, habitat requirements, and known occurrences in the Foresthill Divide vicinity, mountain yellow-legged frog likely utilize the streams and/or lakes within the Plan area.

Northwestern pond turtle. The northwestern pond turtle is a species of concern to the USFWS and is also a California Species of Special Concern. This species is typically found along quiet streams and ponds, and feeds on aquatic plants, fish, and invertebrates. Four records of this species are listed within the 5-mile radius of the Plan area. Although not observed, this species could occur in slower reaches of the intermittent drainages and streams and in the open water habitats within the Plan area.

Black swift. Black swifts are a species of concern to federal resource agencies. This species nests in the Sierra Nevada and Cascade Range, and is also known to nest in the San Gabriel, San Bernardino, and San Jacinto mountains. Black swifts occupy these locations in California during the breeding season. Suitable nesting habitat for this species includes crevices on sea cliffs and on cliffs adjacent to waterfalls. A water source is required at the nest location. One occurrence of this species is recorded in the Plan area. As a result, this species may nest and forage here.

Pacific fisher. Pacific fishers are a species of concern to state and federal resource agencies. This species is found in dense, closed canopy coniferous forests and riparian habitats in the Sierra Nevada, Cascades, and Klamath mountains. This species dens in hollow logs, trees, and snags within dense closed canopy forests. The CNDDDB lists this species as occurring within the 5-mile radius of the Plan area, and this species was identified on the USFWS species list as having once occurred in the Plan area vicinity. Consequently, suitable habitat for this species exists in the Plan area, and this species may occur here.

Northern goshawk. Northern goshawks are a species of concern to federal and state resource agencies. This species frequents middle to high elevation mixed coniferous forest habitats, although it prefers dense stands of lodgepole pines on north-facing slopes near water for nesting. Northern goshawk foraging habitats are widespread, consisting of mixed coniferous forest habitats. Five records of this species are listed with the CNDDDB in the Foresthill Divide vicinity, and this species is also known to historically occupy this region. Suitable nesting, foraging, and wintering habitat for this species occurs within the Plan area, and this species likely utilizes these habitats.

Valley elderberry longhorn beetle. Valley elderberry longhorn beetle is a federally listed threatened species. This species is commonly found near riparian habitats within the Central Valley; however, its range spans the Sierra foothills, and may reach elevations of 3,000 feet. This species is dependent on elderberry shrubs for the larval stage of its life cycle. For this reason, elderberry shrubs are considered habitat for this species. This species is listed with the USFWS as having once occurred in the Foresthill Divide vicinity. No elderberry shrubs were found in the Plan area during field reconnaissance; however, a focused survey for elderberry shrubs has not been conducted for the Plan area vicinity, and elderberry shrubs may occur within the Plan area boundary. As a result, Valley elderberry longhorn beetle may occur within the Plan area.

Foothill yellow-legged frog. The foothill yellow-legged frog is of concern to federal resource agencies and is a California Species of Special Concern. This species occurs in the foothills of the Sierra Nevada up to 6,000 feet. Foothill yellow-legged frogs require shallow, flowing water with cobble-sized substrate. While this species is not listed in the CNDDDB within the 5-mile radius of the Plan area, it is listed as having once occurred in the Plan area vicinity. Suitable habitat for this species is present in the streams and intermittent drainages within the Plan area, and this species could occupy these habitats.

Western spadefoot toad. Western spadefoot toad is a federal and California species of concern that occurs in grassland habitats near seasonal water sources, such as vernal pools or seasonal wetlands. Habitat for this species is in rapid decline, and as a result this species is of special concern to the CDFG and the USFWS. This species was not observed within the Plan area during field reconnaissance; however, western spadefoot toad is listed with the USFWS as having once occurred in the Foresthill Divide vicinity. Consequently, this species could occur in the Plan area in seasonal wetlands associated with annual grassland habitats.

Western burrowing owl. The Western burrowing owl is a species of concern to the USFWS and CDFG. Burrowing owls inhabit open grasslands of the Central Valley. Typically, they nest in small colonies in abandoned ground squirrel burrows. This species may also be found along canal banks. No records of this species are listed with the CNDDDB within the 5-mile radius of the Plan area, and no burrows or evidence (pellets, white wash, feathers, etc.) of this species was observed during field reconnaissance. However, suitable grassland habitat for this species is present within the Plan area, and this species is historically known from the Foresthill Divide vicinity. Consequently, this species may utilize grassland habitats within the Plan area.

Peregrine falcon. American peregrine falcon is currently state-listed as endangered, and was recently removed from the federal endangered species list. This species nests in a wide variety of habitats, including woodlands, dense coniferous forests, and coastal habitats. Nests are typically located in proximity to a water source on cliffs, banks, or dunes. California populations of the peregrine falcon declined in the 1970s due to DDT contamination; however, numbers are increasing statewide. This species is recorded in the USFWS species list as having once occurred in the Foresthill Divide vicinity; however, the CNDDDB lists no recent records of this species within the Plan area. Suitable nesting, foraging, and wintering habitat for this species is

present within the Foresthill Divide Community Plan area, and as a result this species could occur here.

California spotted owl. California spotted owl is a species of concern to state and federal resource agencies. This species occurs in old growth forests with multi-layered canopies, and is associated with mixed coniferous, redwood, and Douglas fir forest habitats. This species' range spans habitats up to 7,600 feet above MSL. Suitable nesting habitat includes cavities in trees or snags; however, this species is known to nest in abandoned raptor nests, mistletoe clusters, caves, and cliffs. California spotted owl is a year-round resident of California. In mountainous regions such as the Sierra Nevada, this species may move to lower elevations during winter months. According to the USFWS species list, historically this species is known from the Foresthill Divide vicinity. Although no recent occurrences of this species in the Foresthill Divide vicinity are recorded with the CNDDDB, suitable foraging and nesting habitat for California spotted owl occurs within the Plan area, and this species may occur here.

Bald eagle. The bald eagle is federally listed as threatened and state listed as endangered. This species nests in the northernmost counties of California within dense conifer stands and woodlands and in scattered small populations at reservoirs in the central portion of the state. Nest locations are restricted to areas within close proximity to permanent water sources. Historically, this species was known from the Foresthill Divide vicinity, and suitable wintering habitat for this species is located within the Plan area. Consequently, bald eagles may utilize coniferous forest and montane hardwood habitat within the Plan area during the winter months.

Tricolored blackbird. Tricolored blackbirds are a species of concern to federal and state resource agencies. This species nests colonially in dense stands of cattails or within blackberry thickets, and requires a source of fresh water. Consequently, this species typically occurs in fresh emergent wetlands. While no records of this species are recorded with the CNDDDB within the 5-mile radius of the planning area, this species is known historically from the Foresthill Divide vicinity. This species was not observed during field reconnaissance; however, suitable habitat may occur within the Plan area. Consequently, this species could occur here.

Sierra Nevada showshoe hare. The Sierra Nevada showshoe hare is a species of concern to state and federal resource agencies. This species, a subspecies of *Lepus americanus*, is restricted to the Sierra Nevada mountain range, and population numbers are thought to be low. Sierra Nevada showshoe hares occupy young growth mixed conifer, subalpine conifer, red fir, Jeffrey pine, lodgepole pine, and aspen forests, and often utilize habitats characterized with dense understory growth located along forest edges in proximity to meadows. The USFWS species list records this species historically in the Foresthill Divide vicinity. Although no recent records of the Sierra Nevada showshoe hare are listed with the CNDDDB, suitable habitat for this species is present within the Plan area, and this species may occur here.

Sierra Nevada red fox. The Sierra Nevada red fox is a federal species of concern, and is listed in California as threatened. This species is typically found in higher elevations (above 7,000 feet MSL), but is known to occur in elevations as low as 3,900 feet above MSL. Sierra Nevada red fox occurs in a variety of habitats, including lodgepole pine, mixed conifer, montane riparian, and Ponderosa pine forests within the Sierra Nevada mountain range. This species requires

dense vegetation for cover, and prefers habitats adjacent to meadows for hunting. The Sierra Nevada red fox dens in rock outcrops and hollow logs, and is known to burrow in friable soils. Population numbers of this species are declining, and this species is rare throughout its range. Historically, this species occurred throughout the Foresthill Divide vicinity, although no recent records of the Sierra Nevada red fox are listed with the CNDDDB in the Plan area or the surrounding vicinity. While suitable habitat for this species occurs within the Plan area, no recent occurrences of this species are listed, and it is unlikely that this species utilizes the area. Without conducting focused surveys for this species in the Plan area, the possibility that this species could occur here cannot be ruled out.

Pine marten. Pine martens are a federal species of concern. This species occurs in various habitats along the north coast and within the Sierra Nevada, Klamath, and Cascades mountain ranges. This species prefers habitats exhibiting over 40 percent canopy closure, and is associated with red fir, lodgepole pine, subalpine conifer, mixed conifer, Jeffrey pine, and eastside pine habitats. This species dens in log, tree, or stump cavities, and sometimes burrows under snow adjacent to logs or stumps. Pine martens are sensitive to human disturbance and require habitat with limited human interaction. This species is listed in the USFWS species list historically within the Foresthill Divide vicinity. Suitable habitat for this species is present within the Plan area, and this species could utilize these habitats.

Bats. Bat species including spotted bat, long-eared myotis, fringed myotis, long-legged myotis, Yuma myotis, small-footed bat, and greater western mastiff bat are species of special concern to state and federal resource agencies. Habitat ranges for these bat species are widespread throughout California; however, many of these species are rare within these habitats. Habitat for bat species consists of foraging habitat, night roosting cover, maternity roost sites, and winter hibernacula. These bat species may forage within montane hardwood, coniferous forest, and blue oak woodland habitats within the Plan area. Suitable roosting sites within these habitats include caves, rock crevices, cliffs, buildings and snags. Because potentially suitable day, night, maternity, and winter roosting habitat exists in these habitats within the Plan area, some or all of these bat species likely utilize the Foresthill Divide and the surrounding vicinity.

Raptors. Numerous raptor species, including red-tailed hawk (*Buteo jamaicensis*), Coopers hawk (*Accipiter cooperii*), and sharp-shinned hawk (*Accipiter striatus*), forage and nest in the Sierra Nevada and surrounding foothills. Raptor nests are protected under the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code. The blue oak woodland, montane hardwood, and coniferous forest habitats within the Plan area support potential nesting habitat for numerous raptor species. Consequently, raptor species likely forage and nest within the FDCP area.

Other migratory birds. Migratory birds forage and nest in multiple habitats such as oak woodlands, grasslands, riparian woodlands, and coniferous forests. The nests of all migratory birds are protected under the MBTA, which makes it illegal to destroy any active migratory bird nest. Numerous migratory bird species have the potential to nest within the Plan area.

Fish and Wildlife

The Foresthill Divide Community Plan area supports the habitats described below. The dominant wildlife species associated with these habitats are also described below, and the habitats are shown in Figures IV-1 and IV-2 of the FDCP.

Coniferous Forest

Coniferous forest habitats provide cover, foraging, and breeding habitat for a large diversity of resident and migratory wildlife. Wildlife species expected to occur in this habitat include western tanager (*Piranga ludoviciana*), brown-headed cowbird (*Molothrus ater*), chipping sparrow (*Spizella passerina*), and Steller's jay (*Cyanocitta stelleri*). Additional species associated with coniferous forest habitats include mule deer (*Odocoileus hemionus californicus*), white-breasted nuthatch (*Sitta carolinensis*), black bear (*Ursus americanus*), raccoon (*Procyon lotor*), mountain lion (*Felis concolor*), western gray squirrel (*Sciurus griseus*), Oregon junco (*Junco hyemalis thurberi*), yellow-rumped warbler (*Dendroica coronata*), and northern flicker (*Colaptes auratus*).

Montane Hardwood

Wildlife species utilize montane hardwood habitats for shelter, foraging, and breeding habitat. Numerous common and migratory wildlife species are found in this habitat including mule deer, western bluebird (*Sialia mexicana*), western tanager, scrub jay (*Aphelocoma californica*), red-tailed hawk (*Buteo jamaicensis*), opossum (*Didelphis marsupialis*), and turkey vulture (*Cathartes aura*). Additional species expected to utilize this habitat include American crow (*Corvus brachyrhynchos*), California ground squirrel (*Spermophilus beecheyi*), Nuttall's woodpecker (*Picoides nuttallii*), northern flicker, Anna's hummingbird (*Calypte anna*), coyote (*Canis latrans*), great horned owl (*Bubo virginianus*), raccoon, porcupine (*Erethizon dorsatum*), blacktail jackrabbit (*Lepus californicus*), wild turkey (*Meleagris gallopavo*), and red-shouldered hawk (*Buteo lineatus*).

Chaparral

Chaparral habitats found within the Plan area support suitable shelter, foraging, and breeding habitat for numerous species of wildlife. Species commonly associated with these habitats include ash-throated flycatcher (*Myiarchus cinerascens*), mule deer, spotted towhee (*Pipilo erythrophthalmus*), blacktail jackrabbit, California quail (*Callipepla californica*), Bewick's wren (*Thryomanes bewickii*), and turkey vulture.

Blue Oak Woodland

Blue oak woodland provides suitable breeding and foraging habitat for common and migratory wildlife species, and also provides a source of shelter for these species. Wildlife expected to utilize this habitat include mule deer, northern flicker, red-tailed hawk, scrub jay, western bluebird, western tanager, blacktail jackrabbit, and wild turkey.

Annual Grassland

Annual grassland habitats support low wildlife species diversity; however, common and migratory species utilize this habitat. Typical species that occur in grasslands on the site include house finch, savannah sparrow (*Passerculus sandwichensis*), red-tailed hawk, western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), lesser goldfinch (*Carduelis psaltria*), blacktail jackrabbit, coyote, and California ground squirrel.

Urban

Predominantly common and some migratory species are found in urban regions within the Plan area. Species typically associated with this habitat type include rock dove (*Columba livia*), scrub jay, yellow-billed magpie (*Pica nuttalli*), American crow, turkey vulture, and California ground squirrel.

Ruderal/Barren

Ruderal/barren habitat provides marginal foraging and breeding habitat for wildlife species. Species expected to occur within this habitat include American robin (*Turdus migratorius*), mourning dove, turkey vulture, and killdeer (*Charadrius vociferus*).

River/Stream

Wildlife utilizing stream habitats include mostly aquatic species such as bullfrog (*Rana catesbeiana*), Pacific chorus frog (*Pseudacris regilla*), and fish species; however, numerous wildlife species also forage in stream habitats, including northern flicker, mule deer, raccoon and belted kingfisher (*Ceryle alcyon*).

Open Water

Numerous aquatic species utilize open water habitats, including fish species, bullfrog, and Pacific chorus frog, as well as mammals and avian species (for foraging habitat). Additional wildlife species expected to occur in association with these habitats include belted kingfisher, raccoon, and mule deer. Additionally, unconfirmed western pond turtle (*Clemmys marmorata*) sightings are known from the FDCP area, and this species likely utilized open water habitats in this region.

No listed anadromous fish species in Table 3.6-2 are likely to occur within the Plan area due to obstructions (e.g., Folsom Dam, Nimbus Dam) in the southern reaches of the American River. Additionally, the remaining special-status fish species listed are not likely to occur within the Plan area due to obstructions in the southern reaches of the American River and habitat/range limitations.

Topography and Slope

Slope is a term used to describe the degree of vertical rise or fall of a hill or mountain. It is a major factor in the planning process as it relates to access and suitability of building sites. Elevations range from approximately 590 to 4,790 feet above mean sea level (MSL).

The Foresthill Divide Community Plan area, located in the Sierra Nevada foothills, has a significant percentage of lands with steep slopes. The Plan area is characterized by a relatively flat ridge (0-9 percent slope) with steep sloping hillsides (in excess of 30 percent) that slope to the North and Middle Fork American River.

The majority of existing residential development in the Plan area has taken place on the flat or gently sloping areas of the terrain. Development on steep slopes (in excess of 30 percent) should be discouraged as much as possible so as to prevent excessive road grades, erosion, cuts and fills and attendant environmental problems.

Paleontology

The Placer County General Plan Background Report states that fossilized plant and animal remains could be found in nearly all of Placer County, although no inventory or other information source exists that characterizes the extent, sensitivity, or significance of paleontological resources. The Background Report states:

Fossil remains of prehistoric plant and animal life could be found in the sedimentary rocks and volcanic rock sedimentary materials that are present throughout western Placer County. Sediments associated with the Mehrten Formation in the Roseville [and Foresthill Divide] area have been found to contain fossils of terrestrial vertebrates. Fossilized animal remains also may be present in caves associated with the limestone geology that can be found in the central part of the Sierra Nevada foothills.

Large paleo-botanical fossil beds have been found in the Sierra Nevada foothills just north of the Plan area in Nevada County. They are world class deposits, estimated to be 10 million years old. Similarly, there has been a mastodon finding on Forest Service land near Truckee. While no such fossil beds or remains have been discovered within the Plan area, there is a likelihood that some may be exposed as a result of hardrock mining or development projects.

Hydrology and Surface Flows

According to the Placer County General Plan Background Report, the Foresthill Divide is located within the North Fork American River and Middle Fork American River surface water drainage basins. The basins are separated by the ridge line of the Foresthill Divide, and are comprised of 11 smaller watersheds.

The North and Middle Fork American River are major surface flows that define the area and have their confluence near Lake Clementine, in the western-most portion of the Plan area. From

the confluence, the American River feeds Folsom Lake and ultimately the Sacramento River. The Plan area includes numerous important tributaries to the American River, many of which are spring-fed.

According to the Placer County General Plan Background Report, the North Fork American River has its headwaters in the Granite Chief area, and has a relatively narrow drainage basin above Folsom Lake. Federal legislation has designated the North Fork above the Auburn State Recreation Area as a National Wild and Scenic River, precluding motorized river access or activities on the river, but permitting access on foot.

The Middle Fork American River begins in the Picayune Valley and the river forms part of the southern boundary of Placer County and the Foresthill Divide Community Plan area. According to the Background Report, the Middle Fork American River (near Foresthill) has a 20-year average flow of 66 cubic feet per second (cfs).

Placer County contains approximately 700 miles of rivers and 97,000 acres of lakes (General Plan Background Report). Two of the eight major reservoirs in the county are located within the Plan area. Lake Clementine is fed by the North Fork American River and is located in the far western portion of the Plan area. Lake Clementine has a 12,800 acre-foot storage capacity and is operated by the Army Corps of Engineers. Lake Clementine is used for power production and recreational purposes. Sugar Pine Reservoir is located in the northeastern portion of the Plan area and is fed by North Shirrtail Creek, Page Creek and Forbes Creek. The reservoir has a 7,000 acre-foot capacity and supplies a maximum 3,000 acre-feet to the Foresthill Public Utility District (PUD). It is owned and operated by the Foresthill PUD.

Water Quality

Water quality trend studies have never been done for the American River basin; however, waters above Folsom Lake are typically of good quality and are suitable for all beneficial uses as specified by the California Department of Health Services. Increased urbanization and recreation on Folsom Lake have resulted in the degradation of water quality downstream from Folsom Dam. The Foresthill Divide Community Plan area remains above these affected areas, and is the source for many of the surface flow origins. Overall, water quality within the Plan area is of excellent quality and is considered one of the area's primary assets.

However, as stated in the Placer County General Plan Background Report:

A review of available data from monitoring locations within the American River basin above Folsom Dam indicates that dissolved oxygen and temperature levels have all been above the specified water quality limit. All measured specific conductance values are below suggested limits. Acidity levels outside the water quality objective range have been observed on the Middle Fork of the American River and are probably attributable to the photosynthetic activity of aquatic plants that absorb dissolved carbon dioxide during daylight. The specified concentration for nitrate has not been exceeded; however, the concentrations of phosphorus

have been exceeded at all observation sites in the upper American River basin but these observations infrequently approached the suggested limits.

During the reauthorization of the Clean Water Act, Sections 402(P) through Section 405 of the Water Quality Act of 1987 were added, providing for a program to eliminate pollution from non-point municipal and industrial sources. Land development and construction activities of five or more acres were also included under this legislation. The addition of stormwater discharges to the National Pollutant Discharge Elimination System (NPDES), the primary federal water quality permit system administered by the federal Environmental Protection Agency (EPA), was completed on October 31, 1990, when EPA signed the final regulations. On November 16, 1990, the final rule and regulations for the NPDES Permit Application for Storm Water Discharges [40 Code of Federal Regulations (CFR) 122-124] were published in the Federal Register.

The State Water Resources Control Board has the authority to issue NPDES permits in Placer County. The State Board has issued two types of stormwater permits. A general permit has been issued for non-point municipal and industrial stormwater discharges, excluding construction activities. A second permit applies to all construction activity (with the exception of those on Indian lands and the Lake Tahoe hydrogeologic unit).

Development in the Plan area would fall under the general construction activity stormwater discharge permit process. The general construction permit authorizes the discharge of stormwater and prohibits the discharge of materials other than stormwater and all discharges that contain a hazardous substance in excess of reportable quantities established in 40 CFR 117.3 or 40 CFR 302.4, unless a separate NPDES permit has been issued to regulate those discharges. A general permit would require that a project applicant control discharges associated with construction activity by:

- eliminating or reducing non-stormwater discharges to stormwater systems and other waters of the nation;
- developing and implementing a stormwater pollution prevention plan (SWPPP); and
- performing inspections of stormwater control structures and pollution prevention measures.

NPDES Stormwater Phase II is a far-reaching federally mandated program requiring installation of Best Management Practices (BMPs) to improve non-point source pollution of stormwater runoff. Among other requirements, after March 10, 2003, the law requires installation of BMPs for water quality control for long-term (post-construction) improvement in water quality runoff from development projects. The six basic elements of the NPDES Phase II permit are:

- Public Education and Outreach on Storm Water Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control
- Post-Construction Storm Water Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

Under the provisions of NPDES II, developers in the Plan area will be required to design and install such BMPs as are determined to be appropriate.

Wastewater

The primary regulations governing implementation of wastewater reclamation projects are contained in the California Code of Regulations (CCR). Implementation of these regulations is the responsibility of both the California Department of Health Services (DHS) and the California Regional Water Quality Control Board (RWQCB).

The regulation governing the treatment and disposal of reclaimed wastewater on land is contained within Title 22, Division 4 CCR. Included in these regulations are requirements for minimum wastewater treatment levels and system reliability. For landscape irrigation on golf courses, parks, playgrounds, school yards or other areas where the public has similar exposure, the wastewater must be adequately disinfected, oxidized, coagulated, clarified and filtered pursuant to Title 22, CCR Section 60313(b). Definitions of these treatment processes are given in Title 22, CCR Section 60301.

In addition to prescribed treatment levels, Title 22 CCR requires reliability features in the treatment process for facilities that reclaim wastewater for surface irrigation. These requirements are contained in Title 22, CCR Sections 60341 through 60355. Reliability features can include multiple unit process components, short term or long term storage, or diversion to other less demanding uses. The method used for reliability aspects of the treatment process must be clearly indicated in an Engineering Report submitted to DHS and RWQCB prior to operation of the wastewater system.

California DHS has proposed amendments to Title 22 CCR that will expand the allowable uses of reclaimed effluent within the state. For example, the use of “disinfected tertiary recycled water” within the context of the amended Title 22 CCR is now approved for residential and commercial toilet flushing, structural fire fighting, commercial laundries, and decorative fountains.

Installation of individual wastewater disposal systems are governed by Placer County’s “Ordinance Governing Individual On-Site Sewage Disposal Systems;” however, the Regional Water Quality Control Board (in a letter dated October 2, 2001 in response to the Notice of Preparation for the Foresthill Divide Community Plan EIR) has indicated that this Ordinance has inadequate design criteria for on-site domestic waste disposal systems. In subsequent correspondence from Environmental Health Services to the Regional Board (August 12, 2002) the County clarified that they are only approving applications that protect the public health, safety, and welfare in accordance with the 1972 Regional Board’s Guidelines. The County believes that the current ordinance is in conformance with the 1972 Guidelines. The Regional Board’s Guidelines are reprinted in Appendix J of this EIR.

The Subdivision Map Act, Government Code Section 66767.6, provides that the governing body of a local agency shall determine whether discharge of waste from a proposed subdivision into

an existing community sewer system would cause a violation of existing Board requirements. If the proposed waste discharge would cause or add to such violations, the proposed subdivision can be denied.

The construction and operation of any community wastewater facilities in the Plan area will be subject to Waste Discharge Requirements which will be imposed by the Central Valley Regional Water Quality Control Board.

Water Resources

The Plan area is rich with water resources, including relatively intact watersheds that provide the Foresthill Divide with an excellent source of drinking water, groundwater supplies that support private well systems on the Divide, and surface waters that provide for fishing, recreation, and drinking water.

Watersheds

A watershed is an area drained by a river or river system. It is an essential ecological unit, upon which the health of the overall landscape depends. Watersheds left undisturbed by road building, logging, construction, agriculture, and mining operations will serve the greatest ecological function by preventing mudflows, water contamination, flooding, and personal property loss, while greatly enhancing regional water quality. Unlike the human-built environment, watersheds do not conform to geo-political boundaries. Watersheds form their own boundaries based on regional drainage basins and river systems, and often extend over multiple county and state lines.

The American River Watershed is a vast and precious resource in the northern Sierra Nevada mountains. It begins near the Sierra crest, and its waters carry trout, provide water for numerous wildlife species, contain gold, and irrigate the Sacramento Valley and Delta. The American River Watershed Group is an affiliation of interested groups and private landowners, as well as local, state, and federal agencies committed to enhancing and maintaining the health of the American River watershed. According to the Group:

A watershed is made up of more than vegetation, trees and brush, which can provide fuel for catastrophic fire. It also includes the land, minerals & soils, animals, creeks, rivers, & water bodies—and the water therein, air, communities and business enterprises situated on the lands which drain to the American River.

Located in Placer, El Dorado, and Nevada Counties in the Sierra Nevada mountains of California, the [American River] watershed, which comprises 616,541 acres (963 square miles) is an important source of water, wildlife habitat, forest vegetation, clean air, and recreation opportunities.

The American River Watershed Group has undertaken a Coordinated Resource Management Plan (CRMP) for the watershed. The Plan area includes 222,360 acres along the North Fork American River and 394,181 acres along the Middle Fork American River. The CRMP focuses on reduction of the fuel load and improvement of the forest ecosystem. The Watershed Group

works in cooperation with the Foresthill Fire Protection District, Sierra Planning Organization, Tahoe and El Dorado National Forests, and a variety of Federal and County agencies.

The Foresthill Divide Community Plan area contributes significantly to the larger American River Watershed. The Plan area is comprised of smaller watersheds. The Pagge Creek Watershed in the northeastern-most portion of the Plan area contributes the majority of drinking water to the Plan area.

Groundwater

There are 97 wells in Placer County that are monitored by the State Department of Water Resources. Long term groundwater level data for Placer County are only available for wells near Roseville and between Highway 65 and the Sutter County line. The Plan area is located within the Central Placer County resource area. Groundwater data for the Plan area is not available.

On the western slopes of the Sierra Nevada, groundwater is generally found in zones of fractured rock. Most areas have limited quantities of groundwater. As stated in the Placer County General Plan Background Report:

Due to the varying geologic formations which exist throughout the central region consisting largely of fractured rock, groundwater is not as abundant as in the western valley alluvium. Although some areas exhibit excellent production and high quality wells, many areas experience low well yields which are some times coupled with iron and manganese contamination.

Continued use of a community water system is recommended for higher density areas within the Plan area in order to minimize the risk of nitrate contamination in private wells. A significant portion of the Plan area is located outside the Foresthill PUD boundaries and other water system service areas, and could not be connected to a community water system. However, most of these areas are not considered suitable for development.

Water Supply

Within the Plan area, water is supplied by a combination of private wells and community water systems. The Foresthill PUD provides domestic water supply for Todd's Valley and Foresthill, and Baker Ranch Mutual Water Company provides domestic water supply for the existing mobile home park. Michigan Bluff Mutual Water Company supplies the Michigan Bluff community. In addition, many individual parcels are supplied with pumped groundwater by individual wells.

Foresthill PUD supplies 1,200 acre-feet of water from the Sugar Pine Reservoir, and can supplement the supply in emergency situations with water from two domestic wells in Todd Valley only. Water from Mill Springs is also available in normal to high precipitation years but is not counted in long-term supply calculations. The BLM originally designed the reservoir for eventual capacity expansion; the dam could potentially be raised an additional 4 to 5 feet to accommodate an additional 4,000 to 5,000 acre-feet; however, it is important to note that the

expansion of facilities would not be without significant environmental impact, and would submerge existing recreational facilities around the reservoir.

Agricultural/Timber Resources

This section discusses the agricultural and timber resources in the Plan area, and provides perspective on historic, current, and planned agricultural and timber resources and management practices in the area. Where possible, quantitative data are used; however, the record keeping systems of the Placer County Agricultural Commissioner, as well as U.S. Forest Service (USFS) and the California Department of Forestry and Fire Protection (CDF) do not categorize agricultural and timber commodities by Plan area. Existing agricultural and timber data provided by the respective agencies were compiled and synthesized with the aid of site surveys and personal interviews to provide an estimate of agricultural and timber resources and harvest levels.

The 2000 gross value of agricultural production in Placer County was \$60,508,700. The timber industry generates an additional \$9,658,800, for a total countywide agricultural and timber value of \$70,167,500.

Due primarily to its elevation, the Plan area does not have an extensive agricultural heritage. According to the Placer County Agricultural Commissioner, a limited range of crops can survive in the 2,800 to 4,000 foot elevation range typical of the Plan area. These crops include walnuts, chestnuts, and apples. A small (15± acres) walnut orchard, a chestnut orchard, and scattered vineyards and back yard apple plantings represent the bulk of existing agricultural activities in the Plan area.

The Plan area experiences more late-season rains than lower elevation areas, making many crops susceptible to damage. Late rains also increase the potential for powdery mildew on many varieties of grapes. Although some soils in the Plan area can be rocky and/or shallow, there are no inherent soil conditions that would prevent agricultural production. Rather, the lack of extensive irrigation infrastructure and availability of richer agricultural lands elsewhere in the county are primary factors behind the lack of agricultural activity in the area, as well as small parcel sizes in areas with soils suitable for agriculture. There has been some recent interest shown in limited wine grape production in the Plan area. Special water rates are available for agricultural irrigation water.

Fruit and nut crop values in Placer County have declined from \$5,149,000 in 1994 to \$3,733,800 in 2000. In the early 1900s, agriculture and timber played a dominant role in Placer County's economy. While agriculture and timber production are still important sectors of the Placer County economy, other industries such as manufacturing, recreation, and services have gained dominance.

The Plan area contains an interface between exclusive Placer County land use jurisdiction and the jurisdiction of the USFS, which is responsible for managing land uses and timber resources in the Tahoe National Forest. Additionally, CDF has regulatory authority over timber harvest activities on privately held timber land under the Z'Berg Nejedly Forest Practices Act of 1973.

Since the Plan area lies within an area designated as Very High Fire Hazard Area, CDF is also actively engaged in fuel reduction programs to reduce the high levels of brush and timber fuel loading that contribute to wildland fire hazard in the area.

Timber croplands represent approximately 33 percent of land within Placer County. Most of the timber croplands and lands under Timberland Production Zone (TPZ) are located east of Foresthill, although the Plan area contains more than 20 square miles of privately held timber land.

The Forest Taxation Reform Act of 1976 requires nonfederal timber-producing lands to be classified by County ordinances into TPZs through a process involving the County Assessor, the County Planning Commission, and timber owners. Lands in TPZs may be used for growing forest products and compatible uses only, and property taxes on TPZ lands are based on those limited uses. The land is subject to the usual County property tax, and the trees on land within a TPZ are not subject to taxation until harvested.

In 1986, Placer County contained approximately 423,000 acres of commercial forestland. Of this total, approximately 126,000 acres were included in TPZs.

Between 1995 and 2000, CDF approved 30 Timber Harvest Plans on an estimated 7,045 acres of privately owned lands south of Shirttail Canyon and east of the Tahoe National Forest boundary in the Plan area, as shown in Table 3.6-4. The majority of the plans (24 plans, covering 4,170 acres) were for shelterwood removal, wherein larger trees that block or overshadow younger trees are removed in order to open the forest canopy and enhance timber growth. Approximately 103 acres of clear cutting were authorized in Timber Harvest Plans in 1996 and 1997, with no approved plans since that time.

Small scale commercial timber harvest still occurs on private lands in the Plan area, and is likely to continue in the future. As of July 2000, CDF had approved one 3-acre Timber Harvest Plan for commercial tree thinning, and four Timber Harvest Plans on 370 acres for shelterwood removal. The amount and type of harvest proposed (e.g., clearcutting, thinning) is a function of the goals of the landowner. Commercial timber companies typically manage stands of timber to enhance production, while individual property owners may be more interested in a one-time timber harvest to generate revenues or clear a building pad.

Table 3.6-4 Timber Harvest Documents for Foresthill Divide Community Plan Area 1995-2000

No. of Docs.	Harvest Doc.	Acres	Section	Township	Range
1	2-00-094-Pla3	17	35	14N	10E
	2-00-094-Pla3		34	14N	10E
2	2-00-093-Pla3	253	32	14N	10E
	2-00-093-Pla3		31	14N	10E
3	2-00-089-Pla3	110	13	14N	10E
	2-00-089-Pla3		14	14N	10E
4	2-98-360-Pla3	168	24	14N	10E

No. of Docs.	Harvest Doc.	Acres	Section	Township	Range
	2-98-360-Pla3		23	14N	10E
	2-98-360-Pla3		14	14N	10E
	2-98-360-Pla3		13	14N	10E
5	2-98-145-Pla3	56	33	14N	10E
	2-98-145-Pla3		32	14N	10E
6	2-98-130-Pla3	35	23	14N	10E
7	2-98-085-Pla3	17	32	14N	10E
8	2-98-043-Pla3	376	20	14N	10E
9	2-98-039-Pla3	11	25	14N	10E
10	2-98-035-Pla3	37	33	14N	10E
11	2-97-403-Pla3	64	25	14N	10E
12	2-97-218-Pla3	196	25	14N	10E
	2-97-218-Pla3		24	14N	10E
	2-97-218-Pla3		13	14N	10E
	2-97-218-Pla3		12	14N	10E
13	2-97-070-Pla3	2,067	35	14N	10E
	2-97-070-Pla3		34	14N	10E
	2-97-070-Pla3		27	14N	10E
	2-97-070-Pla3		26	14N	10E
	2-97-070-Pla3		25	14N	10E
	2-97-070-Pla3		24	14N	10E
	2-97-070-Pla3		23	14N	10E
	2-97-070-Pla3		22	14N	10E
14	2-97-066-Pla3	22	24	14N	10E
	2-97-066-Pla3		13	14N	10E
15	2-97-062-Pla3	120	33	14N	10E
	2-97-062-Pla3		32	14N	10E
16	2-96-339-Pla3	5	28	14N	10E
17	2-96-074-Pla3	319	31	14N	10E
18	2-96-044-Pla3	201	29	14N	10E
	2-96-044-Pla3		19	14N	10E
19	2-95-363-Pla3	44	23	14N	10E
20	2-95-139-Pla3	19	24	14N	10E
	2-95-139-Pla3		13	14N	10E
21	2-99-268-Pla3	25	17	14N	11E
	2-99-268-Pla3		16	14N	11E
22	2-99-220-Pla3	144	22	14N	11E
	2-99-220-Pla3		21	14N	11E
	2-99-220-Pla3		16	14N	11E
	2-99-220-Pla3		15	14N	11E
23	2-99-092-Pla3	119	17	14N	11E
24	2-98-360-Pla3	168	17	14N	11E
25	2-99-235-Pla3	14	21	14N	11E
26	2-97-403-Pla3	64	9	14N	11E
27	2-97-228-Pla3	31	27	14N	11E
	2-97-228-Pla3		22	14N	11E

No. of Docs.	Harvest Doc.	Acres	Section	Township	Range
28	2-97-218-Pla3	196	30	14N	11E
	2-97-218-Pla3		19	14N	11E
	2-97-218-Pla3		18	14N	11E
29	2-97-209-Pla3	80	7	14N	11E
	2-97-209-Pla3		6	14N	11E
30	2-97-070-Pla3	2,067	30	14N	11E
Total Acreage		7,045			

Note: Since the California Department of Forestry and Fire Protection tracks Timber Harvest Plans by Township, Range, and Section, some of the above acreage may lie in sections that are not wholly within the Foresthill Community Plan area.

Source: California Department of Forestry and Fire Protection, 1995-2000.

Geology

The geologic units in the Foresthill Divide Community Plan area consist predominantly of metamorphic rocks common to the Sierra Nevada foothills. Metamorphic rocks in the area originally were deposited as volcanic lava flows, volcanic ash falls (tuffs), and sedimentary rocks. They were compressed, hardened, and tilted on edge due to great forces in the earth acting over long periods of time to create the present metavolcanic and metasedimentary rock units.

The majority of the developed areas along the Foresthill Divide and in the northeastern portion of the Plan area are composed of Mehrten Formations, including undifferentiated Tertiary andesitic mudflows, volcanic breccias, pyroclastic deposits, lava flows, and sedimentary fluvial deposits composed almost entirely of andesitic material.

Metavolcanic rock of the Calaveras complex occurs under thin soils on steep canyon slopes, and includes serpentine. These units are dark green, hard, mostly massive, and some are highly schistose. The rock is iron-rich and produces thin, dark red, iron rich soil.

Metasedimentary rocks of the Calaveras Complex are dark gray and highly fissile, and contain lenticular masses of greenstone, limestone, chert, and graywacke. Mostly the rocks are soft, intensely jointed metashales and metasandstones with scattered hard ribs of black slate. Soil thickness and nature vary with the underlying parent rock. The units are susceptible to raveling and shallow slips along fracture planes in open cuts. This complex is located on steep canyon slopes on the Foresthill Divide, on either side of the ridge from the Foresthill townsite.

Areas of the Foresthill Divide, and the Sierra Nevada in general, have a rich history of gold and mineral mining. Historically, chromium was mined for steel alloy for use during wartime; however, mining of chromium, iron, and nickel are no longer financially feasible. Mining of silver and gold continues to be a viable livelihood for a small number of miners on the Divide. Approximately 20 to 30 individuals are involved in hard rock mining on private claims, some of which are located on National Forest Service lands. The Michigan Bluff area has several company gold mines that have been active since the late 1980's. Mining is highly restricted and regulated by State and federal law, and requires permits from County, State, regional and federal

agencies. Operations involving the diversion of water are regulated and monitored by the Department of Fish and Game and the Regional Water Quality Control Board. There are many risks associated with mining, such as exposure to gases, standing water, and mining equipment; for this reason, the general public has little involvement with mining on the Foresthill Divide.

Geologic Hazards

Seismicity

Seismicity refers to an area's propensity for earthquakes. Seismicity can be evaluated based on the occurrence of faults, both active and inactive. According to the 1977 Placer County Seismic and Safety Element, "the fault history of Placer County began about 140 million years ago with the folding, crushing, and faulting of marine sedimentary and volcanic deposits." Placer County is not known to possess active faults.

The Plan area is within the Melones fault zone; however, it is noted in the 1977 County Seismic and Safety Element that the central county area, which includes the Plan area, is the most stable area, formed on ancient granitic and metamorphic rock that contains no historically active faults. Western Placer County is more susceptible to seismic events, and eastern Placer County is historically earthquake-prone because the main frontal fault of the Sierra Nevada occurs about 6 miles east of Lake Tahoe. The Plan area has the potential to be affected by shock waves that would result from earthquakes in these areas.

Rock fall and Landslide

As defined by the California Division of Mines and Geology, a landslide is the down slope movement of soil and rock material under the influence of gravity. The formation of landslides under natural conditions depends on several factors including the type of materials, structural properties of the materials, steepness of slopes, water and rainfall, vegetation type, proximity to areas undergoing active erosion, and earthquake-generated ground shaking.

The canyon sides of the American River watershed are prone to sliding or slumping due to slopes in excess of 30 percent. There are several rock units within the Plan area that have active deposits. The units most likely to experience rockfalls and landslides include Valley Springs Tuff, Metavolcanic Flows, Mehrtren Mudflow Breccia (weathered), Serpentine, and Metasedimentary Rocks. Table 3.6-5 summarizes potentially unstable rock units and the landslide deposit classification.

Shallow and Serpentine Soils

Shallow and serpentine soils are a limiting factor to development. Serpentine soils surround Todd's Valley and are located east of Foresthill, on Forest Service lands, and along McKeon-Ponderosa Road. Portions of the Plan area are located over areas with shallow soils, especially the slopes of the North and Middle Fork American River. Testing is now required by Placer County Environmental Health Services (HHS) for projects that would disturb serpentine soils.

Table 3.6-5 Potentially Unstable Rock Units

Rock Unit	Landslide Deposits
Valley Springs Tuff	Active
Metavolcanic Flows	Active
Mehrtren Mudflow Breccia (weathered)	Inactive
Serpentine	Inactive
Metasedimentary Rocks	Inactive

Source: Livingston 1976.

Other Geologic Constraints and Hazards

The Foresthill Divide is subject to avalanches, soil erosion and resulting sedimentation of nearby streams and rivers.

The combination of steep slopes, abundant snow, weather, snowpack, and an impetus to cause movement may create an avalanching episode. The Plan area has not been identified as a moderate or high avalanche hazard zone; however, avalanching episodes may occur. Placer County’s avalanche management program works to identify Potential Avalanche Hazard Areas (PAHAs) in order to minimize risk.

Soils within the Plan area are subject to moderate to very high erosion hazard. Erosion can lead to other hazards including slope instability and sedimentation of nearby streams and rivers. Table 3.6-6 lists and describes soils prone to erosion.

Table 3.6-6 Soil Erosion Hazards

Soil	Erosion Hazard	Occurrence in Plan Area	Description
Andregg-Caperton-Sierra	Moderate to high		Undulating to steep, well drained and somewhat excessively drained soils that are deep to shallow over granitic rock
Auburn-Sobrante	Moderate to very high	X	Undulating to very steep, well-drained soils that are shallow or moderately deep over metamorphic rock
Cohasset-Aiken-McCarthy	Moderate to high	X	Undulating to steep, well-drained soils that are moderately deep to very deep over volcanic rock
Cohasset-Jocal-Holland	Moderate to very high		Very deep, nearly level to very steep, well-drained soils on ridgetops and mountainsides
Dubakella-Rock outcrop	Moderate to high	X	Rolling to steep, well-drained soils that are moderately deep over serpentine; also located on rock outcrop
Exchequer-Inks	Moderate to high		Undulating to steep, well-drained and somewhat excessively drained soils that are shallow over volcanic rock

Soil	Erosion Hazard	Occurrence in Plan Area	Description
Fugawee-Waca-Ahart	Moderate to high		Moderately deep, nearly level to very steep, well-drained, soils on mountainsides
Hurlbut-Deadwood-Putt	Moderate to high		Moderately deep and shallow, nearly level to very steep, well-drained soils on mountainsides
Mariposa-Josephine-Sites	Moderate to very high	X	Undulating to steep, well-drained soils that are shallow to deep over metamorphic rock
Maymen-Mariposa	Moderate to very high	X	Hilly to very steep, well-drained and somewhat excessively drained soils that are shallow or moderately deep over metamorphic rock
McCarthy-Crozier-Ledmount	Moderate to high	X	Moderately deep, nearly level to very steep, well-drained soils on ridgetops and mountainsides
Meeks-Tallac	Moderate to high		Nearly level to steep, well-drained to somewhat excessively drained soils that are deep to very deep over a pan
Tahoma-Jorge	Moderate to high		Gently sloping to steep, well-drained soils that are deep to very deep over latite and andesitic conglomerate
Tallac-Smokey-Meiss	Moderate to high		Deep and moderately deep and shallow, nearly level to very steep, moderately well-drained to somewhat excessively drained soils on moraines, outwash terraces, and mountainsides
Trojan-Kyburz-Portola	Moderate to high		Deep and moderately deep, level to very steep, well-drained soils on mountainsides
Umpa-Fugawee	Moderate to high		Gently sloping to steep, well-drained soils that are moderately deep over andesite and andesitic conglomerate
Waca-Meiss	Moderate to high		Strongly sloping to steep, well-drained and excessively drained soils that are moderately deep to shallow over andesite or andesitic tuff

Source: U.S. Natural Resource Conservation Service.

Hazards and Hazardous Materials

According to the Placer County General Plan Background Report, due to its quantity, concentration, or physical, chemical, or infectious characteristics, hazardous waste may do either of the following: cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; and/or pose a substantial present or

potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed. The General Plan Background Report further states that the County expects to be producing approximately 12,660 tons of hazardous waste per year by 2000.

Hazardous waste includes products commonly used in residences and local businesses. Hazardous waste includes, but is not limited to pesticides, herbicides, paints, lacquers, varnishes, motor oil and fluids, household cleaning supplies, photographic chemicals, and certain building materials.

The General Plan Background Report and the Foresthill Divide Community Plan Background Report identify contaminated sites in the Foresthill vicinity. In some sites, hazardous wastes have been improperly disposed of or surface impoundments have possibly contaminated groundwater supplies.

No Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) sites are listed within Foresthill. No Leaking Underground Storage Tank (LUST) sites are located on the Forest Ranch Concept Plan site. The Foresthill Beacon station on Foresthill Road, within ¼ mile of the Concept Plan site, is listed in the Leaking Underground Storage Tank Information System (LUSTIS) database. The database indicates that this case consists of gasoline leaking into soil. Other sources of contamination in the vicinity include old mining sites, which contribute to heavy metals in area streams.

The Forest Ranch Concept Plan site is known to have the remnants of the Mayflower mine. Known and unknown mine shafts, pits and tunnels could become hazards to the public. Weak ground can be present over and adjacent to the portal of an inclined shaft. As groundwater infiltrates into the subsurface, it can cause piping of soils and weather bedrock to the extent that it causes failure. If surface structures such as roads or buildings are unknowingly built over these areas, and as underlying earth material weather and weaken, their loss of support can cause differential settlements and failure. Most abandoned vertical shafts penetrate the earth down to and through the local water table, thus most of these shafts may be open to free standing water conditions that are as deep as the shaft is to its bottom. These features represent a direct safety hazard to humans. Additionally, these structures could act as conduits for pollutants into the subsurface and groundwater, thus potentially contaminating subsurface environments.

GOALS AND POLICIES

Placer County General Plan Policies

Public Facilities and Services

- 4.E.1. The County shall encourage the use of natural stormwater drainage systems to preserve and enhance natural features.
- 4.E.5. The County shall continue to implement and enforce its Grading Ordinance and Flood Damage Prevention Ordinance.
- 4.E.9. The County shall encourage good soil conservation practices in agricultural and urban areas and carefully examine the impact of proposed urban developments with regard to drainage courses.

- 4.E.10. The County shall strive to improve the quality of runoff from urban and suburban development through use of appropriate and feasible mitigation measures including, but not limited to, artificial wetlands, grassy swales, infiltration/sedimentation basins, riparian setbacks, oil/grit separators, and other best management practices (BMPs).
- 4.E.11. The County shall require new development to adequately mitigate increases in stormwater peak flows and/or volume. Mitigation measures should take into consideration impacts on adjoining lands in the unincorporated area and on properties in jurisdictions within and immediately adjacent to Placer County.
- 4.E.12. The County shall encourage project designs that minimize drainage concentrations and impervious coverage and maintain, to the extent feasible, natural site drainage conditions.
- 4.E.13. The County shall require that new development conforms with the applicable programs, policies, recommendations, and plans of the Placer County Flood Control and Water Conservation District.
- 4.E.14. The County shall require projects that have significant impacts on the quantity and quality of surface water runoff to allocate land as necessary for the purpose of detaining post-project flows and/or for the incorporation of mitigation measures for water quality impacts related to urban runoff.
- 4.E.15. The County shall identify and coordinate mitigation measures with responsible agencies for the control of storm sewers, monitoring of discharges, and implementation of measures to control pollutant loads in urban storm water runoff (e.g., California Regional Water Quality Control Board, Placer County Division of Environmental Health, Placer County Department of Engineering and Surveying, Placer County Flood Control and Water Conservation District).

Flood Protection

- 4.F.1. The County shall require that arterial roadways and expressways, residences, commercial and industrial uses and emergency facilities be protected, from a 100-year storm event.
- 4.F.4. The County shall require evaluation of potential flood hazards prior to approval of development projects. The County shall require proponents of new development to submit accurate topographic and flow characteristics information and depiction of the 100-year floodplain boundaries under fully-developed, unmitigated runoff conditions.

Public Facilities and Services

- 4.I.9. The County shall ensure that all proposed developments are reviewed for compliance with fire safety standards by responsible local fire agencies per the Uniform Fire Code and other County and local ordinances.

Recreational and Cultural Resources

- 5.D.6. The County shall require that discretionary development projects identify and protect from damage, destruction, and abuse, important historical, archaeological, paleontological, and cultural sites and their contributing environment. Such assessments shall be incorporated into a countywide cultural resource data base, to be maintained by the Department of Museums.
- 5.D.7. The County shall require that discretionary development projects are designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less than significant level and/or shall be mitigated by extracting maximum recoverable data. Determinations of impacts, significance, and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups), historical, or paleontological consultants, depending on the type of resource in question.

Natural Resources

- 6.A.1. The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species. Based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. The County may, however, allow exceptions, such as in the following cases:
- a. Reasonable use of the property would otherwise be denied;
 - b. The location is necessary to avoid or mitigate hazards to the public;
 - c. The location is necessary for the repair of roads, bridges, trails, or similar infrastructure; or
 - d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.
- 6.A.3. The County shall require development projects proposing to encroach into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:
- a. Avoid the disturbance of riparian vegetation;
 - b. Replace riparian vegetation (on-site, in-kind);
 - c. Restore another section of creek (in-kind); and/or
 - d. Pay a mitigation fee for restoration elsewhere (e.g., wetland mitigation banking program).
- 6.A.4. Where creek protection is required or proposed, the County should require public and private development to:
- a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) shall be located to optimize resource protection. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;
 - b. Designate such easement or dedication areas (as described in a. above) as open space;
 - c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;
 - d. Provide recreation and public access near creeks consistent with other General Plan policies;
 - e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: 1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas; and/or are stabilized with permanent vegetation that will prevent the transport of sediment off site; and 2) temporary vegetation sufficient to stabilize disturbed areas.
 - f. Provide for long-term creek corridor maintenance by providing a guaranteed financial commitment to the County which accounts for all anticipated maintenance activities.
- 6.A.6. The County shall require that natural watercourses are integrated into new development in such a way that they are accessible to the public and provide a positive visual element.

- 6.A.8. Where the stream environment zone has previously been modified by channelization, fill, or other human activity, the County shall require project proponents to restore such areas by means of landscaping, revegetation, or similar stabilization techniques as a part of development activities.
- 6.A.9. The County shall require that newly-created parcels include adequate space outside of watercourses' setback areas to ensure that property owners will not place improvements (e.g., pools, patios, and appurtenant structures), within areas that require protection.
- 6.B.1. The County shall support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.
- 6.B.2. The County shall require new development to mitigate wetland loss in both regulated and non-regulated wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability: (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation banking program that provides the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.
- 6.B.3. The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.
- 6.B.5. The County shall require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, (a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; (b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plan; and (c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alteration to a wetland is considered a less-than-significant impact under CEQA.
- 6.C.1. The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:
- a. Wetland areas including vernal pools.
 - b. Stream environment zones.
 - c. Any habitat for rare, threatened or endangered animals or plants.
 - d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat.
 - e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat.
 - f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.
 - g. Important spawning areas for anadromous fish.
- 6.C.2. The County shall require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the reasonable value of the habitat for wildlife is maintained.
- 6.C.5. The County shall require mitigation for development projects where isolated segments of stream habitat are unavoidably altered. Such impacts should be mitigated on-site with in-kind habitat replacement or elsewhere in the stream system through stream or riparian habitat restoration work.

- 6.C.9. The County shall require new private or public developments to preserve and enhance existing native riparian habitat unless public safety concerns require removal of habitat for flood control or other public purposes. In cases where new private or public development results in modification or destruction of riparian habitat for purposes of flood control, the developers shall be responsible for acquiring, restoring, and enhancing at least an equivalent amount of like habitat within or near the project area.
- 6.C.11. Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites by a wildlife biologist, the evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts or indicate why mitigation is not feasible. In approving any such discretionary development permit, the decision making body shall determine the feasibility of the identified mitigation measures. Significant ecological resource areas shall, at a minimum, include the following:
- a. Wetland areas including vernal pools.
 - b. Stream environment zones.
 - c. Any habitat for rare, threatened or endangered animals or plants.
 - d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat.
 - e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat.
 - f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.
 - g. Important spawning areas for anadromous fish.
- 6.D.1. The County shall encourage landowners and developers to preserve the integrity of existing terrain and natural vegetation in visually-sensitive areas such as hillsides, ridges, and along important transportation corridors.
- 6.D.2. The County shall require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in fulfilling landscaping requirements imposed as conditions of discretionary permits or for project mitigation.
- 6.D.8. The County shall require that new development preserve natural woodlands to the maximum extent possible.
- 6.D.9. The County shall require that development on hillsides be limited to maintain valuable natural vegetation, especially forests and open grasslands, and to control erosion.
- 6.D.12. The County shall support the retention of heavily vegetated corridors along circulation corridors to preserve their rural character.
- 6.D.13. The County shall support the preservation of native trees and the use of native, drought-tolerant plant materials in all revegetation/landscaping projects.
- 6.D.14. The County shall require that new development avoid, as much as possible, ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas should be protected through public acquisition of fee title or conservation easements to ensure protection.

- 6.E.2. The County shall require that new development be designed and constructed to preserve the following types of areas and features as open space to the maximum extent feasible:
- a. High erosion hazard areas;
 - b. Scenic and trail corridors;
 - c. Streams, streamside vegetation;
 - d. Wetlands;
 - e. Other significant stands of vegetation;
 - f. Wildlife corridors; and
 - g. Any areas of special ecological significance.

Agricultural and Forestry Resources

- 7.E.2. The County shall discourage development that conflicts with timberland management.
- 7.E.4. The County shall encourage qualified landowners to enroll in the Timberland Production Zone (TPZ) program.

Seismic and Geological Hazards

- 8.A.1. The County shall require the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards (i.e., groundshaking, landslides, liquefaction, critically expansive soils, avalanche).
- 8.A.2. The County shall require submission of a preliminary soils report, prepared by a registered civil engineer or a licensed geotechnical engineer and based upon adequate test borings, for every major subdivision and for each individual lot where critically expansive soils have been identified or are expected to exist.
- 8.A.3. The County shall prohibit the placement of habitable structures or individual sewage disposal systems on or in critically expansive soils unless suitable mitigation measures are incorporated to prevent the potential risks of these conditions.
- 8.A.4. The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landsliding.
- 8.A.5. In landslide hazard areas, the County shall prohibit avoidable alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems; removal of vegetative cover; and steepening of slopes and undercutting the bases of slopes.
- 8.A.6. The County shall require the preparation of drainage plans for development in hillside areas that direct runoff and drainage away from unstable slopes.
- 8.A.9. The County shall require that the location and/or design of any new buildings, facilities, or other development in areas subject to earthquake activity minimize exposure to danger from fault rupture or creep.
- 8.A.10. The County shall require that new structure permitted in areas of high liquefaction potential be sited, designed, and constructed to minimize the dangers from damage due to earthquake-induced liquefaction.
- 8.A.11. The County shall limit development in areas of steep or unstable slopes to minimize hazards caused by landslides or liquefaction.

Hazardous Materials

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

Foresthill General Plan Goals and Policies

Environmental Resources Management Element

Goal 1: To ensure a balanced environment where physical development can occur with minimal adverse effect to the natural resources of the area.

5. Encourage professional, multiple use forest practices on timber producing lands to ensure long-term benefits of forest products, recreational use, open space, fish and wildlife habitat, and watershed protection. Encourage Timber Preserve Zoning to accomplish this objective.
6. Avoid potential conflicts of use by encouraging residential and commercial development away from areas of high timber or agricultural production.

Goal 2: Maintain the quality of air and water resources at a level consistent with adopted federal, state and local standards.

2. Review proposed developments for their potential adverse effect on air and water quality.

Goal 3: Preserve outstanding areas of natural vegetation of fish and wildlife habitat.

1. Preserve the natural condition of all stream influence areas, including flood plains and riparian vegetation areas.
2. Identify and preserve all important fish and wildlife areas.
3. Provide for the protection of all rare or endangered species.

Safety

Goal 1: Protect the citizens and visitors of the Foresthill area from loss of life while protecting property and watershed resources from unwanted fires through pre-planning, education, fire defense improvements, and fire suppression.

1. Ensure that all proposed developments are reviewed for fire safety standards by local fire agencies responsible for its protection, including providing adequate water supplies and ingress and egress.
2. Maintain strict enforcement of the Uniform Building Code and the Uniform Fire Code.

Goal 2: Protect the lives and property of the citizens of the Foresthill area from unacceptable risk resulting from flood hazards.

3. Maintain natural conditions within the 100-year flood plain of all streams.

Seismic Safety

Goal: To protect the lives and property of the citizens of the Foresthill area from unacceptable risk resulting from seismic and geologic hazards.

1. Review future developments using all available seismic data and taking into account recommendations from the Seismic Safety Element.

2. Maintain strict enforcement of seismic safety standards for new construction contained in the Uniform Building Code.

Foresthill Divide Community Plan Goals and Policies

The proposed FDCP includes the following goals and policies related to stormwater drainage, flood protection, vegetation, wetland and riparian areas, fish and wildlife habitat, agricultural resources, forest resources, water resources, soils, geology, open space, and conservation:

Stormwater Drainage

Goal 3.D.17. Collect and dispose of stormwater in a manner that least inconveniences the public, reduces potential water-related damage, and enhances the environment.

- 3.D.17-3. Projects that result in significant impacts on the quantity and quality of surface water runoff shall be required to allocate land as necessary for the purpose of detaining post-project flows and/or for the incorporation of mitigation measures for water quality impacts related to urban runoff.
- 3.D.17-4. The County shall identify and coordinate mitigation measures with responsible agencies for the control of storm drains, monitoring of discharges, and implementation of measures to control pollutant loads in urban storm water runoff (e.g., California Regional Water Quality Control Board, Placer County Environmental Health Services, Placer County Department of Public Works, Placer County Flood Control and Water Conservation District).

Flood Protection

Goal 3.D.18. Protect the lives and property of the citizens of the Divide from hazards associated with development in floodplains and manage floodplains for their natural resource values.

- 3.D.18-1. The County shall require that arterial roadways, residences, commercial and industrial uses and emergency facilities be protected, at a minimum, from a 100-year storm event.
- 3.D.18-2. The County shall require evaluation of potential flood hazards prior to approval of development projects. The County shall require proponents of new development to submit accurate topographic and flow characteristics under fully-developed, unmitigated runoff conditions

Vegetation

Goal 4.A.1. Promote and provide for the continued diversity and sustainability of the native vegetative resources throughout the Divide.

Policies

- 4.A.1-1 Encourage landowners and developers to manage the integrity of existing terrain and native vegetation, especially in visually-sensitive areas such as hillsides, ridges and along important transportation corridors, consistent with fire safety standards.
- 4.A.1-2 Require developers to use native species (and compatible non-invasive non-native species, where appropriate), especially drought-resistant species, to the extent possible in fulfilling landscaping requirements imposed as conditions of discretionary permits or for project mitigation.
- 4.A.1-3 Support the conservation of a healthy forest including outstanding areas of native vegetation, including, but not limited to, open meadows, oak woodlands and riparian areas.

- 4.A.1-4 Establish a vegetation management plan and program for the Foresthill Divide that includes, but is not limited to, maintaining a balance of thinning, maintenance and the reforestation of trees along road corridors.
- 4.A.1-5 Ensure that landmark trees and major stands or groves of native trees (such as the Todd's Valley Cemetery) are preserved and protected. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.
- 4.A.1-6 Establish procedures for identifying and preserving rare, threatened, and endangered plant species that may be adversely affected by public or private development projects.
- 4.A.1-7 Ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.
- 4.A.1-8 Support the management of wetland and riparian plant communities and forest-woodland (e.g. ponderosa pine stands, blue oak woodlands, and valley oak stands) for passive recreation, groundwater recharge, nutrient catchment, and wildlife habitats. Such communities shall be restored to a healthy forest environment or expanded, where possible.
- 4.A.1-9 Require that new development protect, restore, rehabilitate, and manage the native forest-woodlands to the maximum extent possible.
- 4.A.1-10 Require that development on hillsides be limited to maintain valuable native forest vegetation and to control erosion.
- 4.A.1-11 Encourage the planting of native trees, shrubs and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.
- 4.A.1-12 Encourage the utilization and protection of the natural forest in a way that maintains it in a healthy condition and at the same time provides for fire safety (low impact ground fires) in residential and developed areas (the wildland/rural intermix).
- 4.A.1-13 Support the continued use of prescribed burning and other methods of brush suppression to mimic the effects of natural fires to reduce fuel volumes and associated fire hazard to human residents and to enhance the health of biotic communities.
- 4.A.1-14 Support the preservation of native trees and the use of native seed sources and such seedlings and drought-tolerant plant materials in all revegetation/landscaping projects.
- 4.A.1-15 Require that new development avoid, as much as possible, ecologically fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas and heritage trees should be protected through public acquisition of fee title or conservation easements to ensure protection.

Wetland and Riparian Areas

Goal 4.A.2. Protect wetland communities and related riparian areas throughout the Plan area as valuable resources and encourage their creation and restoration.

Policies

- 4.A.2-1 Support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.

- 4.A.2-2 Require new development to mitigate wetland loss in both regulated and non-regulated wetlands to achieve "no net loss" within the Plan area through any combination of the following, in descending order of desirability: (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation that provides the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.
- 4.A.2-3 Discourage direct runoff of pollutants and siltation into existing wetland areas from outfalls serving nearby development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.
- 4.A.2-4 Strive to identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and nesting of wetland and riparian species.
- 4.A.2-5 Require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques within the Plan area. In evaluating the level of compensation to be required with respect to any given project, (a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; (b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plan; and (c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. Continue to implement and refine criteria for determining when an alteration to a wetland is considered a less-than-significant impact under CEQA.
- 4.A.2-6 Discourage open grazing or open confinement of livestock in riparian areas on the Foresthill Divide.

Fish and Wildlife Habitat

Goal 4.A.3. Protect, restore, and enhance habitats that support fish and wildlife species so as to maintain populations at viable levels.

Policies

- 4.A.3-1 Identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:
 - a. Wetland areas.
 - b. Stream environment zones.
 - c. Any habitat for rare, threatened or endangered animals or plants.
 - d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat.
 - e. Large areas of non-fragmented natural habitat, including Oak Woodlands and Valley Foothill Riparian.
 - f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.
- 4.A.3-2 Require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the reasonable value of the habitat for wildlife is maintained.
- 4.A.3-3 Require the control of residual pesticides to prevent potential damage to water quality, vegetation, and wildlife.

- 4.A.3-4 Encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.
- 4.A.3-5 Support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.
- 4.A.3-6 Support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.
- 4.A.3-7 Support the preservation or reestablishment of fisheries in the rivers and streams on the Foresthill Divide, whenever possible.
- 4.A.3-8 Require new private or public developments to preserve and enhance existing native riparian habitat unless public safety concerns require removal of habitat for flood control or other public purposes. In cases where new private or public development results in modification or destruction of riparian habitat for purposes of flood control, the developers shall be responsible for acquiring, restoring, and enhancing at least an equivalent amount of like habitat within or near the project area.
- 4.A.3-9 Use the California Wildlife Habitat Relationships (WHR) system as a standard descriptive tool and guide for environmental assessment in the absence of a more detailed site-specific system.
- 4.A.3-10 The County shall cooperate with, encourage, and support the plans of other public agencies to acquire fee title or conservation easements to privately-owned lands in order to preserve important wildlife corridors and to provide habitat protection of California Species of Concern and state or federally listed rare, threatened, or endangered plant and animal species.
- 4.A.3-11 The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats, wetland/riparian habitats, wildlife migration corridors, and locally-important species/communities.

Agricultural Resources

Goal 4.A.4. Encourage the retention of agricultural lands and provide for the long-term conservation of these lands whenever feasible.

Policies

- 4.A.4-1 The County shall protect agricultural areas from conversion to non-agricultural uses.
- 4.A.4-2 The County shall identify agricultural lands within the Plan area and protect these lands from incompatible development.
- 4.A.4-3 The County shall encourage continued and, where possible, increased agricultural activities on lands suited to agricultural uses, while balancing the preservation of the Divide's natural resources.
- 4.A.4-4 Maintain agricultural lands in large parcel sizes to retain viable agricultural units.
- 4.A.4-5 Encourage the concentration of development within or near the Core Area as an alternative to expanding urban boundaries into agricultural areas.
- 4.A.4-6 Encourage multi-seasonal use such as private recreational development, agricultural lands, and timberlands to enhance the economic viability.

Goal 4.A.5. Minimize existing and future conflicts between agricultural and non-agricultural uses in agriculturally-designated areas.

Policies

- 4.A.5-1 The County shall identify and maintain clear boundaries between residential and agricultural areas and require land use buffers specified in the Placer County General Plan between such uses where feasible. These vegetative buffers shall occur on the parcel for which the development permit is sought and shall favor protection of the maximum amount of farmland.
- 4.A.5-2 The fencing of subdivided lands adjoining agricultural uses shall be considered as a potential mitigation measure, when used in combination with vegetative buffers, to reduce conflicts between residential and agricultural uses. Factors to be considered in implementing such a measure include:
- a. The type of agricultural operation (i.e., livestock, orchard, timber, row crops);
 - b. The size of the lots to be created;
 - c. The presence or lack of fences in the area;
 - d. Existing natural barriers that prevent trespass; and
 - e. Passage of wildlife.

Forest Resources

Goal 4.A.6. Conserve Placer County's forest resources, enhance the quality and diversity of forest ecosystems, reduce conflicts between forestry and other uses, and encourage a sustained yield of forest products.

Policies

- 4.A.6-1 The County shall encourage the sustained productive use of forest land as a means of providing open space and conserving other natural resources.
- 4.A.6-2 The County shall discourage development that conflicts with timberland management and shall protect significant timber production lands from incompatible development (i.e., unrelated residential and other non-timber-related uses).
- 4.A.6-3 Work closely and coordinate with agencies involved in the regulation of timber harvest operations to ensure that County conservation goals are achieved.
- 4.A.6-4 Review all proposed timber harvest plans (THPs) and request that the California Department of Forestry and Fire Protection (CDF) amend THPs to address public safety and environmental concerns.
- 4.A.6-5 Encourage and promote the productive use of wood waste generated in the county.
- 4.A.6-6 Identify and maintain sustainable timberlands and forests.
- 4.A.6-7 Provide for both on-site and off-site forest-related industries while minimizing conflicts with adjacent uses.
- 4.A.6-8 The County shall maintain a low mathematical density of allowable development in Forestry areas in order to protect major areas of potential timber resources on the Divide from conversion to other more intensive uses.

- 4.A.6-9 The County shall encourage clustering of development in timberland areas within the Forest Residential land use designation to preserve timber resources for productive use.
- 4.A.6-10 The County shall encourage the use of the Timberland Production Zone for those lands which have significant commercial timber value.
- 4.A.6-11 The County shall encourage reforestation practices on timber harvest lands.
- 4.A.6-12 The provision of public facilities and services shall be limited in important timber areas on the Foresthill Divide.

Water Resources

Goal 4.A.7. Protect and enhance the natural qualities of the Foresthill Divide's streams, creeks and groundwater.

Policies

- 4.A.7-1 The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species. Based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. The County may, however, allow exceptions, such as in the following cases:
 - a. Reasonable use of the property would otherwise be denied;
 - b. The location is necessary to avoid or mitigate hazards to the public;
 - c. The location is necessary for the repair of roads, bridges, trails, or similar infrastructure; or
 - d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.
- 4.A.7-2 The County shall require development projects proposing to encroach into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:
 - a. Avoid the disturbance of riparian vegetation;
 - b. Replace riparian vegetation (on-site, in-kind);
 - c. Restore another section of creek (in-kind); and/or
 - d. Pay a mitigation fee for restoration elsewhere in the Plan area.
- 4.A.7-3 Where creek protection is required or proposed, the County should require public and private development to:
 - a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) shall be located to optimize resource protection. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;
 - b. Designate such easement or dedication areas (as described in a. above) as open space;
 - c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback

areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

- d. Provide recreation and public access near creeks consistent with other *General Plan* policies;
- e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: 1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment off site; and 2) temporary vegetation sufficient to stabilize disturbed areas.
- f. Provide for long-term creek corridor maintenance by providing a guaranteed financial commitment to the County which accounts for all anticipated maintenance activities.

- 4.A.7-4 Encourage the use of natural stormwater drainage systems to preserve and enhance natural features.
- 4.A.7-5 Support efforts to acquire land or obtain easements for drainage and other public uses of floodplains where it is desirable to maintain drainage channels in a natural state.
- 4.A.7-6 Consider using stormwater of adequate quality to replenish local groundwater basins, restore wetlands and riparian habitat, and irrigate agricultural lands. This should occur in an environmentally and aesthetically acceptable manner without construction of large dams or canals.
- 4.A.7-7 The County shall strive to improve the quality of runoff from urban and suburban development through use of appropriate and feasible mitigation measures including, but not limited to: artificial wetlands, grassy swales, infiltration/sedimentation basins, riparian setbacks, oil/grit separators, and other best management practices (BMPs).
- 4.A.7-8 Continue to require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and runoff from developed areas and to encourage the use of BMPs.
- 4.A.7-9 As funding allows, the County shall establish a water well monitoring program in areas with known or potential water quality problems or reduced yields, take action to mitigate water quality problems, and review development proposals in low water yield areas.
- 4.A.7-10 The County shall improve water quality by eliminating existing water pollution sources and by prohibiting activities which include the use of hazardous materials around wetland and groundwater recharge areas.
- 4.A.7-11 Where possible, view flood waters as a resource to be used for waterfowl habitat, aquifer recharge, fishery enhancement, agricultural water supply, and other suitable uses. This should occur in an environmentally and aesthetically-acceptable manner without construction of large dams or canals.
- 4.A.7-12 Preserve or enhance the aesthetic qualities of natural drainage courses in their natural or improved state compatible with flood control requirements and economic, environmental, and ecological factors.
- 4.A.7-13 Promote the use of natural or non-structural flood control facilities, including off-stream flood control basins, to preserve and enhance creek corridors.
- 4.A.7-14 Require flood-proofing of structures in areas subject to flooding.

- 4.A.7-15 Require flood control structures, facilities, and improvements to be designed to conserve resources, incorporate and preserve scenic values, and to incorporate opportunities for recreation, where appropriate.
- 4.A.7-16 Require that natural watercourses be integrated into new development in such a way that they are accessible to the public and provide a positive visual element.
- 4.A.7-17 Discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.
- 4.A.7-18 Require project proponents to restore such areas by means of landscaping, revegetation, the use of rice straw or other weed-free vegetative material for erosion control measures, or similar stabilization techniques as a part of development activities where the stream environment zone has previously been modified by channelization, fill, or other human activity.
- 4.A.7-19 The County shall require that newly-created parcels include adequate space outside of watercourses' setback areas to ensure that property owners will not place improvements (e.g., pools, patios, and appurtenant structures) within areas that require protection.
- 4.A.7-20 The County shall protect groundwater resources from contamination and further overdraft, particularly those areas that rely on groundwater as their only domestic water source (e.g., Baker Ranch, Michigan Bluff, Old Todd's Valley, Spring Garden Road, etc.), by pursuing the following efforts:
- a. Identifying and controlling sources of potential contamination;
 - b. Protecting important groundwater recharge areas; and
 - c. Encouraging the use of surface water to supply major consumptive demands.
- 4.A.7-21 Open space located in watersheds which serve reservoirs is important to the adequate performance of those reservoirs for their intended purposes and should be preserved and protected.

The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and within 5,000 feet of the reservoir shall be considered as having an immediate effect.

Key Reservoirs

Sugar Pine Reservoir
Big Reservoir

Key Watersheds

American River
Owl Creek

- 4.A.7-22 The County shall encourage the protection of floodplain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.
- 4.A.7-23 The Foresthill Divide community shall work with the American River Watershed Group in their efforts to maintain and improve water quality within the watershed.

Soils

Goal 4.A.8. Promote the conservation of soils as a valuable natural resource.

Policies

- 4.A.8-1 The County shall support and encourage existing special district, state and federal soil conservation and restoration programs.

- 4.A.8-2 The County shall require slope analysis maps during the environmental review process, or at the first available opportunity of project review, to judge future grading activity, building location impacts, and road construction impacts.
- 4.A.8-3 Encourage the restoration/reuse of hydraulically mined areas.
- 4.A.8-4 Require the use of feasible and practical BMPs to minimize the effects of construction, logging, mining, recreation or other activities that could result in soil loss from dust generation and water runoff.

Geology

Goal 4.A.9. Minimize the loss of life, injury, and property damage due to seismic and geological hazards.

Policies

- 4.A.9-1 The County shall require the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards (i.e., ground shaking, landslides, liquefaction, critically expansive soils, avalanche).
- 4.A.9-2 The County shall require submission of a preliminary soils report, prepared by a registered civil engineer or a licensed geotechnical engineer and based upon adequate test borings, for every major subdivision and for each individual lot where critically expansive soils have been identified or are expected to exist.
- 4.A.9-3 The County shall prohibit the placement of habitable structures or individual sewage disposal systems on or in critically expansive soils unless suitable mitigation measures are incorporated to prevent the potential risks of these conditions.
- 4.A.9-4 The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landsliding.
- 4.A.9-5 In landslide hazard areas, the County shall prohibit avoidable alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems; removal of vegetative cover; and steepening of slopes and undercutting the bases of slopes.
- 4.A.9-6 The County shall require the preparation of drainage plans for development in hillside areas that direct runoff and drainage away from unstable slopes.
- 4.A.9-7 In areas subject to severe groundshaking, the County shall require that new structures intended for human occupancy be designed and constructed to minimize risk to the safety of occupants.
- 4.A.9-8 The County shall continue to support scientific geologic investigations which refine, enlarge and improve the body of knowledge on active fault zones, unstable areas, severe groundshaking, avalanche potential, mines and other hazardous conditions in Placer County.
- 4.A.9-9 The County shall require that the location and/or design of any new buildings, facilities or other development in areas subject to earthquake activity minimize exposure to danger from fault rupture or creep.
- 4.A.9-10 The County shall require that new structures permitted in areas of high liquefaction potential be sited, designed and constructed to minimize the dangers from damage due to earthquake-induced liquefaction.

- 4.A.9-11 The County shall limit development in areas of steep (in excess of 30%) or unstable slopes, or slope breaks to minimize hazards caused by landslides, liquefaction, construction undercutting or vegetation loss.
- 4.A.9-12 The County shall require septic leachfields and drainage plans during the environmental review process to direct runoff and drainage away from steep and/or unstable slopes.
- 4.A.9-13 The County shall require submission of appropriate studies and subsequent action when past mining activities are known to have existed or are subsequently discovered on a development project site.

Goal 4.A.10. Recognize and protect valuable mineral resources for current and future generations in a manner that does not create land use conflicts.

Policies

- 4.A.10-1 Protect valuable mineral deposits from intrusion by incompatible land uses that will impede or preclude mineral extraction or processing. Promote proper management of all mineral resource activities and minimize the impact of extraction and processing on neighboring activities and the environment in general.

Open Space

Goal 4.A.11. Preserve and enhance open space lands to maintain the natural resources of the county.

Policies

- 4.A.11-1 The County shall support the preservation and enhancement of natural land forms, native vegetation, and natural resources as open space to the maximum extent feasible. The County shall permanently protect, as open space, areas of natural resource value, including open meadows, mixed conifer forests, wetlands preserves, riparian corridors, oak woodlands and floodplains.
- 4.A.11-2 The County shall require that new development be designed and constructed to protect, enhance, rehabilitate, and restore the following types of areas and features as open space to the maximum extent feasible:
- a. High erosion hazard areas;
 - b. Scenic and trail corridors;
 - c. Streams, streamside vegetation;
 - d. Wetlands;
 - e. Other significant stands of vegetation;
 - f. Wildlife corridors, and;
 - g. To coordinate open space desires with the fuel break system needs for public safety fire protection and access to manage wildfires.
- 4.A.11-3 The County shall support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.
- 4.A.11-4 The County shall encourage either private or public ownership and maintenance of open space.
- 4.A.11-5 The County shall coordinate with local, state, and federal agencies and private organizations to establish visual and physical links among open space areas to form a system that, where appropriate, includes trails. Dedication of easements shall be encouraged, and in many cases, required as lands are developed and built.

4.A.11-6 The County shall encourage the preservation of open space so as to enhance developed areas as well as to maintain the rural mountain character of the area and clear boundaries of the community.

4.A.11-7 The County shall prohibit the extraction of natural resources, except for water, from areas of dedicated open space except those that protect, rehabilitate, maintain and enhance the natural characteristics of such resources (i.e. fire protection, flood prevention, etc.).

Goal 4.A.12. Preserve, as much as possible, open space lands to maintain the natural resources and rural mountain characteristics of the area, and to protect wildlife habitats and other areas of major or unique ecological significance.

Policies

4.A.12-1 Encourage the preservation and enhancement of, and establish protective land use designations for, sensitive areas such as stream corridors, steep canyons and areas of significant natural resource value.

4.A.12-2 Require that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of run-off waters flowing into these waterways.

4.A.12-3 In cooperation with the Resource Conservation District, identify those segments of watersheds and wetlands affecting waterways important to water resource protection which are in need of rehabilitation through revegetation, and implement a plan for same. Wherever development removes vegetation important to watersheds, require as a part of the environmental review process that revegetation methodologies for watershed protection be identified and implemented.

4.A.12-4 Encourage the retention and/or creation of open space in Foresthill. No land owner should be forced to sell or grant easements for open space purposes except as a condition of project approval and/or where a public safety concern exists.

Goal 4.A.13. Preserve and enhance open space for outdoor recreation, resource production and health and safety purposes.

Policies

4.A.13-1 Identify and encourage the development of recreation facilities compatible with the Plan area's rural lifestyle and environment.

4.A.13-2 Encourage the recreation and open space potential of water features, including reservoirs, natural streams and other waterways.

4.A.13-3 The County shall encourage open spaces to be linked visually and physically as much as possible to form a system of open spaces and recreational uses. Where appropriate, trails shall connect open space areas. Dedication of easements shall be encouraged or required as lands are developed and built.

4.A.13-4 The County shall encourage the preservation of agricultural lands as regional open space and protect these areas from the encroachment of development.

4.A.13-5 The County shall assure that removal of economic mineral resources does not conflict with surrounding land uses or the stated desire for maintaining the natural environment.

4.A.13-6 The County shall assure the removal of biomass and other commercial forest products is done under resource management planning.

- 4.A.13-7 The County shall require that areas hazardous to public safety and welfare be open or predominantly open. This category includes:
- a. Areas subject to landslide or with severe slope stability problems.
 - b. Streams and other areas subject to flooding from a 100-year storm.
 - c. Areas with extreme and high fire risk.
 - d. Areas of active or past mining activities.

Conservation

Goal 4.A.15. Promote water conservation and recycling efforts.

Policies

- 4.A.15-1 The County shall expand recycling programs on the Divide, including abandoned vehicle abatement.

3.6.3 IMPACT EVALUATION CRITERIA

Appendix G of the State CEQA Guidelines, combined with other state and county policies, provides that a project will have a significant effect on the environment if the project would result in the following:

Hydrology/Water Quality

- Violate any water quality standards or waste discharge requirements
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
- Otherwise substantially degrade water quality

- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam
- Result in inundation by seiche, tsunami, or mudflow
- Be inconsistent with adopted standards (i.e. Placer County Stormwater Management Manual and the Placer County Land Development Manual)

Biological Resources

- If the species' survival and reproduction in the wild are in immediate jeopardy;
- If the species is existing in such small numbers throughout all or a significant portion of its range that it could become endangered if its environment worsens;
- If the species is likely to become endangered within the foreseeable future throughout all of a significant portion of its range and could be considered under the federal definition of "threatened;"
- If the project would result in the measurable degradation of sensitive habitats through filling, inundation, or other land use alteration.

Appendix G also provides the following examples of impacts that would normally be considered significant if a project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Section 21001 of the Public Resources Code, the California Environmental Quality Act (CEQA), states California's policies with respect to fish and wildlife, summarized as follows:

- Prevent the elimination of fish and wildlife species due to human activities.
- Ensure that fish and wildlife populations do not drop below self sustaining levels.
- Preserve representatives of all plant and animal communities for future generations.

Section 15065(a) of the State CEQA Guidelines defines a significant adverse effect of a project as one that:

- Has the potential to substantially reduce the habitat of a fish and wildlife species or cause the population to drop below self-sustaining levels
- Threatens to eliminate a plant or animal community
- Reduces the number or restricts the range of an endangered, rare or threatened species

Geology and Soils

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
 - Strong seismic ground shaking
 - Seismic-related ground failure including liquefaction, or
 - Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property

- The loss of, or loss of access to, mineral resources identified in a Mineral Resource Zone by the CDMG

Impact analysis is based on a review of geologic and soils data prepared by the State Division of Mines and Geology, U.S. Geological Survey, and USDA Natural Resources Conservation Service (Unified Soil Classification System and tables summarizing the Engineering Properties and the Physical and Chemical Properties of mapped soils) which is pertinent to the Plan area. Seismic hazard impacts were analyzed according to published and unpublished data, and conclusions formed from the scientific community's current understanding of local and regional features.

Based on Appendix G of the State CEQA Guidelines, the project would normally be considered to have an adverse impact on public health and safety if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

3.6.4 IMPACTS AND MITIGATION MEASURES

Impact 3.6-1 Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

Discussion/Conclusion: Soil units that meet the criteria for Prime Farmland and Farmland of Statewide Importance occur within the Plan area. They are located primarily at the top of the Foresthill Divide, along the Foresthill Road corridor.

The majority of the Plan area is designated for Open Space (25%), Timberland (41%), and Water Influence (1.8%). The remaining lands (approximately 32%) are designated for Forest Residential, Rural Estate, Low and Medium Density Residential, Development Reserve, Industrial, General and Neighborhood Commercial, Professional Office, Public Facility, and Mixed-Use areas. Portions of these areas have existing development, and the policies of the FDCP are designed to discourage "leapfrog" development.

Due primarily to its elevation, the Plan area does not have an extensive agricultural heritage. A limited range of crops can survive within the Plan area, including walnuts, chestnuts and apples. A small (15± acres) walnut orchard, a chestnut orchard, and scattered vineyards and backyard apple plantings represent the bulk of existing agricultural activities in the Plan area. Although some soils in the Plan area can be rocky and/or shallow, there are no inherent soil conditions that would prevent agricultural production. Rather, the lack of extensive irrigation infrastructure and availability of richer agricultural lands elsewhere in the county are primary factors behind the lack of agricultural activity in the area, as well as small existing parcel sizes in areas with soils suitable for agricultural. Some recent interest has been shown in limited wine grape production in the Plan area.

The Plan also includes goals and policies to encourage the retention of agricultural lands, to protect them from conversion to non-agricultural uses, to encourage continued and expanded agricultural activities, to maintain agricultural lands in large parcel sizes, to encourage the concentration of development within or near the Core Area to avoid expanding urban boundaries into agricultural areas, and to protect agricultural lands from non-agricultural uses. The proposed FDCP land use designations and zoning are designed to avoid conversion of agricultural uses to non-agricultural uses. Proposed implementation measures offer further protection for agricultural lands. This impact is therefore considered *less than significant*.

The Forest Ranch Concept Plan site is not currently used for agricultural purposes, and there is no record of the site being used for agricultural purposes, although a portion of the site is used for a Christmas tree farm. No lands within the project site are identified as Important Farmlands by the California Department of Conservation. This impact is therefore considered *less than significant*.

Mitigation Measures

No mitigation measures are required.

Impact 3.6-2 Conversion of timber lands to non-timber production use.

Discussion/Conclusion: Coniferous forest represents the dominant vegetation community within the Plan area. The Plan area contains an interface between exclusive Placer County land use jurisdiction and the jurisdiction of the U.S. Forest Service, which is responsible for managing land uses and timber resources in the Tahoe National Forest. Additionally, the California Department of Forestry (CDF) has regulatory authority over timber harvest activities on privately held timber land under the Z' Berg Nejedly Forest Practices Act of 1973. Since the Plan area lies within an area designated as Very High Fire Hazard Area, CDF is also actively engaged in fuel reduction programs to reduce the high levels of brush and timber fuel loading that contribute to wildland fire hazard in the area.

Timber croplands represent approximately 33% of land within Placer County. Most of the timber croplands and lands under Timberland Production Zone (TPZ) are located east of

Foresthill, although the Plan area contains more than 20 square miles of privately held timber land, including large holdings by Sierra Pacific Industries and Lone Star Timber Partners II.

The Forest Taxation Reform Act of 1976 requires nonfederal timber-producing lands to be classified by County ordinances into TPZs through a process involving the County Assessor, the County Planning Commission, and timber owners. Lands in TPZs may be used for growing forest products and compatible uses only, and property taxes on TPZ lands are based on those limited uses. Small scale commercial timber harvest still occurs on private lands in the Plan area, and is likely to continue in the future.

The goals and policies of the proposed FDCP are designed to protect and preserve existing forest and timber resources. The majority of the Plan area is designated for Open Space (25%) and Timberland (41%). Policy 4.A.6-2 calls for the County to discourage development that conflicts with timberland management and to protect significant timber production lands from incompatible development. Policy 4.A.6-8 requires the County to maintain a low mathematical density of allowable development in Forestry areas in order to protect major areas of potential timber resources on the Divide from conversion to other more intensive uses. Policy 4.A.6-9 calls for the County to encourage clustering of development in timberland areas within the Forest Residential land use designation to preserve timber resources for productive use, and Policy 4.A.6-10 encourages the use of the Timberland Production Zone for those lands which have significant commercial timber value. Finally, Policy 4.A.6-12 calls for the provision of public facilities and services to be limited in important timber areas on the Foresthill Divide. The proposed FDCP land use designations and zoning are designed to avoid conversion of productive timber lands to non-timber uses, and to allow other development to occur in a manner that does not conflict with timber-related uses. Nevertheless, the loss of productive or potentially productive timber resources through conversion of lands to developed uses represents a ***cumulative, significant and unavoidable*** impact of the proposed FDCP.

Mitigation Measures

No additional mitigation measures are available to reduce this impact to a less than significant level. Therefore, this impact is ***cumulative, significant and unavoidable***.

Discussion/Conclusion with Incorporation of the Forest Ranch Concept Plan: According to the California Department of Forestry and Fire Protection (CDF, letter included in Appendix A.2 of this EIR), there was an active timber harvesting plan on the project site (THP 2-97-070 PLA) at the time their letter was written (it since expired in July 2002). Most of the property has been logged and most of the merchantable timber removed; however, there are portions of the property where proposed helicopter yarding has not been done. The timberland is highly productive and portions could be harvested in less than 20 years. Two separate non-industrial timber management plans were prepared for this property in 1993 and 1994 (NTMP 2-93-3 and NTMP 2-94-3). The forester who prepared the plans segregated the different timber stand types and estimated their current and projected growth rates. The forester estimated that over 2,000 acres of the property is capable of producing 600 to 800 board feet of timber per acre per year with proper timber management. With the recent timber harvesting in the last decade, the amount of timber on site dwindled. But in the long term, this property could, with proper

management, grow 1.2 to 1.6 million board feet of timber per year, or an estimated 150 homes per year. In comparison, the Sierra Pacific Industries lumber mill in Lincoln processes about 150 million board feet of logs per year. If aggressive management was provided, this property could annually supply nearly one percent of the raw material for the Lincoln sawmill. Converting this timberland to other uses will lower productivity and reduce the timber supply in the region. As further stated in their letter, CDF is concerned about rezoning and conversion of timberland to other uses because it conflicts with CDF's mission and with the Forest Practice Act, especially Public Resources Code Sections 4512 and 4513 (included in their letter, see Appendix A.2 of this EIR).

Development of the project site will result in the conversion of over 2,000 acres of productive timber land to residential, open space and recreational uses. CDF concludes that converting this timberland to other uses will lower productivity and reduce the timber supply in the region.

The applicant had a consulting forester prepare a response to the CDF comments (Andrew D. Funk, Professional Forester, Calif. Reg. No. 2260, see letter in Appendix A of this EIR). Mr. Funk prepared the existing Timber Harvest Plan for the project site. His letter includes the following statements regarding timber resources:

The Foresthill Divide contains tens of thousands of acres of forested land. This timberland is currently managed for forest resources that include timber production, wildlife, fisheries, recreation and aesthetics. The largest owner is the USDA Forest Service. Other large owners include Sierra Pacific Industries and Fruit Growers. It was suggested that the Ryan et. al. property could produce 1% of Sierra Pacific's annual Lincoln wood fiber production. Sierra Pacific Industries owns more than one million acres of California timberland. The entire subject property represents just thousandths of one percent when compared to the holdings of just this one company. Sierra Pacific Industries saw mill in Lincoln is a destination mill. The facility does not derive its material entirely from Placer County but rather from the entire Central Sierra Region. The facilities [sic] close proximity to the Stockton and Sacramento ports makes the location of the Lincoln mill desirable to import sawlogs from foreign sources.

The timber industry has declined even though the subject property has been producing sawlogs for many years. Notwithstanding the obvious risk to catastrophic loss due to wildland fire, thirty years ago a timber producer could go to the market with his produce and find many buyers. Today, the timber producer goes to the market and finds the price set by only one buyer. Will that one buyer still be there in another thirty years, the earliest under the best conditions in which another substantial harvest could be contemplated? We all hope so but if the present trend is any indication of the future, then there will likely not be a market in thirty years. Already some timber producers are moving operations out of California and the United States due to uncertainty about the future direction of local, state and federal regulations...

...While pure conifer and hardwood stands exist [on the project site], the vast majority of the area contains a mixture of both conifer and hardwood. The most recent harvest substantially removed the overstory that was suppressing the release of the young developing conifers. The thinning was directed at achieving a more balanced composition. The NTMP began the process of reducing the excessive amount of incense cedar in the intermediate canopy layers that was retained from previous harvest entries. The THP continued the thinning to balance the species composition.

...The topography contained on the subject property north of Foresthill Divide Road is mostly gentle with some moderately sloped terrain. It is generally accepted that this area contains good forest soils. The majority of the soils are very deep and nutrient rich. These soils are capable of producing high quality sawlog and wood fiber forest products. The only exceptions to this are those areas where placer mining removed the surface soil. Slope stability problems are associated with the scraps at the diggings areas. These areas are becoming more stable with the advance of vegetation.

...The Timber Harvest Plan will expire on July 2, 2002. The helicopter portion of the THP has not been harvested due to poor market conditions. No further harvesting is planned.

...CDF has concluded from reading the NTMP's that 600 to 800 board feet per year per acre is the sawlog productivity for over 2,000 acres of the subject property. The following considerations should be made in evaluating this claim:

- How many acres will be contained in the open space areas?
- The CACTOS [California Conifer Output Simulator] projection included an estimate of current growth with one five-year growth projection. It is not clear as to whether hardwood board foot volume was included in the growth projection.
- Bulletin Number 394 was referenced as providing an estimate that the subject property was capable of producing between 600 and 800 board [feet] per acre per year. While the CACTOS projections were supported by a substantial amount of supporting documentation, the Bulletin 394 projection was not.
- The Yield tables in Bulletin 394 are derived from a sample of selected plots in cut-over land with varied forest structure and composition in the 1920's and 1930's. From this sample, forest structure and composition estimates of future volume are made given a rating of the quality of the growing site. This is typically called a site index. Or, range of site indexes called site I, II, III etc.

- Yield tables are heavily weighted on the assumption of the density and composition of average conifer stands which consist of ponderosa and sugar pine, Douglas-fir and white fir. Incense cedar is treated in the yield table construction as a minor species with compositions of 10 percent and less. The area of the NTMP identified for 600 to 800 board feet of growth per acre per year contains hardwoods and incense cedar both reported in excess of 30 percent. The influence that hardwoods have on the growth rate of conifers was not discussed in Bulletin 394; hence, the growth projections may not apply.
- To measure the productivity of a given property after conversion from a mixed forest of conifer and hardwood to entirely conifer is not a measure of a practical constrained management policy where a variety of related values are given importance. While making this type of assumption produces some great productivity numbers, the reality of constrained optimization is a reduction in conifer timber production in-lieu of enhancing other values such as wildlife habitat and recreation.

...[I]t is generally accepted that the entire Foresthill Divide contains good forest soils. These soils are capable of producing a series of periodic harvests. The current forest structure and composition is not the same forest structure and composition that existed at the time of the preparation of the NTMP's or THP 97-070. Drawing future volume conclusions from Bulletin 394 yield tables is interesting; however, it is not recommended because of the unknown competitive influence on future growth from hardwoods that are a significant part of the past and present stands. Changing the forest mix is speculative at best and improbable given the constraints imposed by other considerations such as wildlife habitat and recreation. Even if such a conversion were to occur, it is questionable if there would be any local mills which could accept sawlogs in 30 years time.

Notwithstanding the disagreement among experts regarding the potential future productivity of the project site for timber, the project applicants have not expressed interest in continuing to log the project site. The closure of sawmills in the project area, the cost of transporting logs to sawmills out of the area, the long-term timetable of future harvests, and the environmental impacts of timber harvesting on the project site and area waterways make prospects for future timber harvesting questionable, even if the project applicants should decide to pursue it. Nevertheless, development of the project as proposed would result in the loss of this timber resource, and would contribute to the cumulative loss of timber resources in the region. This impact is therefore considered *cumulative, significant and unavoidable*.

Mitigation Measures

No additional mitigation measures are available to reduce this impact to a less than significant level. Therefore, this impact is *cumulative, significant and unavoidable*.

Impact 3.6-3 Increased exposure of people and property to geologic hazards in the Plan area due to development in accordance with the proposed FDCP.

Discussion/Conclusion: Implementation of the FDCP will allow development of new structures and will result in additional persons living and working in the Plan area, and visiting the Plan area. These people and structures will be subject to geologic hazards identified in the proposed FDCP. The Plan area is within the Melones fault zone; however, it is noted in the 1977 County Seismic and Safety Element that the central county area, which includes the Plan area, is the most stable area, formed on ancient granitic and metamorphic rock that contains no historically active faults. The Plan area does have the potential to be affected by shock waves resulting from earthquakes in western and eastern Placer County, as well as more distant areas that display greater seismic activity.

The canyon sides of the American River watershed are prone to sliding or slumping due to slopes in excess of 30 percent. There are several unstable rock units within the Plan area that have active deposits. In addition, the Foresthill Divide is subject to avalanches. The combination of steep slopes, abundant snow, weather, snowpack, and an impetus to cause movement may create an avalanching episode. Placer County's avalanche management program works to identify Potential Avalanche Hazard Areas (PAHAs) in order to minimize the risk. This exposure to geologic hazards is a *potentially significant* impact.

The proposed goals and policies of the FDCP address seismic and geologic hazards. Policy 4.A.9-1 calls for the County to require preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards. Policy 4.A.9-4 requires the County to ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landsliding. In landslide hazard areas, Policy 4.A.9-5 requires the County to prohibit avoidable alteration of land in a manner that could increase the hazard. In areas subject to severe groundshaking, Policy 4.A.9-7 calls for the County to require the location and/or design of any new buildings, facilities or other development in areas subject to earthquake activity minimize exposure to danger from fault rupture or creep. Policy 4.A.9-10 calls for the County to require that new structures permitted in areas of high liquefaction potential be sited, designed and constructed to minimize the dangers from damage due to earthquake-induced liquefaction. Finally, Policy 4.A.9-11 requires the County to limit development in areas of steep or unstable slopes, or slope breaks to minimize hazards caused by landslides, liquefaction, construction undercutting or vegetation loss. New construction is also required to comply with the Uniform Building Code, including seismic safety standards, which assures that new structures are safer than many existing structures. Compliance with the requirements and regulations of the Uniform Building Code and goals, policies and implementation measures of the FDCP will reduce impacts related to seismic safety and other geologic hazards to a *less-than-significant* level:

Mitigation Measures

With incorporation of the goals, policies and implementation measures of the FDCP, no mitigation measures are required.

Discussion/Conclusion with Incorporation of the Forest Ranch Concept Plan: Development of the proposed Forest Ranch Concept Plan will allow construction of new structures and will result in an estimated 4,255 additional persons living on the Concept Plan site, and additional people and visitors occupying the offices and recreational facilities. These people and structures will be subject to geologic hazards identified in the Setting section above. The area does have the potential to be affected by shock waves resulting from earthquakes in western and eastern Placer County, as well as more distant areas that display greater seismic activity. The canyon sides of the American River watershed are prone to sliding or slumping due to slopes in excess of 30 percent. Impacts related to groundshaking and other geologic hazards on the site are *potentially significant*. Compliance with the requirements and regulations of the Uniform Building Code and goals, policies and implementation measures of the FDCP will reduce impacts related to seismic safety and other geologic hazards to a *less-than-significant* level:

Mitigation Measures

With incorporation of the goals, policies and implementation measures of the FDCP, no mitigation measures are required.

Impact 3.6-4 Increased soil erosion and other soil-related hazards in the Plan area due to development in accordance with the proposed FDCP.

Discussion/Conclusion: Impacts related to landslide and liquefaction are addressed in Impact 3.6-3 above. Shallow and serpentine soils are a limiting factor to development. Serpentine soils surround Todd's Valley and are located east of Foresthill, on Forest Service lands, and along McKeon-Ponderosa Road. Testing is now required by Placer County Environmental Health Services for projects that would disturb serpentine soils. This issue is addressed in Section 3.8, Air Quality. Portions of the Plan area are located over areas with shallow soils, especially the slopes of the North and Middle Fork American River.

Soils within the Plan area are subject to moderate to very high erosion hazard. Erosion can lead to other hazards, including slope instability and sedimentation of nearby streams and rivers. The proposed FDCP includes a goal to promote the conservation of soils as a valuable natural resource. It includes Policy 4.A.8-2, which calls for the County to require slope analysis maps during the environmental review process, or at the first available opportunity of project review, to judge future grading activity, building location impacts, and road construction impacts. It also includes Policy 4.A.8-4 to require the use of feasible and practical Best Management Practices to minimize the effects of construction, logging, mining, recreation or other activities that could result in soil loss from dust generation and water runoff. Policy 4.A.12-2 requires that natural open space buffers be maintained in non-riparian areas adjacent to drainage swales and creeks to reduce erosion and to aid in the natural filtration of run-off waters flowing into these waterways. Proposed Implementation Measures add further protection, including #14, which requires site-specific studies to be prepared, including soil reports, slope analysis, grading plans, and erosion control and rehabilitation plans during the environmental review process. Implementation Measure #15 calls for development to be avoided on highly erosive soils and slopes over 15%, and Implementation Measure #16 calls for continued monitoring of mitigation measures that relate to accelerated erosion and attendant problems. Policies 4.A.7-3, 4.A.7-7,

4.A.7-8, 4.A.7-17, and 4.A.7-18 in the Water Resources section of the FDCP provide additional protection from soil erosion hazards.

Implementation of the proposed FDCP will result in reduced erosion hazards within the Plan area. However, because new development will occur in the Plan area, impacts related to soil erosion are considered *potentially significant*.

Mitigation Measures

In addition to compliance with the policies and implementation measures contained in the FDCP, implementation of the following measures will reduce the magnitude of potential topographic alteration and erosion impacts to a *less-than-significant* level:

- 3.6-4a *A geotechnical engineering investigation of proposed development sites shall be prepared by a qualified California-licensed civil engineer or qualified California-licensed geotechnical engineer prior to any grading or other ground-disturbing activities. All site grading, trenching, cut and fill, engineered soils, and construction shall be in compliance with the recommendations of the geotechnical engineering investigation, including soil index, pH and resistivity testing, fill control, and proper design of cut and fill slopes.*
- 3.6-4b *Erosion and ground instability mitigation measures shall include conformance to Chapter A 33 of the 1997 edition of the Uniform Building Code and Placer County's Grading Erosion and Sediment Control Ordinance. The required designs shall include methods to control soil erosion and ground instability. Measures to control soil erosion and mitigate potential differential settlement and construction related ground instability impacts include, but are not limited to, the following:*
- 1. A California licensed civil engineer shall prepare an Improvement/Grading plans for proposed development sites.*
 - 2. A Notice of Intent (NOI) and supporting documents shall be submitted to the State Water Resources Control Board (SWRCB). A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared for inclusion with construction plans and for regulation of construction activities on development project sites. The objectives of the SWPPP are to identify the sources of sediment and other pollutants that affect the quality of storm water discharges and to describe and ensure the implementation of practices to reduce sediment and other pollutants in storm water discharges. The SWPPP must include Best Management Practices (BMPs) which address source reduction and sediment capture and retention.*
 - 3. Uncemented silty soils are prone to erosion. According to requirements as set forth in Section 402(p) of the Clean Water Act as amended in 1987, and as administered by the SWRCB as described in (2) above, erosion control measures (appropriate Best Management Practices) shall be implemented during*

construction which conform to the National Pollutant Discharge Elimination System, Storm Drain Standards, and local standards.

Any cut or fill slopes and their appurtenant drainage facilities shall be designed in accordance with Uniform Building Code guidelines and the Placer County Grading Ordinance. In general, soil slopes shall be no steeper than 2:1 (horizontal to vertical) unless authorized by a qualified professional. Any deviation from the 2:1 slope standard is subject to review and approval by the Department of Engineering and Surveying. Slope angles shall be designed to conform to the competence of the material into which they are excavated.

- 4. Parking facilities, roadway surfaces, and buildings all have impervious surfaces which concentrate runoff and artificially change existing drainage conditions. Collection systems shall be designed where possible to divert natural drainage away from structures, to collect water concentrated by these surfaces, and to convey water away from the project site in accordance with the National Pollutant Discharge Elimination System, Storm Drain Standards, and Placer County standards.*
- 5. Where structures are to be constructed between the rock, hardpan or dense soil exposed in a cut slope and engineered fill, a geotechnical study shall be prepared as detailed in Mitigation Measure 3.6-4a, and site specific soil engineering recommendations developed to mitigate this impact.*
- 6. During construction, trenches greater than 5 feet in depth shall be shored, sloped back at a 2:1 slope angle, or be reviewed for stability by a qualified professional in accordance with the Occupational Safety and Health Administration regulations, if personnel are to enter the excavations.*

Discussion/Conclusion with Incorporation of the Forest Ranch Concept Plan: Earthwork/grading for structure placement, internal road system development, the golf course, and overall site improvements will be required during development of the project site. Grading activities, such as those anticipated during development, can create the potential for ground instability and erosion. Extensive grading is anticipated for some facilities, such as the golf course.

Slopes within the project site vary from gentle to steep (over 30 percent). Anticipated construction activities will include shallow to substantial cut and fill slopes for site buildings and associated trench excavation. Development on the project site is principally proposed to occur on areas with well-drained soils, with moderately slow permeability, shrink-swell potential and slight to moderate erosion hazards.

Potential ground instability within the project site is not known, as no geotechnical studies have been performed. Construction activities involving ground disturbance could result in a potential for ground instability in portions of the site. Erosion is anticipated to occur in disturbed soil areas. Soil stockpiles may be susceptible to erosion and soil loss. These impacts are anticipated to be ***potentially significant***.

Mitigation Measures

Implementation of the following measures will reduce the magnitude of potential topographic alteration and erosion impacts to a *less than significant* level:

- 3.6-4c *A preliminary geotechnical engineering investigation prepared by a licensed civil engineer or a California-licensed geotechnical engineer and consistent with the requirements of the Placer County Grading, Erosion, and Sediment Control Ordinance shall be submitted with the Specific Plan. A more detailed geotechnical engineering investigation prepared by a licensed civil engineer or a California-licensed geotechnical engineer and consistent with the requirements of the Placer County Grading, Erosion and Sediment Control Ordinance shall be submitted with each Tentative Subdivision Map application within the project area. Other entitlement requests may be required to prepare project specific geotechnical investigations if findings in the Specific Plan preliminary engineering investigation indicates a need.*
- 3.6-4d *Erosion and ground instability mitigation measures shall include conformance to the Uniform Building Code and Placer County's Grading, Erosion and Sediment Control Ordinance. The required designs shall include methods to control soil erosion and ground instability. Measures to control soil erosion and mitigate potential differential settlement and construction related ground instability impacts include, but are not limited to:*
- 1. Prohibit the placement of habitable structures or individual sewage disposal systems on or in critically expansive soils.*
 - 2. In landslide hazard areas, prohibit avoidable alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems; removal of vegetative cover; and increasing the grade of slopes and undercutting the bases of slopes.*
 - 3. Limit development in areas of steep (in excess of 30%) or unstable slopes, or slope breaks to minimize hazards caused by landslides, liquefaction, construction undercutting or vegetation loss.*
 - 4. Septic leachfields and drainage plans shall direct runoff and drainage away from steep and/or unstable slopes.*
 - 5. A California licensed Civil Engineer shall prepare and submit to the Department of Engineering and Surveying a preliminary grading plan and erosion control plan (winterization/ground instability plan) for new development projects prior to any environmental review determination.*

Impact 3.6-5 Increased exposure of people and property to flooding hazards in the Plan area due to development in accordance with the proposed FDCP.

Discussion/Conclusion: Flooding can result in damage to the ecosystem, personal property, and can threaten life. Careful steps must be taken to avoid development in flood-prone areas and construction in flood plains. According to the Placer County General Plan Background Report, flooding due to excessive rainfall can occur in Placer County anytime between November and May. The 1981 Foresthill General Plan states:

Special flood hazard areas have recently been mapped in Placer County by the U.S. Department of Housing and Urban Development. According to their maps there are only two flood hazard zones within the plan area. The first is the Middle Fork of the American River which serves as the southern boundary for the plan. The second area is the North Fork of the American River running through the western portion of the plan area within the proposed Auburn Dam Take-line.

While the Plan area is prone to seasonal flooding, it is not located within a 100-year flood zone, as determined by Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs).

Dam failure presents additional flood hazards. Several reservoirs are located within or upstream of the Plan area. Failure of the French Meadows Dam could threaten an estimated 20 persons and could inundate French Meadows Road and Highway 49 on the North Fork of the American River. Sugar Pine Dam would not threaten persons unless recreationists were in the vicinity at the time of dam failure. Iowa Hill Road, Shirttail Canyon Road, and Yankee Jim's Road could all be inundated.

The proposed FDCP includes numerous goals and policies which address flooding hazards. At the same time, the Plan encourages the use of natural stormwater drainage systems to preserve and enhance natural features (Policy 4.A.7-4), and supports efforts to acquire land or obtain easements for drainage and other public uses of floodplains where it is desirable to maintain drainage channels in a natural state (Policy 4.A.7-5). Policy 4.A.7-12 calls for the County to preserve or enhance the aesthetic qualities of natural drainage courses in their natural or improved state compatible with flood control requirements and economic, environmental, and ecological factors. Policy 4.A.7-13 promotes the use of natural or non-structural flood control facilities, including off-stream flood control basins, to preserve and enhance creek corridors. Policy 4.A.7-14 requires flood-proofing of structures in areas subject to flooding. Finally, Policy 4.A.7-22 calls for the County to encourage the protection of floodplain lands and where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.

Because the Plan area does not include FEMA-designated flood zones, because the proposed Plan does not increase the potential for dam failure, and because the policies of the FDCP reduce potential flooding hazards within the Plan area, this impact is considered *less than significant*.

Mitigation Measures

With incorporation of the goals, policies and implementation measures of the FDCP, no mitigation measures are required.

Discussion/Conclusion with Incorporation of the Forest Ranch Concept Plan: The existing drainages accept runoff from approximately 2,615 onsite acres, and approximately 800 acres offsite which drain through Concept Plan site watercourses. The net total area to be developed, assuming runoff coefficients of 0.20 for rural density and low density single family residential, 0.30 for 2 and 3 unit per acre single family residential, 0.35 for medium density residential, and 0.60 for resort and commercial development, is the net runoff increase equivalent of approximately 200 acres of existing forested land at a runoff coefficient of 0.15. This represents an estimated 6 percent increase in total runoff to be accommodated at buildout of the Concept Plan. There are no FEMA-designated flood hazard areas on the Forest Ranch Concept Plan site. However, minor watercourses exist that could pose localized flooding conditions if housing and other structures are inappropriately located. Roadway construction across and along the banks of Devils Canyon Creek and Second Brushy Canyon Creek could restrict flows, resulting in roadway and upstream flooding. This is a *potentially significant* impact.

Implementation of the following measures will reduce the impacts of locating development in flood prone areas to a *less-than-significant* level:

- 3.6-5a *All drainage-related infrastructure shall be designed in accordance with the standards contained in the Placer County Flood Control and Water Conservation District's Stormwater Management Manual and Placer County Land Development Manual. All new development shall be planned and designed so that no damage occurs to structures or improvements during the 100-year event and no inundation of private property utilized for human habitation or wastewater disposal facilities occurs during the 10-year event. The Master Drainage Plan to be provided with the Specific Plan shall identify all 100 year flood plains within the Forest Ranch Concept Plan and designate these areas for open space uses. Plans identifying areas susceptible to 100-year and 10-year events shall be presented to the Placer County Flood Control and Water Conservation District and the Engineering and Surveying Department prior to consideration by the County of the first tentative map, conditional use permit or minor use permit.*
- 3.6-5b *Development within the Concept Plan area shall comply with the requirements of the Placer County Flood Damage Prevention Regulations (Article 15.52, Placer County Code).*
- 3.6-5c *Flood control mechanisms shall be designed to utilize natural or non-structural flood control facilities, including off-stream flood control basins, to preserve and enhance creek corridors. Flood control structures, facilities, and improvements shall be designed to conserve resources, incorporate and preserve scenic values, and incorporate opportunities for recreation where appropriate.*

- 3.6-5d *The developer shall submit a master drainage plan for the Forest Ranch Concept Plan for review and approval by the Placer County Engineering and Surveying Department and the Placer County Flood Control and Water Conservation District with the Specific Plan or subsequent entitlement request submitted for the Forest Ranch Concept Plan. The master drainage plan shall be designed to create no net increase in peak flows from any individual identified watershed and shall meet all of the requirements of the Placer County Land Development Manual and Stormwater Manual in force at the time of plan submittal. The master drainage plan shall address phasing tied to individual subdivision maps, conditional use permits, and minor use permits, subject to approval by the Engineering and Surveying Department and the District. Subsequent development within the Forest Ranch Concept Plan shall be consistent with the approved master drainage plan. If detention/retention facilities are identified as necessary, these shall be designed in accordance with the Master Drainage Plan and the Placer County Flood Control and Water Conservation District Storm Water Management Manual.*
- 3.6-5e *Detention basins shall be designed and constructed with new development to mitigate the projects post project flows determined to be necessary by the Department of Engineering and Surveying.*

Impact 3.6-6 Adverse impacts on water quality in the Plan area and downstream due to wastewater generated by development in accordance with the proposed FDCP.

Discussion/Conclusion: As noted in the “Setting” discussion above, the Plan area is rich in water resources, including relatively intact watersheds that provide the Foresthill Divide with an excellent source of drinking water, groundwater supplies that support private well systems on the Divide, and surface waters that provide for fishing, recreation, and drinking water. The Plan area includes 222,360 acres along the North Fork American River and 394,181 acres along the Middle Fork American River. The Plan area contributes significantly to the larger American River Watershed. The Plan area is comprised of smaller watersheds, of which the Pagge Creek Watershed in the northeasternmost portion of the Plan area contributes the majority of drinking water.

The greatest potential threat to water quality within the Plan area is contamination from individual sewage disposal systems. There are no community sewer systems located within the Plan area. All wastewater disposal is by individual systems (some of which serve more than one dwelling unit or business). The only community sewerage systems (i.e., community leach fields, oxidation ponds) are those serving mobile home parks, two apartment complexes and four houses on one lot. Future growth will continue to be served by septic systems, unless required by the Placer County Environmental Health Services to connect to a community sewer system. Sewer systems may be necessary for development of higher densities that generate high sewage flows or concentrate large quantities of sewage in limited areas.

The effectiveness of septic systems remains limited in some areas by shallow soils, massive granitic rock complexes, and excessive slopes that are characteristic of the Plan area. The FDCP

provides that the flat region running through the center of the Plan area be served by individual sewage disposal systems on parcel sizes of 2.3 acres or more. Large areas northwest and southwest of this flat area “are marginal to unacceptable for the proper functioning of individual sewage disposal systems,” and sewage systems should be located on parcels ranging from 4.6 to 20 acres or larger. There are areas within the Plan area, however, that do not have shallow soils and are suitable for individual septic systems, such as Todd’s Valley. Other areas may be suitable with the use of engineered septic systems. Soil suitability for septic systems has been taken into consideration in development of the FDCP and the assignment of land use densities in residential, commercial and industrial areas.

Continued use of a community water system is recommended for higher density areas within the Plan area in order to minimize the risk of nitrate contamination in private wells. A significant portion of the Plan area is located outside the Foresthill PUD boundaries and other water system service areas, and cannot feasibly be connected to a community water system; however, most of these areas are not considered suitable for development.

The proposed FDCP includes numerous policies that address water quality and wastewater disposal. Policies 3.D.3-1 through 3.D.3-3 and Implementation Measures address the criteria and process for review and approval of on-site sewage treatment and disposal. Policies 3.D.4-4 and 3.D.4-5 address maintaining quality of drinking water supplies. Policies 4.A.7-9, 4.A.7-10, 4.7.A-20, 4.A.7-21 and 4.A.7-23 and Implementation Measures address more general water quality protection measures. Although these policies and implementation measures address water quality issues associated with on-site disposal systems, the Regional Water Quality Control Board (in their response to the Notice of Preparation, see Appendix A.1) had indicated in the past that the County had inadequate design criteria for on-site domestic waste disposal systems. The Regional Board found the Ordinance Governing Individual On-Site Sewage Disposal Systems (Placer County Code, Chapter 4, Subchapter 1, Section 4.45) did not meet the Regional Board Guidelines for Waste Disposal From Land Developments (Guidelines) and therefore posed a significant impact. This conclusion is also based on the Regional Board’s statement that the FDCP policies have not been submitted to them for review as required under Resolution No. 82-036 to waive Waste Discharge Requirements (WDRs) for septic tank/leachfield systems for large developments. The Department of Environmental Health was in correspondence in August of 2002 with the Regional Board and is under the firm belief that the current ordinance is in conformance with the above referenced guidelines and the antiquated concept of sewage disposal. The Regional Board under state legislation is mandated to work with the local agencies in developing new, technologically current, standards for the permitting, operation, maintenance and monitoring of on-site sewage systems. Depending on when the process is completed, it can be anticipated that there will be some sort of ordinance revision to reflect the statewide changes. The Regional Board suggests that high density residential discharges can be mitigated with the development of effective community collection, treatment and disposal systems.

Based on the Regional Board’s comments, although the FDCP does not propose that large developments utilize individual on-site systems, this impact is considered a ***potentially significant cumulative*** impact. However, it can be mitigated to a level that is ***less than significant*** through implementation of the following mitigation measures:

Mitigation Measures

3.6-6a *If required by the State of California Water Resources Control Board, the County shall modify its Ordinance Governing Individual On-site Sewage Disposal Systems to meet the Regional Board Guidelines for Waste Disposal from Land Developments and submit the adopted FDCP to the Regional Board for review as required under Resolution No. 82-036 or subsequent resolutions.*

3.6-6b *When required by State law or local ordinance, add the following policy to the FDCP: On-site sewage systems shall participate in the approved County Operation, Maintenance and Monitoring program.*

Discussion/Conclusion with Incorporation of the Forest Ranch Concept Plan: The Forest Ranch Concept Plan has the potential to violate water quality standards and to degrade surface water and groundwater (springs) quality. Failure to properly locate and design individual wastewater treatment systems can degrade both surface waters and groundwater through offsite transmission of effluent. Inadequate sizing, design or operation of community facilities can result in similar impacts. Operation of wastewater disposal facilities at the proposed recreational vehicle park could threaten water quality through overload and upset conditions. All of these impacts can occur, despite overall project design that maintains low residential densities in areas where onsite treatment and disposal will occur and which recycles and reuses community wastewater treatment facility effluent. These water quality impacts are *potentially significant*.

Mitigation Measures

Implementation of the following measures will reduce water quality impacts related to Forest Ranch Concept Plan wastewater treatment and disposal to a *less-than-significant* level:

3.6-6c *All onsite wastewater treatment and disposal facilities (whether septic tank/leachfield or engineered alternative systems) proposed to be installed on individual lots shall comply with Placer County's Ordinance Governing Individual On-Site Sewage Disposal Systems, including compliance with the minimum locational and operational criteria described therein.*

3.6-6d *Prior to approval of tentative maps or improvement plans (whichever comes first) involving lots proposed for onsite wastewater disposal systems, a site evaluation shall be performed for each proposed lot in accordance with Placer County's Ordinance Governing Individual On-Site Sewage Disposal Systems. Proposed lots shall contain sufficient area to ensure compliance with Placer County and Regional Water Quality Control Board standards and criteria for treatment and disposal facilities, including sufficient replacement area in the event of system failure. On-site sewage treatment and disposal will only be allowed on parcels where all current regulations can be met and where parcels have the area, soils, and other characteristics that permit such disposal facilities without threatening surface or groundwater quality or posing any other health hazards.*

- 3.6-6e *The Specific Plan shall clearly show the location of all watercourses and existing springs. No onsite wastewater disposal system or replacement area shall be located within 100 feet of such features.*
- 3.6-6f *A preliminary design of all proposed community wastewater treatment and disposal facilities shall be prepared and provided to Central Valley Regional Water Quality Control Board concurrent with the Specific Plan and shall be approved prior to consideration of the first tentative map covering those areas to be served. Tentative maps shall not be approved for the Forest Ranch project unless the proposed facilities are deemed by the regulatory agencies to be adequate to prevent potential water quality degradation from facilities operation at buildout of the Concept Plan. Subsequent project level environmental analysis of proposed wastewater treatment facilities shall be undertaken, to evaluate the impact of any proposed treatment and disposal facilities prior to approvals for the area to be serviced.*
- 3.6-6g *The proposed recreational vehicle park shall be connected to the proposed community wastewater treatment and disposal facilities.*

Impact 3.6-7 Water quality in the Plan area may be degraded following site development by the introduction of urban pollutants including vehicle oils and greases, heavy metals on roads, parking lots, and driveways, fertilizers and pesticides used on site landscaping, and toxic compounds released from auto maintenance areas. Construction during wet or dry weather will affect water quality with increased sedimentation, operation and maintenance of construction vehicles, and storage of materials that could release contamination to surface waters.

Discussion/Conclusion: Newly planted vegetation and newly paved roadways could result in long-term water quality degradation. The higher daily use of roads and parking areas would contribute vehicle oils and grease to stormwater discharge. In commercial, industrial and mixed use areas, stormwater runoff may convey a wide range of pollutants to receiving waters. Vehicles contribute oil, grease, and metals onto roads and parking lots. Excessive use of fertilizers, pesticides and herbicides on landscaping can also result in leaching of nutrients and toxic compounds into stormwater runoff. Such compounds are soluble and would not, therefore, be removed by the use of detention basins.

Uncontrolled, these urban pollutants can directly or indirectly affect aquatic life. High concentrations of toxins in runoff can be lethal to aquatic life; chronic, low levels may enter the food chain, affecting the long-term breeding success of populations and lower reproductive potential. Aquatic and wildlife habitat can also be adversely affected by the accumulation of toxins, which can indirectly affect aquatic and wildlife resources. Direct discharge from developments could occur towards surface waters.

Pollutant levels are typically highest during late summer and fall when pollutants, previously bound to particulates in the sediments, are released during the first large rainfall event (“first

flush”) of the season. Since pollutants are typically concentrated, the potential for toxic events are more likely during first flush events because the dilution factor is usually low.

Common pollutants found in urban runoff include trace metals (copper, lead, zinc, cadmium, chromium, arsenic and nickel), PCBs, oil and grease, nutrients, coliform bacteria, organic compounds, and sediment. Generally, the high level of metals can be traced to one of several urban sources, including vehicle operation and maintenance, atmospheric fall-out, and illegal sewage discharges.

New developments of 1 to 5 acres or larger are subject to a National Pollutant Discharge Elimination System (NPDES) permit. The purpose of the permit is to protect water quality from development that would discharge into Waters of the U.S. The need for an NPDES permit would be triggered with any application for development of one acre or greater in the Plan area. In addition, private development projects are subject to Placer County Flood Control District and Placer County Department of Engineering and Surveying requirements, which require the submittal of an erosion control plan.

Development and ultimate urbanization of Plan area improvements could result in water quality degradation over the duration of construction. Grading operations result in a loss of vegetation, exposing the soils to erosion, particularly in steep areas. The exposed soils could be carried by storm runoff during the rainy season to downstream waters resulting in sediment transport. These increased sediment loads could substantially degrade water quality in downstream drains, especially over the construction duration and buildout of the Plan area. In addition, the operation and maintenance of construction vehicles and equipment, the loading and unloading of construction materials, and construction waste could release contaminants that would be washed off by stormwater discharges. This increase in sediment loads and turbidity in local drains would be considered a *potentially significant short-term* water quality impact.

Mitigation Measures for Short Term Impacts

The following measures reduce the significant impact of **short-term** surface water quality degradation that would occur during the development of the Plan area to a *less than significant* level:

- 3.6-7a *Prior to approval of improvement plans for projects of 1 acre or greater, the developer shall obtain from the State Water Resources Control Board a General Construction Activity Stormwater Permit under the National Pollutant Discharge Elimination System (NPDES) and comply with all requirements of the permit to minimize pollution of stormwater discharges during construction activities.*
- 3.6-7b *Prior to approval of improvement plans for all projects in the Plan area, the project developer shall submit to the Placer County Engineering and Surveying Department, for review and approval, an erosion control plan consistent with the County’s Grading, Erosion and Sediment Control Ordinance during environmental review. The erosion control plan shall indicate that proper control of siltation, sedimentation and other pollutants will be implemented per NPDES permit requirements and*

County ordinance standards. The plan shall address storm drainage during construction and proposed BMPs (Best Management Practices) to reduce erosion and water quality degradation. All on-site drainage facilities shall be constructed to Placer County specifications. BMPs shall be implemented throughout the construction process.

Best Management Practices for construction shall be developed in accordance with the California Stormwater Quality Association Stormwater Best Management Practice Handbook (January 2003).

Due to the increase in impervious surfaces and traffic trips in the Plan area, a substantial increase in urban pollutants would gradually occur in the watersheds over the life of the FDCP. Given the extent of proposed development and roadway improvements, the overall potential for generation of urban pollutants, and because drainage is ultimately conveyed into a potable water source, this potential for long-term water quality degradation is considered a ***potentially significant*** impact.

Mitigation Measures for Short Term Impacts

Implementation of the following mitigation measures will reduce short-term surface water quality impacts to a ***less than significant*** level.

3.6-7c *On-site sediment basins shall be designed and constructed with new development as determined to be necessary by the Department of Engineering and Surveying. These basins shall be constructed at the commencement of grading, and be maintained throughout the construction period to receive storm water runoff from graded areas to allow capture and settling of sediment prior to discharge to receiving waters. Sediment basins located downstream of known development shall be designed to accommodate anticipated sediment deposit that will be transported during subsequent phases of development.*

Mitigation Measures for Long Term Impacts

Implementation of the following mitigation measures will reduce **long-term** surface water quality impacts to a ***less than significant*** level.

3.6-7d *Prior to approval of improvement plans for development projects in the Plan area, the developers shall develop a surface water pollution control plan (i.e., parking lot sweeping program and periodic storm drain inlet clearing) to reduce long-term surface water quality impacts. Parking lot sweeping shall occur on a weekly basis, and storm drain inlet clearing shall occur semi-annually. The plan shall also include the installation of oil, gas and grease trap separators in the proposed parking lots. The developers shall develop a financial mechanism, to be approved by Placer County, which ensures the long-term implementation of the program.*

Best management practices (BMPs), such as sediment or water quality ponds, wetlands, filters, and vegetated swales, have been shown to reduce urban pollutant

levels in storm water. A number of studies have been conducted over the past two decades regarding the pollutant removal effectiveness of urban storm water BMPs. For example, wetland BMPs such as shallow marshes, extended detention wetlands, and ponded wetlands have demonstrated median removal rates of 77% for bacteria, 90% for hydrocarbons, including oil and grease, and 69% for cadmium. Ponds have demonstrated median removal rates of 57% and 73% for copper and lead, respectively. Filters have been shown to be 81% effective in removing hydrocarbons, including oil and grease, 80% effective in removing zinc, 87% effective in removing total suspended solids (TSS), and 66% effective in removing organic carbon, based on the median rates of a number of reported studies. Vegetated drainage swales have demonstrated median removal efficiencies of 81% for TSS, 67% for organic carbon, and 71% for zinc (Schueler 1997). All BMPs for water quality protection, source control, and treatment control shall be developed in accordance with the California Storm water Quality Association Storm water Best Management Practice Handbook (January 2003) for the applicable type of development and/or improvement. Provisions shall be included for long-term maintenance of BMPs.

3.6-7e *Projects subject to construction-related storm water permit requirements of the Federal Clean Water Act National Pollutant Discharge Elimination System (NPDES) program shall obtain any required permits through the Regional Water Quality Control Board or Environmental Protection Agency.*

3.6-7f *Developers shall re-vegetate all disturbed areas. A winterization plan shall be provided. It is the developer's responsibility to assure proper installation and maintenance of erosion control/winterization during project construction. Where soil stockpiling or borrow areas are to remain for more than one construction season, proper erosion control measures shall be applied. Erosion control shall be provided where roadside drainage is off of the pavement, to the satisfaction of the Department of Engineering and Surveying.*

Discussion/Conclusion with Incorporation of the Forest Ranch Concept Plan: Construction and implementation will involve grading, excavation and potential cut and fill activity. Ground disturbance associated with these activities has the potential to cause erosion of exposed surfaces during rainfall events. Runoff during rainfall events has the potential to cause sedimentation of onsite and offsite watercourses. Urban runoff from roadways, driveways and parking lots may carry petroleum-based contaminants to waterways. Operation of a proposed golf course may have the potential to generate runoff containing pesticide, herbicide and fertilizer residues. These activities pose a **potentially significant** impact to water quality.

Mitigation Measures

Implementation of the following measures will reduce water quality impacts related to erosion and urban runoff to a **less than significant** level:

3.6-7g *Best Management Practices (BMPs) shall be applied during construction to minimize erosion and sedimentation. An erosion control plan shall be submitted prior to*

ground disturbing activities that reduces erosion and water quality degradation. Environmental review for subsequent development shall identify appropriate BMP's for site specific conditions. BMP's selected shall be in accordance with the California Storm Water Quality Association Storm Water Best Management Practice Handbook, or other appropriate criteria as determined by the Design Review Committee.

The erosion control plan shall indicate that proper control of erosion, sedimentation, siltation and other pollutants will be implemented per NPDES permit requirements and County standards. The plan shall address storm drainage during construction and propose BMP's to reduce erosion and water quality degradation. All drainage facilities shall be constructed to Placer County specifications. The plan shall indicate whether grading will occur in the winter months. If grading is proposed for the winter months, mechanisms to avoid sedimentation of creeks and damage to riparian habitat shall be identified. The plan shall also specify restoration measures for graded areas including but not limited to landscaping, re-vegetation, the use of rice straw or other weed free vegetative material for erosion control measures.

Drainage facilities shall be protected as necessary to prevent erosion of the onsite soils immediately following grading activities. In addition, cut slopes and drainage ways within native material shall be protected from direct exposure to water runoff immediately following grading activities. The design for collected run-off shall dissipate the energy. Cut and fill embankment slopes shall be protected from sheet, rill, and gully erosion.

Impact 3.6-8 Reduction in available surface and ground water supplies due to development in accordance with the proposed FDCP.

Discussion/Conclusion: Within the Plan area, water is supplied by a combination of private wells and community water systems. The Foresthill PUD provides domestic water supply for Todd's Valley and Foresthill, and Baker Ranch Mutual Water Company provides domestic water supply for the existing mobile home park. Michigan Bluff Mutual Water Company supplies the Michigan Bluff community. Many individual parcels are supplied with pumped groundwater from individual wells.

Foresthill PUD supplies 1,200 acre-feet of water from the Sugar Pine Reservoir, and can supplement the supply in emergency situations with water from two domestic wells in Todd Valley only. Water from Mill Springs is also available in normal to high precipitation years but is not counted in long-term supply calculations. Water supply and transmission facilities would need to be expanded to serve the build out population of 22,010. The BLM originally designed the reservoir for eventual capacity expansion; the dam could potentially be raised an additional 4 to 5 feet to accommodate an additional 4,000 to 5,000 acre-feet; however, it is important to note that the expansion of facilities would not be without significant environmental impact, and would submerge existing recreational facilities around the reservoir.

The proposed FDCP includes policies that encourage water conservation and groundwater recharge, and includes other policies that address water supply. Policy 3.D.4-1 requires all new development to demonstrate the availability of a long-term, reliable water supply. Policy 3.D.4-2 requires higher density development to rely on public water systems, and developments containing parcel sizes of one acre or less are required to connect to a treated water supply. Individual wells may be permitted when parcels are larger than one acre and no public water system exists or can be extended to the property. Policy 3.D.5-1 requires the County to ensure that an adequate quality and quantity of water is delivered to residents of the Foresthill area.

Although development in accordance with the proposed FDCP will utilize additional surface and ground water supplies, with the implementation of the Plan policies, the available water resources are adequate to serve the Plan area population without an adverse effect on those resources. This impact is *less than significant*.

Mitigation Measures

No mitigation measures are required.

Discussion/Conclusion with Incorporation of the Forest Ranch Concept Plan: See Section 3.4 (Public Facilities) - Discussion/Conclusion of Impact 3.4-2 and mitigation measures 3.4-2a through 3.4-2f

Impact 3.6-9 Adverse impacts on special-status plants in the Plan area due to development in accordance with the proposed FDCP.

Discussion/Conclusion: Special-status plant species including Butte County fritillary, Layne's ragwort, nissenan manzanita, Stebbins's phacelia, saw-toothed lewisia, woolly violet, Red Hills soaproot, Pine Hill flannelbush, and Stebbins's morning glory have the potential to occur within the Plan area. These plants are afforded special protection in the CEQA review process and are considered sensitive local resources in Placer County. Habitats supporting conditions suitable for these species should be considered sensitive, and as such should be surveyed prior to project development in these areas. If some or all of these species are found in areas proposed for development, the appropriate resource agencies should be contacted and, if possible, those areas should be avoided.

The proposed FDCP includes the following policies that address this impact:

4.A.1-6, 4.A.1-15 and 4.A.3-1

In addition to these policies, Implementation Measure #3 requires that reconnaissance-level biological surveys be conducted for all new development proposals on undeveloped land. Protocol surveys and mitigation is required if indicated by the survey results. If indicated by reconnaissance surveys, Implementation Measure #5 requires that site-specific evaluations be performed at the appropriate time of year to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation must consider the potential for significant impact on these resources, and will identify feasible measure(s) to