

## IV. RESOURCE MANAGEMENT ELEMENT

The Resource Management Element addresses subjects associated with the natural resources and environment of the Foresthill Divide Community Plan area. These subjects include Natural Resources/Conservation, Open Space, Cultural Resources, and Air Quality. For each of these topics, the Resource Management Element provides a statement of purpose, goals and policies, background information, and implementation measures.

### A. NATURAL RESOURCES/CONSERVATION/OPEN SPACE

#### 1. PURPOSE

The purpose of the Natural Resources/Conservation/Open Space section is to identify existing natural resources which make up the physical environment of the Foresthill Divide Community Plan 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 Foresthill Divide Community Plan 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.

The 109 square mile Foresthill Divide Community Plan area is comprised of many diverse biological communities, including the coniferous forest, montane hardwood, chaparral, blue oak woodland, annual grassland, urban and riparian 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, urban, ruderal/barren, river/stream, and open water habitats. 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, §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 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 CDFG Streambed Alteration Agreement.

Wildlife movement corridors are essential to the distribution of wildlife, providing a means of movement throughout ranges that are encroached on 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.

Riparian habitats support numerous plant and wildlife species and are considered a sensitive habitat in provisions of the Placer County General Plan and the FDCP. Projects that propose encroachment into these areas must follow the guidelines established in the Placer County General Plan, and may require Streambed Alteration Agreements with the CDFG.

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 and timber harvest, 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 Foresthill Divide Community Plan area, as well as providing open space and contributing to the scenic qualities of the Plan area.

## 2. GOALS AND POLICIES

### 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, native 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 United States Army Corps of Engineers, the United States 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 on agricultural lands and timberlands to enhance their 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.

<p><b>Key Reservoirs</b>                      Sugar Pine Reservoir                      Big Reservoir</p>	<p><b>Key Watersheds</b>                      American River                      Owl Creek</p>
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- 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.

**Visual Resources**

**Goal 4.A.14. Protect and maintain identified viewsheds and natural areas of special aesthetic quality along Foresthill roadways, public recreation areas and, specifically, the viewshed of the American River canyons.**

**Policies**

- 4.A.14-1 The well-recognized views of surrounding lands, ridges and canyons from public rights-of-way or lands shall be retained.
- 4.A.14-2 The views of proposed development from other properties shall be considered when making decisions on compatibility of the proposed development.
- 4.A.14-3 Ridge line development shall be carefully reviewed to ensure that proposed structures and lighting do not unduly intrude into the viewshed of nearby roadways, properties or the American River canyon.
- 4.A.14-4 The undergrounding of existing and new utility lines shall be encouraged.
- 4.A.14-5 Although not entirely within the Community Plan area, the following road segments shall be designated as scenic highways:
- a. Foresthill Road within the Plan area and to Robinson Flat;
  - b. Mosquito Ridge Road to Robinson Flat Road; and,
  - c. Robinson Flat Road from Mosquito Ridge Road to Foresthill Road.

**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. DISCUSSION**

Topics addressed in this discussion of natural resources include soils, vegetation, geology, topography and slope, paleontology, hydrology and surface flows, water resources, fish and wildlife, agricultural/timber resources, and geologic hazards.

**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. 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 4.A-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 4.A-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.

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.

From the perspective of timber production, many of the soils on the Foresthill Divide are productive. Figure IV-I depicts soil productivity measured as cubic feet of timber per acre per year. As noted in the figure, large areas of the Foresthill Divide contain a high level of productivity, particularly along the top of the ridge that separates the North Fork and Middle Fork of the American River. Some of this land is already developed or highly fragmented and consequently the ability of these areas to serve as timberland is limited. Other areas, particularly east of the historic downtown area are still designated timberland on the land use diagram and would remain viable for production through the plan's horizon year of 2030. Timber production continues to be an important component element of agricultural production in Placer County. The Agricultural Commissioner's 2006 Crop Report shows that 49,281,000 board feet was produced in Placer County with a value of \$11,583,044. A significant percentage of this production was from the timberland soils of the Foresthill Divide. Although the mill in Foresthill is no longer in operation, a mill in Lincoln remains in operation. Timber production from Foresthill Divide substantially contributes to the mill operation in Lincoln, and overall timber production within Placer County.

Vegetation

Predominant habitats comprising the Foresthill Divide Community Plan area include coniferous forest, montane hardwood, chaparral, blue oak woodland, annual grassland, urban, 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-2 and IV-3 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*). Conversely, 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*). However, 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.

### 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 Foresthill Divide Community Plan 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 U. S. Army Corps of Engineers (Corps) regulates discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act (CWA). “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. as illustrated on Figures IV-4 and IV-5. 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.

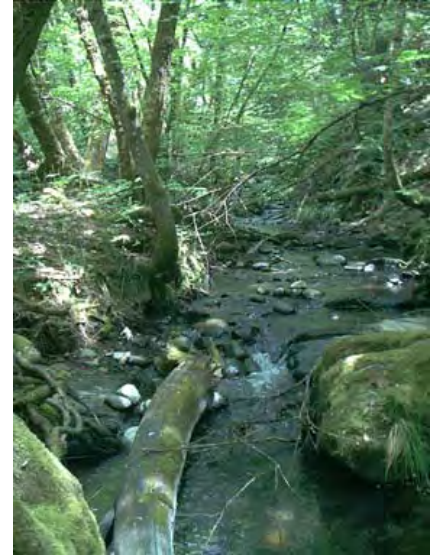
### Wildlife Movement Corridors

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-4 and IV-5. A review of topographic maps and aerials 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.

### Cumulative Impacts on Common Species

The Foresthill Divide Community Plan 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 plant 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 U.S. Fish and Wildlife Service (USFWS) is responsible for implementation of the FESA, while the 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

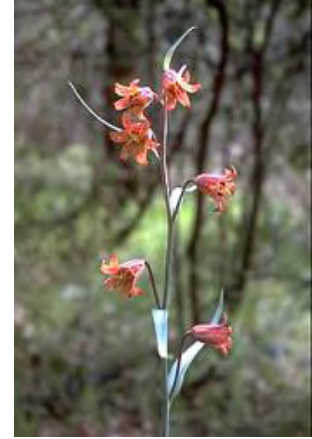
### Special-Status Plant Species Presence in the Community Plan Area

Table 4.A-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 once 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 4.A-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 4.A-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.



**Table 4.A-2 Listed and Special-Status Species Potentially Occurring Within the Region**

Common Name	Scientific Name	Regulatory Status (Federal, State, CNPS)	Potential for Occurrence
<b>Plants</b>			
Brandegeee’s clarkia	<i>Clarkia biloba brandegeae</i>	1B	YES
Butte County fritillary	<i>Fritillaria eastwoodiae</i>	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 ssp. Decumbens</i>	FE;CR;1B	YES
Red Hills soaproot	<i>Chlorogalum grandiflorum</i>	SC;--;1B	YES
Red-anthered rush	<i>Juncus marginatus var. marginatus</i>	--; --; 2	NO ( planning area is outside the known range for this species)
Saw-toothed lewisia	<i>Lewisia serrata</i>	SC; --; 1B	YES
Scadden Flat checkerbloom	<i>Sidalcea stipularis</i>	SC; CE; 1B	NO ( planning area is outside the known range for this species)
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
<b>Wildlife</b>			
<b>Invertebrates</b>			
Sagehen Creek goracean caddisfly	<i>Goeracea oregona</i>	SC; --; --	*
Shirrtail Creek stonefly	<i>Megaleuctra sierra</i>	SC; --; --	*
South Forks ground beetle	<i>Nebria darlingtoni</i>	SC;--;--	*
Spiny rhyacophilan caddisfly	<i>Rhyacophila spinata</i>	SC; --; --	YES
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT;--;--	YES

Common Name	Scientific Name	Regulatory Status (Federal, State, CNPS)	Potential for Occurrence
Yates' snail	<i>Ammonitella yatesi</i>	SC; --; --	YES
<b>Amphibians/Reptiles</b>			
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
Mount Lyell Salamander	<i>Hydromantes platycephalus</i>	SC; CSC (Protected); --	NO
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 hammondi</i>	SC; CSC (Protected);--; --	YES
<b>Fish**</b>			
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
<b>Birds</b>			
American peregrine falcon	<i>Falco peregrinus anatum</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 cunicularia hypugea</i>	SC;CSC;--	YES
White-faced ibis	<i>Plegadis chihi</i>	SC;CSC;--	NO
<b>Mammals</b>			
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
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

Common Name	Scientific Name	Regulatory Status (Federal, State, CNPS)	Potential for Occurrence
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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.<sup>19</sup>

Source: Foothill Associates, 2000.

**Table 4.A-3 Listed and Special-Status Species Potentially Occurring Within the Plan Area or Vicinity**

Common Name	Scientific Name	Habitat Requirements	Potential for Occurrence
<b>Plants</b>			
Brandegee'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>Fremontodendron 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.
<b>Wildlife</b>			
<b>Invertebrates</b>			
Yates' snail	<i>Ammonitella yatesi</i>	Limestone caves and outcroppings, typically on northfacing slopes	Species could occur in suitable habitats within the planning area.
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.

Common Name	Scientific Name	Habitat Requirements	Potential for Occurrence
Spiny rhyacophilan caddisfly	<i>Rhyacophila spinata</i>	Cool, running water	Species could occur in the streams within the planning area.
<b>Amphibians</b>			
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.
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.
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.
<b>Reptiles</b>			
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.
<b>Birds</b>			
Northern goshawk	<i>Accipiter gentilis</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 Bernadino and San Jacinto mountains	Species could occur in suitable habitats within the planning area.

Common Name	Scientific Name	Habitat Requirements	Potential for Occurrence
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.
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.
<b>Mammals</b>			
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.

Common Name	Scientific Name	Habitat Requirements	Potential for Occurrence
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.
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.

**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.

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.

### 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 Shirttail 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 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. 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.*

Overall, water quality within the Plan area is of excellent quality and is considered one of the area's primary assets.

## 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 currently supplies up to 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 buildout population within the PUD sphere of influence of 7150 persons. The BLM originally designed the reservoir for eventual capacity expansion; the dam could potentially be raised an additional 20 feet to accommodate an additional 3,658 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.

## Fish and Wildlife

The Foresthill Divide Community Plan area supports the habitats described. The dominant wildlife species associated with these habitats are described below, and the habitats are shown in Figures IV-2 and IV-3.

### 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 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 Foresthill Divide Community Plan area, and this species likely utilized open water habitats in this region.

No listed anadromous fish species in Table 4.A-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.

## Listed and 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.”

## Special-Status Animal Species Presence in the Community Plan Area

Table 4.A-2 identifies the animal 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 once occurred in the vicinity of the Plan area. Additionally, animal species listed in the CNDDDB as occurring within a 5-mile radius of the Plan area are included in Table 4.A-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 animal species that are known to occur, or may potentially occur, within the Plan area are listed in Table 4.A-3 and described below. The animal 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, and existing documentation for the Foresthill Divide vicinity.

### 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. This species has been recently listed on the CNDDDB in the Michigan Bluff vicinity, which is located within the Plan area. This species is also listed with the USFWS as occurring in the Michigan Bluff region of the Community Plan area. Due to the presence of suitable habitat within the Plan area, and the recent sightings of California red-legged frogs within the Michigan Bluff area, this species is known 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.

**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.

**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.

**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.

**American 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 close 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. However, 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 close 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. However, 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 Foresthill Divide Plan area.

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

### 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. Special water rates are available for agricultural irrigation water. However, there has been some recent interest shown in limited wine grape production in the Plan area.

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 4.A-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 has 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 4.A-4 Timber Harvest Documents for Foresthill 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		10E
2	2-00-093-Pla3	253	32	14N	10E
	2-00-093-Pla3		31		10E
3	2-00-089-Pla3	110	13	14N	10E
	2-00-089-Pla3		14		10E
4	2-98-360-Pla3	168	24	14N	10E
	2-98-360-Pla3		23		10E
	2-98-360-Pla3		14		10E
	2-98-360-Pla3		13		10E
5	2-98-145-Pla3	56	33	14N	10E
	2-98-145-Pla3		32		10E
6	2-98-130-Pla3	35	23	14N	10E

No. of Docs.	Harvest Doc.	Acres	Section	Township	Range
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
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

No. of Docs.	Harvest Doc.	Acres	Section	Township	Range
30	2-97-070-Pla3	2,067	30	14N	11E
<b>Total Acreage</b>		<b>7,045</b>			

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.

## 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.

### Rockfall and Landslide

As defined by the California Division of Mines and Geology, a landslide is the downslope 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, Mehtren Mudflow Breccia (weathered), Serpentine, and Metasedimentary Rocks. Table 4.A-5 summarizes potentially unstable rock units and the landslide deposit classification.

**Table 4.A-5 Potentially Unstable Rock Units**

Rock Unit	Landslide Deposits
Valley Springs Tuff	Active
Metavolcanic Flows	Active
Mehtren Mudflow Breccia (weathered)	Inactive



Rock Unit	Landslide Deposits
Serpentine	Inactive
Metasedimentary Rocks	Inactive

Source: Livingston, 1976.

### 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.

### 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 4.A-6 lists and describes soils prone to erosion.

**Table 4.A-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	Mod. 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	Mod. 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	Mod. to very high	X	Undulating to steep, well-drained soils that are shallow to deep over metamorphic rock
Maymen-Mariposa	Mod. 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.

**Visual Resources**

An area’s physical appearance can have much to do with the way it is perceived by residents and visitors alike. Foresthill residents have expressed a strong desire to maintain the current character of the area, which is exemplified by the historic downtown, rural development, forested environment and deep river canyons. A significant portion of the area’s economy is based upon recreation visitors to the area and many residents have moved to the area to enjoy the natural setting and recreation opportunities.

The visual resource policies of the Plan are intended to provide a policy base to use in the review of new development, so that new development does not adversely affect important view sheds.

Figure IV-6 depicts the view sheds of the North and Middle Forks of the American River that will be considered in the review of projects which have the potential to alter the landscape. In parts, the areas are officially designated as a Wild and Scenic River and other areas have the characteristics that are important to the maintenance of the Foresthill areas overall character. Land development activities that place structures, clearing of vegetation or significant road cuts/fills in areas visible from these canyons should be discouraged and prohibited where other alternatives exist. Adherence to the policies contained in the Plan will ensure that the community’s goal of protecting these areas of special aesthetic quality is reached.

**4. IMPLEMENTATION**

1. Review development projects for compliance with the goals and policies of the Natural Resources section and throughout the FDCP.

**Responsible Agency/Department:** Land Development Departments/Foresthill Forum (MAC)/Planning Commission/Board of Supervisors  
**Time Frame:** Ongoing  
**Funding:** Application Fees

2. A mitigation monitoring plan shall be required for heritage tree and native tree replacement areas proposed as part of land development projects for a minimum of two years to ensure an 80% success ratio of all new plantings. Landscaping and revegetation plans shall focus on creating habitat and use of native species in addition to replacing trees.

**Responsible Agency/Department:** Planning Department  
**Time Frame:** Ongoing  
**Funding:** Application Fees

3. Reconnaissance-level biological surveys shall be required for all new development proposals on undeveloped land. Protocol surveys and mitigation shall be required if indicated by the survey results. Said surveys should be conducted by qualified professionals and a report prepared evaluating the site’s vegetation and wildlife values.

**Responsible Agency/Department:** Planning Department/Trustee Agencies  
**Time Frame:** Ongoing  
**Funding:** Application Fees

4. If indicated by reconnaissance surveys, site-specific wetland delineations utilizing the U.S. Army Corps of Engineers’ criteria shall be required for new development proposals. All development proposals involving wetlands shall be coordinated with the California Department of Fish and Game, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service to ensure that a no-net-loss policy is maintained.

**Responsible Agency/Department:** Planning Department/Trustee Agencies  
**Time Frame:** Ongoing  
**Funding:** Application Fees

5. If indicated by reconnaissance surveys, site-specific evaluations shall 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 will consider the potential for significant impact on these resources, and will identify feasible measure(s) to mitigate such impacts. In approving any such discretionary development permits, the decision making body shall determine the feasibility of the identified mitigation measure(s).

**Responsible Agency/Department:** Planning Department/Trustee Agencies  
**Time Frame:** Ongoing

**Funding:** Application Fees

6. A minimum 100 foot non-development setback from the centerline of all perennial streams, and a minimum 50 foot setback from the centerline of intermittent streams, or the outermost limits of the future, fully developed 100-year floodplain (whichever is greater) are required for all new development projects. These areas shall include all riparian vegetation and shall preclude all structures, including pools, spas, gazebos, decks, etc., non-native landscaping, tree removal, night lighting, fencing interfering with significant wildlife corridors, and grading. Deed restrictions in the form of easements shall be placed on these setback areas to protect them in perpetuity, and easements shall be shown on project exhibits.

**Responsible Agency/Department:** Planning Department

**Time Frame:** Ongoing

**Funding:** Application Fees

7. Implement the Placer County Stream Management Guidelines (1992) and wetland banking program in the Plan area.

**Responsible Agency/Department:** Planning Department/Department of Fish and Game/U.S. Army Corps of Engineers

**Time Frame:** Ongoing

**Funding:** General Fund/Mitigation Fees

8. Implement the County’s guidelines for creek maintenance practices that ensure native vegetation is not removed unnecessarily in the Plan area.

**Responsible Agency/Department:** Placer County Flood Control and Water Conservation District/Resource Conservation District/Planning Department

**Time Frame:** Ongoing

**Funding:** General Fund

9. As funding permits, Placer County Environmental Health Services (HHS) will work with water well drilling contractors and others with useful information to study the quality of groundwater in the Plan area. This information will be used to develop and implement a formal groundwater quality management plan with emphasis upon such pollutants as elevated nitrate and coliform bacteria levels and the cause of any elevated levels discovered.

**Responsible Agency/Department:** Environmental Health Services (HHS)

**Time Frame:** As funding permits

**Funding:** Permit Fees

10. Modify existing ordinances regulating land development activities to incorporate and formalize policies related to land use, grading operations, and vegetation removal adjacent to all drainageways, canals and significant water features.

**Responsible Agency/Department:** Planning Department/Department of Engineering & Surveying /Environmental Health Services (HHS)/Board of Supervisors

**Time Frame:** Ongoing

**Funding:** General Fund

11. Prepare and adopt a stream management plan and ordinance to protect and enhance waterways and stream channels, and a forest management plan for non-state and federal lands to protect and enhance the health of the natural forest while providing for fire safety.

**Responsible Agency/Department:** Planning Department/Resource Conservation District/Department of Engineering & Surveying/Placer County Flood Control and Water Conservation District

**Time Frame:** Fiscal Year 2009-2010  
**Funding:** General Fund

12. Develop brochures for distribution with building permits and as part of project review, and make information available on the County website to educate the public and developers regarding potential impacts of development and individual property modifications on drainage, flooding and water quality. Include information regarding the sections of the State Fish and Game Code which apply to diversion or obstruction of stream channels and pollution of waterways with detrimental material.

**Responsible Agency/Department:** Planning Department/Department of Engineering & Surveying/Placer County Flood Control and Water Conservation District/Environmental Health Services (HHS)

**Time Frame:** Ongoing  
**Funding:** General Fund

13. Include mitigation measures for new development projects adopted pursuant to the Department of Fish and Game's Streambed Alteration Agreements and permits issued under Section 404 of the federal Clean Water Act.

**Responsible Agency/Department:** Development Review Committee

**Time Frame:** Ongoing  
**Funding:** Permit Fees

14. During environmental review of private development projects, site-specific studies shall be prepared including soil reports, slope analysis, grading plans, and erosion control and rehabilitation plans, as needed.

**Responsible Agency/Department:** Development Review Committee

**Time Frame:** Ongoing  
**Funding:** Permit Fees

15. Through environmental review and project approval, avoid development on highly erosive soils and slopes over 15% if possible. Where development does occur in these areas, require application of Best Management Practices (BMPs).

**Responsible Agency/Department:** Development Review Committee

**Time Frame:** Ongoing  
**Funding:** Permit Fees

16. Continue monitoring mitigation measures that relate to accelerated erosion and attendant problems. Arrange with public agencies and/or acceptable consultants to assist in implementing the mitigation monitoring program.

**Responsible Agency/Department:** Department of Engineering & Surveying

**Time Frame:** Ongoing  
**Funding:** Permit Fees

17. Require BMPs of the Placer County Resource Conservation District and the U.S. Department of Agriculture Natural Resources Conservation District through developer participation, discretionary fees, general fund monies, etc.

**Responsible Agency/Department:** Department Engineering & Surveying

**Time Frame:** Ongoing  
**Funding:** Permit Fees/General Fund

18. Require 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).

**Responsible Agency/Department:** Department of Engineering & Surveying  
**Time Frame:** Ongoing  
**Funding:** Permit Fees/Plan Review Fees

19. Continue to enforce the Placer County Grading Ordinance to ensure that areas of slope instability are adequately investigated and that any development incorporates appropriate design provisions to prevent landsliding.

**Responsible Agency/Department:** Department of Engineering & Surveying  
**Time Frame:** Ongoing  
**Funding:** Permit Fees/Plan Review Fees

20. Require preparation of drainage plans that direct runoff and drainage away from unstable slopes for construction in hillside areas.

**Responsible Agency/Department:** Department of Engineering & Surveying  
**Time Frame:** Ongoing  
**Funding:** Permit Fees/Plan Review Fees

21. Encourage the use of Williamson Act agricultural preserves within the Plan area.

**Responsible Agency/Department:** Planning Department/Agricultural Commissioner  
**Time Frame:** Ongoing  
**Funding:** State Subventions to County

22. Maintain regulations that exempt certain agricultural buildings from the construction requirements of the Uniform Building Code, subject to limitations on the size, occupancy, location, and use of such structures.

**Responsible Agency/Department:** Building Department  
**Time Frame:** Ongoing  
**Funding:** General Fund

23. Continued enforcement of the provisions of the Right-to-Farm Ordinance and existing State nuisance laws.

**Responsible Agency/Department:** Planning Department  
**Time Frame:** Ongoing  
**Funding:** General Fund

24. Review development projects for compliance with the goals and policies contained in the Open Space section and throughout the FDCP.

**Responsible Agency/Department:** Land Development Departments/Foresthill Forum (MAC)/Planning Commission/Board of Supervisors  
**Time Frame:** Ongoing  
**Funding:** Application Fees

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

**Responsible Agency/Department:** Planning Department  
**Time Frame:** Concurrently with FDCP adoption

**Funding:** General Fund

- 26. Require conditions of approval to provide open space where appropriate as a component of the land development review procedure.

**Responsible Agency/Department:** Development Review Committee

**Time Frame:** Ongoing

**Funding:** General Fund

- 27. Require dedication of open space easements or encourage participation in the Placer Legacy program as appropriate for development projects to preserve and protect open space resources.

**Responsible Agency/Department:** Development Review Committee

**Time Frame:** Ongoing

**Funding:** Permit Fees

- 28. Adopt a “dark sky” ordinance to protect important nighttime visual resources in the Plan area.

**Responsible Agency/Department:** Planning Department

**Time Frame:** Fiscal Year 2010-2012

**Funding:** General Fund

**B. CULTURAL RESOURCES**

**1. PURPOSE**

The purpose of the Cultural Resources section is the identification and, to the extent possible, preservation of archaeological and historical resources in the Plan area. The Foresthill Divide Community Plan area contains a rich heritage that is marked by numerous archaeological and cultural properties. Heritage resources are being lost to natural deterioration and to development-related impacts. Heritage resources are especially at risk as the Plan area assumes an increasing role as a “bedroom” community for Auburn and Sacramento. Incoming residents and visitors, and the new construction designed to accommodate them, may compromise the rich sense of heritage and unique historical identity of the Plan area. An appreciation of the heritage of the Foresthill Divide will engender the preservation and rejuvenation of old Foresthill and its surroundings



and insure that both long-term and incoming residents and visitors to Foresthill can appreciate the area where they have chosen to live and visit. Historic structures are also an important visual element of the Foresthill Divide. The goals and policies which follow are intended to assure that future generations will have the opportunity to form a sense of community pride and identity from the achievements of the people that lived before them.

**2. GOALS AND POLICIES**

**Goal 4.B.1. Identify, protect, record and enhance the Divide’s important historical, archaeological, and cultural sites and their contributing environment.**

**Policies**

- 4.B.1-1 Assist the residents of Foresthill in becoming active guardians of their community's cultural resources.
- 4.B.1-2 The County and the community shall preserve the historical character of the Core Area of Foresthill.
- 4.B.1-3 Encourage all agencies and groups (USFS, Placer County, Historical Society) to preserve, record and mark sites and artifacts of local importance (such as Startown, Damascus, Sunny South, Red Star, Miller's Defeat).
- 4.B.1-4 Solicit the cooperation of the owners of cultural resources, encourage those owners to treat these resources as assets rather than liabilities, and encourage the support of the general public for the preservation and enhancement of these resources.
- 4.B.1-5 Solicit the views of the Native American Heritage Commission and/or the local Native American community in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.
- 4.B.1-6 Use, where feasible, incentive programs to assist private property owners in preserving and enhancing cultural resources.
- 4.B.1-7 Require that discretionary development projects identify and protect from damage, destruction, and abuse, important historical, archaeological, 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.
- 4.B.1-8 Existing large trees or groves of historic and/or cultural significance (i.e., weather tree in Michigan Bluff, cork oaks on Todd Valley Road, Finning Tree off Finning Mill Road, Fork's House Grove, Harold T. "Bizz" Johnson Tree) should be identified and protected to the best of the County's ability. Trees so identified should only be removed as a last resort.
- 4.B.1-9 Areas of potential archaeological sensitivity shall be identified and catalogued by Placer County. Proposed development or public works projects within this area shall be required to undertake an archaeological survey prior to project approval. Proposed projects outside this area, in locations that have not been significantly disturbed, shall be referred to the California Archaeological Inventory, Northern Information Center, California State University, Sacramento for review and comment, and shall be required to undertake an archaeological survey prior to project approval upon recommendation by the Center.
- 4.B.1-10 The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.
- 4.B.1-11 The County shall use the State *Historic Building Code* to encourage the preservation of historic structures.
- 4.B.1-12 The County shall support the registration of cultural resources in appropriate landmark designations (i.e., National Register of Historic Places, California Historical Landmarks, Points of Historical Interest, or Local Landmark). The County shall assist private citizens seeking these designations for their property.
- 4.B.1-13 The County shall consider acquisition programs as a means of preserving significant cultural resources that are not suitable for private development. Organizations that could provide assistance in this area include, but are not limited to, the Archaeological Conservancy, The Nature Conservancy and the Placer Land Trust.



4.B.1-14 The County shall require that the subdivision of property containing existing features of cultural or aesthetic merit be carefully designed to preserve these structures and, where appropriate, utilize them as a focal point of neighborhood design.

4.B.1-15 The County shall make the protection of significant cultural resources a priority over recordation and/or destruction.

**Goal 4.B.2. Encourage the continued provision of a wide variety of cultural activities that contribute to the appeal of the Foresthill area.**

#### **Policies**

4.B.2-1 The County shall encourage the development of multipurpose facilities which can function as recreational sites, open space areas and for historic, cultural, and archaeological preservation.

4.B.2-2 The use of the Foresthill Museum as a repository of historical artifacts on the Divide shall be encouraged.

### **3. DISCUSSION**

The following physical and cultural background draws heavily from contexts presented in the “Historical, Architectural, and Archaeological Resources of Placer County, California” (Terhorst and Gerike 1992) and in work by Baker (2000), Baker and Shoup (1992), and Baker, Shoup and Brack (1993) associated with the Highway 124 Project. Further information is taken from Carlson’s (1986) ethnographic overview and Markley and Henton’s (1985) prehistoric overview of the Tahoe National Forest. Details regarding the physical and cultural setting of the Foresthill Divide are found in these sources and will not be repeated here. References cited in this section are listed in Appendix D of this Plan.

#### **Physical Setting**

The Foresthill Divide is a long northeast-trending ridge system separating the North and Middle Forks of the American River. The ridge ranges in width from two to ten miles. As one of the major east-west ridge systems of the north-central Sierra Nevada, the Divide would have provided relatively easy access for prehistoric populations moving east and west over the crest. However, the steep canyons and rugged terrain to the north and south of the Divide may have been a barrier to travel and trade, and ultimately contributed to cultural conservatism and the development of local identities and differences, which included basic technology and economic and settlement patterns (Baker 2000:281). The Foresthill Divide has been sculpted by tectonic forces and stream erosion. During times of glacial advances, Sierran streams steepened their channels, creating steep slopes and tributary canyons and destabilizing riverside banks. It is during these times that ridgetop village sites may have been preferable to village locales along streams. Ridges were also the preferred locales for Euroamerican settlements and ranchlands.

Rocks in the Foresthill region represent a geologic history spanning nearly 300 million years. The rocks underlying the Divide are part of the Mother Lode Belt and include slates and shales of the Mariposa Formation. The Mariposa Formation is composed of ancient seafloor sediments. These sedimentary rocks are associated with underlying volcanic rocks of the Logtown Ridge Formation.

The flat ridge of the Foresthill Divide is formed by a complex system of Tertiary channels capped by lavas that are included within the Mehrten Formation and categorized as andesite mud-flows. The underlying ancient Tertiary river channels contain auriferous deposits that were the focus of hydraulic and drift mining for gold by incoming Euroamericans. Prehistoric populations also appear to have had detailed knowledge of these geological deposits (Baker 2000:10). For example, the complex geology of the Foresthill Divide region provided a variety of stone for tool manufacture, including slate and schist, chert, and igneous and metamorphic materials. In addition, basalt and obsidian were brought or traded into the area from source locations as far as the Truckee-Tahoe Basin, Bodie Hills, Napa, and locales in northeast California and northwest Nevada. Also, prehistoric populations visited salt marshes near Cool and salt springs near Lincoln and mined quartz crystal quarries in the Middle Fork Canyon for toolstone and ceremonial use, and red and yellow ochre near Clipper gap for ornamentation and rock art.

The Mediterranean climate of the Plan area is characterized by hot summers and cool winters, with most precipitation falling during the winter. The Plan area receives little snow, as the winter snow line on the Divide is around 3,000 feet in elevation. The North and Middle Forks of the American River form the major hydrological features; fresh water sources are relatively abundant on top of the Divide. Rivers cut steep canyons up to 1,000 feet below the top of the Divide that presented major obstacles for both prehistoric and historic populations traveling off of the Divide.

The Plan area spans an elevation range roughly between 600 and 4,800 feet and encompasses several major life zones that gradually change with increasing altitude. Mountain ridges are colonized by mixed forests, oaks, shrubs, grasslands, and meadows--habitat for diverse faunal resources. The rich array of plants and animals were of subsistence and economic importance to both aboriginal inhabitants and incoming Euroamericans.

### Prehistory and the Native American Period

Clear boundary determinations for Native American residents along the Foresthill Divide are confounded by the complete disruption of aboriginal cultures by early Euroamericans and of traditional practices involving inter-group trade, politics, marriage, and ritual. The Foresthill Divide lies firmly within the traditional territory of the Hill Nisenan (or Southern Maidu), a Penutian speaking group that inhabited the west-central Sierra Nevada. The Divide is peripheral land used by the Washoe, Hokan language speakers who chiefly occupied the west-central Great Basin along the eastern Sierran flank and its crest (Beales 1933; d'Azevedo 1966; Levey 1978; Littlejohn 1928). After historic contact, Northern Miwok, also Penutian speakers, may have resided here; Northern Miwok currently reside in the Plan area. The Hill Nisenan held territory in the foothill and mountainous portions of the Yuba, Bear and American rivers, and the lower drainages of the Feather River. The Hill Nisenan recognized three divisions within their group based on slight linguistic and cultural differences. The Foresthill people belonged to one of the subgroups with its "center of influence" at Auburn (Littlejohn 1928:15). Nuclear Washoe tribal lands were about 2,000 square miles surrounding Lake Tahoe, with much larger peripheral lands having flexible, undefended boundaries. The area between snowline on the west Sierra slope and the Sierran crest was shared between the Nisenan and Washoe. Tradition holds that the Washoe and Nisenan had contact at Westville, east and upslope of the Plan area, and that encounters were not always friendly.

Environmental phenomena such as springs and drainages, unique geological outcrops, and different land surface exposures with variable slopes created extreme variety in the accompanying plant and animal communities upon which aboriginal populations depended. Like most hunters and gatherers, vegetable foods formed the subsistence baseline, although they used a wide range of plant and animal species. Generally, the least productive time of the year for both the Hill Nisenan and Washoe was late winter-early spring. Hill Nisenan caught salmon during spring runs up the North and Middle Forks of the American Rivers and their tributaries. Throughout the summer, both groups gathered nuts and seeds, roots, berries, fungi, and greens. Expeditions to hunt large game took place within the higher elevations during the fall. Acorns became available in massive quantities in the autumn. Acorn eating is the hallmark of California Indians and they were the primary staple for those groups who inhabited the western foothills of the Sierra. The Washoe went to great lengths to obtain acorns in trade from their western neighbors.

Lower elevations encompassed by the Plan area were occupied on a permanent or semi-permanent basis, with higher elevations inhabited at various times of the year by smaller groups that made seasonal movements in order to procure economic resources as they became available. The archaeological imprint of these ancient subsistence activities are distinctive, with diverse environmental zones closely corresponding to a variety of specific site types, such as villages, multi-task camps, task-specific locales, and special use areas.

Hill Nisenan villages and year-round encampments were clustered in the lower elevations of the Plan area. Villages were usually placed on ridge tops and on large flats along major streams. Permanent villages are represented archaeologically by culturally enriched and darkened soils (or “midden”) which contain artifacts, charcoal, organic debris, and/or house pit and dance house depressions. Villages hosted important social gatherings and religious ceremonies. Dances to celebrate seasonal events and honor ancestors and deities were held in large semi-subterranean dance houses. Hill Nisenan villages consisted of from 4 to 12 separate dwellings, housing a nuclear or polygamous family. Larger social organizations, called “tribelets”, were formed by several villages uniting under a single chief. Tribelet boundaries were marked by natural ridges between streams. No permanent Nisenan winter village occupation is reported above approximately 4,000 feet elevation on the western slope.

The Washoe generally wintered in the Truckee Meadows area on the east slope of the Sierra and spent summers in the higher elevations in and around the Truckee-Tahoe Basin and west of the crest. Compared to the Hill Nisenan, the Washoe were a relatively informal and flexible political collectivity. While semi-permanent villages were maintained along the eastern Sierran front, the Washoe as a whole were more mobile than the Nisenan, and the Washoe have a tradition of making long treks across the Sierran passes to hunt and gather acorns and to trade with Maidu and Miwok neighbors.

At seasonal base camps, the occupation by fewer people for briefer periods of time precluded the buildup of deep midden deposits. Such seasonal camps are manifest archaeologically by a wide range of cultural items (including stone tools, waste flakes from the manufacture of stone tools, and milling equipment such as bedrock mortars and pestles and hand stones and portable milling slabs). This artifact inventory indicates that multiple tasks were pursued.

Single-task specific sites were located throughout Washoe and Nisenan territory and were used at variable times of the year as satellite locales aimed at a specific function. Task sites were often located away from camps or villages and near concentrations of plant, animal or fish resources. For example, bedrock mortar stations were positioned in oak groves, fishing stations were established near productive spawning streams, and hunting stations were placed in proximity to deer migration routes. Aboriginal trek routes were patterned after game trails, were later used by the emigrants, and are often the precursors of our modern transportation systems.

Special use sites were often isolated from living areas and comprise petroglyphs (or rock writings), cemeteries, and quarries where toolstone such as chert or basalt was mined and roughly fashioned into tools.

These land use patterns, known from Washoe and Nisenan protohistoric times, are generally consistent with interpretations derived from numerous archaeological investigations within Placer County (and a few excavations on the Foresthill Divide). The archaeological record indicates a shift from sparsely populated hunting-based societies in earlier times to growing populations with increasing reliance on plant foods by the time of historic contact. Also, paleoclimates may have been warmer and drier in the past, allowing for year-round occupation of the higher elevations. Occupation along the Divide may extend earlier than 5000 years ago and continue up to the time of historic contact. Between about 7000 and 5000 years ago, during the Early Archaic Period, climates were warmer and drier and drying lowlands may have prompted human populations to travel to upland resource zones where prehistoric economies incorporated seed processing and fishing, as well as hunting. During the Middle Archaic period, dating from about 5000 to 1300 years ago, climates became moister and, with a return to more optimal living conditions, population densities increased. More intensive prehistoric use of the Foresthill Divide by mixed-mode foragers/collectors began during this period. The Late Archaic period, about 1300 years ago to historic contact, has been equated with the Nisenan and Washoe cultures, as described in ethnographic accounts written by early anthropologists. This period is marked by an overall drying trend, with cool and moist episodes alternating with extended severe drought. Throughout the Late Archaic, prehistoric populations continued to increase.

The largest available body of ethnographic data on the Nisenan and Washoe was collected between the 1890s to the 1930s. Most of this information was gathered after aboriginal populations had been substantially reduced and the process of acculturation was well underway. The Washoe and the Nisenan inhabited the heart of two of the most important mineral resource zones in the western United States, the Sierra Nevada Mother Lode and the Comstock Lode of Nevada, respectively. By the 1850s Euroamericans had permanently occupied their territories and changed traditional lifeways. Mining, lumbering, grazing, commercial fishing, tourism, and the growth of settlements disrupted traditional Indian relationships to the land. As hunting, fishing, and gathering wild foods were no longer possible, they were forced into dependency upon the Euroamerican settlers.

Little is known about the period of initial contact on the Divide between Indians and Euroamericans. Resistance to white incursions occurred, mostly in the form of Indian raids upon the stock and camps in desperate attempts to find food. Disruption of subsistence patterns, starvation, disease, and violence resulted in a severe decline in Native populations and abandonment of villages. The Federal Government's Indian "relocation" policies in California were set in motion

during the 1850s with the creation of rancherias and reservations. Nisenan either stayed on reservations or rancherias and married into their own or into other Indian tribes, or became assimilated into the dominant Euroamerican society. Nonetheless, reports of early anthropologists and census records indicate that some Nisenan remained in their home places. Nisenan recall place names for several village locations on the Divide (Littlejohn n.d.; 1928): Pow’o to at Damascus, To I mom at Red Point, Kil’ im yan at Westville, Om’lam (meaning “tall rocks”) at Mile Hill Toll House, Hem’hem near Yankee Jim’s, Wa’tas near Spring Garden, O’pok pok at Todd’s Valley, etc. A Nisenan cemetery located in the Spring Garden/Todd’s Valley area continues to be used and maintained. Today, significant numbers of Nisenan are dispersed throughout many Sierran foothill communities. On the Foresthill Divide, interest in maintaining traditional ways is reflected in the revival of dances, basketry skills and new construction for a ceremonial roundhouse near Todd’s Valley. The Todd’s Valley Miwok-Maidu Cultural Foundation has been established within the last five years and the group is in the process of gaining official tribal recognition from the U.S. government (Brown and Suehead, pers. comm., 2000). Members conduct monthly meetings. The group is committed to preserving their heritage and reestablishing their presence and traditional practices on the Divide. Plans are underway to build a roundhouse on BLM land near Foresthill. Miwok-Maidu plant managers are actively involved in harvesting plants of traditional importance and are concerned about the disappearance of oak stands with their prized acorn crop.

The Washoe remain as a recognized tribe by the U.S. government and have maintained an established land base. Its 1,200 tribal members are governed by a tribal council that consists of members of the Carson, Dresslerville, Woodfords, and Reno-Sparks Indian colonies, as well as members from non-reservation areas.

## Historic Period

### Gold Rush Period (1848-1859)

Earliest exploration during the Spanish and Mexican periods was limited in Placer County. It was not until later, with the growing American interest in the Trans-Mississippi West and California, that the U.S. government dispatched expeditions, such as those led by John C. Fremont, to explore the region, produce accurate maps, and report back on the region's inhabitants and resources. Fremont's expedition of 1845-1846 traversed portions of Placer County over Donner Pass.

A similar route to that taken by Fremont, ascending the Truckee River out of Nevada, over Donner Pass, and down the west slope into the Central Valley, was opened in 1844 by members of the Stephens-Townsend-Murphy Party, the first emigrant group to cross the Sierra Nevada by wagon. Hundreds of emigrant trains soon followed, the most notable being the Donner Party. The ordeal of starvation and cannibalism, endured by their members in the winter of 1846-1847, is a well-known and tragic episode in the American settlement of the West and is now memorialized at Donner State Historic Park in adjacent Nevada County.

A few months after John Marshall's gold discovery in January of 1848 at Sutter's Mill in Coloma, Claude Chana found gold in Placer County in Auburn Ravine near Ophir. Thousands of gold seekers soon arrived, and within a few years settlements were permanently established in Placer County. The first prospecting along the Foresthill Divide was confined to the shallow placers along

gravel bars and the beds of running streams where younger Quaternary stream deposits eroded the gold-bearing gravels laid down in earlier times. These shallow deposits were initially mined by a variety of simple surface hand mining techniques that involved the basic principle of agitating gold-bearing gravel in water-filled containers. Early gold extraction devices include gold pan, rocker, long tom, and sluice box. These early techniques were ultimately phased out in favor of ones that processed higher volumes of gravel. However, the sluice box continued as the standard means for extracting gold from gravels. The shallower pits and excavations and mounds of hand-piled rocks associated with these old surface washings are now largely infilled by erosion and are sometimes difficult to distinguish from natural features.

Older Tertiary Gravels, such as those formed by the ancestral American River that drained the Foresthill Divide, were laid down by slower Sierra Nevada rivers with gradual slopes. These huge deposits of ancient, loosely cemented gold-bearing gravels are more deeply buried and required more sophisticated techniques in their extraction. One method, ground sluicing, employed gravity flows of water aided by pick and shovel to break up deposits. Hydraulic mining was a more powerful form of ground sluicing, using water under pressure to dislodge and direct gold-bearing deposits into sluices where gold was trapped. "Coyoting" and later, more elaborate drift mining techniques, both employed horizontal or vertical excavations sunk into the ground to reach the gold bearing gravels. The majority of mining on the Foresthill Divide was accomplished by drift mining (a type of placer mining), using an adit and/or a shaft to reach the gold-rich ancient river channel lying deep under the ridge.

To accommodate simple mining techniques and to keep pace with the innovations of increasingly more sophisticated and powerful hydraulic methods, which demanded enormous volumes of water, an elaborate system of ditches, flumes and storage reservoirs was put in place. Financial backing requiring larger capital reserves prompted the development of ditch companies that directed their water delivery and storage facilities to major diggings. Ditches and flumes headed in high elevation reservoirs and wound their way down mountainsides.

Placer mines far outnumbered lode mines on the Foresthill Divide. In California, quartz lode mining was a less important mining technique than placer mining until after the discovery and development of the Comstock silver mines in Nevada in 1859. The "Mother Lode" is the popular name for the main quartz vein that is associated with the intrusion of the Sierra Nevada batholith. This single lode is split into a number of seams that underlie the quartz lode region within western and central Placer County. These gold-quartz veins occur along contacts between granite and metamorphosed sedimentary rocks, volcanics and deeply weathered serpentinite. These and other hardrock sources were tapped by excavating tunnels with drills and dynamite in order to follow gold bearing quartz veins. Rock was transported out of the tunnels on ore carts and then transferred to stamp mills where the rock was crushed to release the gold ores from the surrounding material. The pulverized ore was then treated to remove impurities.

After the discovery of gold along the Foresthill Divide at Birds' Store in 1850, communities quickly sprang up around the mines. Yankee Jim's, Todd's Valley, Michigan Bluff, Foresthill, and the numerous river bars along the North and Middle Forks of the American River were active mining communities during the early 1850s. By 1850, wagons traveled up onto the Divide, following old Indian trails, and pioneered the main travelway that became today's Foresthill Road (Forest

Highway 124). In the early 1850s, Foresthill became the business and transportation center of the Divide and the town survives as the only viable community.

Yankee Jim's (California Historical Landmark 398) is important as the site of Placer County's first hydraulic mining operation in 1853 and the site of the first mining ditch in the county (and perhaps the state) cut in 1851. The town takes its name from Yankee Jim (whose real name was reportedly Robinson), an infamous horse thief who built a corral here in 1849 to keep his horses. Yankee Jim is credited with the first gold discovery in the area. A post office was established at Yankee Jim's in 1852. Yankee Jim's is also renowned as the site of the first commercial orchards in Placer County. The



town became an important local supplier of fruits on the Foresthill Divide. The town declined as a commercial center with the growth of nearby Foresthill and Todd's Valley on the ridge. By 1882, with the passage of the 1882-Anti-Debris Act that curtailed hydraulic mining, the town's populace of 3,000 had dwindled to only 150 permanent residents.

Michigan Bluff, another one of the region's earliest mining towns, was established in 1850 (California Historical Landmark No. 402). By 1853, miners were hydraulicking the area. The mining ditches supplied water for the mines and provided the town with a reliable water supply, and the town soon became a supply center for other mining camps farther up the Divide. Leland Stanford (later to become one of the Central Pacific Railroad's "Big Four" and subsequently Governor of California) operated a clothing store at Michigan Bluff from 1853 to 1855. The town fell into decline in 1882 when hydraulic mining was restricted.

Foresthill (California Historical Landmark No. 399) was established in the fall of 1850 by M. Fannan, James Fannan and R.S. Johnson as a small trading post. The trading post later became the town's first "Forest House." A post office was established here in 1859. Located on the main route along the Divide, Foresthill quickly became a center for trade and traffic to and from Michigan Bluff, Yankee Jim's, Deadwood, Last Chance, and Westville. Gold was "accidentally" discovered within the deep river gravels below Foresthill after a landslide exposed nuggets of gold in the debris. By 1857, there were 25 drift operations in the area, most tunnels entering into the gravel deposits from the east side of the Divide. Prosperous mining companies around Foresthill included: the Dardanelles, Jenny Lind, Northwood & Fast, the Rough and Ready, the Jersey, the Alabama, the Eagle, and the India Rubber.

Throughout this early gold rush period, logging, agriculture, and transportation were adjuncts in support of the mining industry. Many migrants who flocked to the county had no intention of working the mines, but rather of working the miners, an equally lucrative prospect with burgeoning populations needing shops and services, food and clothing, transportation and building materials. California was almost completely dependent on imported food, most coming from Oregon, Hawaii, Chile, and other Pacific-rim countries. To fill this subsistence need, disenchanted or opportunistic

ex-miners secured the best farming lands in the lower foothills in Placer County to produce food for miners. Ranching of both sheep and cattle was encouraged by the increased demand for meat during the gold rush.

Sawmills immediately sprang up around mining camps to supply lumber for mine timbering and building materials for the growing settlements. The mills at Foresthill and Todd's Valley were in operation in the 1850s.

The growth of gold rush era camps and towns stimulated the development of transportation systems based on supplying mines and camps with needed mail, express and provisions. Mining camps located along the present-day Foresthill Divide were difficult to reach by foot or by wagon. Miners traveled early roads to the mines using crude wagons, pack animals, or backpacks. Freightage with wagons or transport by major express companies out of valley supply centers was not undertaken until larger-scale hydraulic mining developed in the late 1850s. With the permanence of the mining settlements insured, heavy expenditures commonly required for road building were justified. As government was unable or unwilling to finance road building, individuals or companies undertook the task and operated the thoroughfares as toll roads for profit and as a means to attract freight business into a community. As teaming became more important, the number and permanency of roadside inns increased. By the 1850s, the route along the current Forest Highway 124 was established as the main travelway between Auburn and the Foresthill Divide. The original road undoubtedly followed an earlier Native American trail.

A heterogeneous population composed of people from every corner of the world crowded into the Sierra mining districts, as reflected in the ethnic names assigned to some of the earliest camps in and along the Foresthill Divide. Native Americans played an important and little acknowledged part in the earliest period of the gold rush. Immigrants from Hawaii, Latin America, Europe, Asia, and elsewhere were initially welcomed because of their knowledge of mining techniques, but anti-foreign feelings hampered their economic opportunities in Placer County, and many groups were gradually forced out of the mines altogether into other economic pursuits. The mingling of these different ethnic groups and nationalities has produced a unique cultural collage from which the heritage of the Foresthill Divide is drawn.

#### Post-Gold Rush Period (1859-present)

The years following 1859 are marked by technological changes that prompted a shift in the organization and financial arrangements of the mines. Lode mining and large-scale placer mining within the county required considerable technical skill, which was dependent upon scientific knowledge and a trained work force. The era of the self-sufficient, itinerant prospector with pick and shovel gave way to a system based increasingly on cooperation between groups of miners, and ultimately to the miner as wage earner employed by large multidivisional corporations tied to the national and world economy. National and foreign capitalists, initially investing only in mining, now poured their money into logging, transportation and water development, enterprises that paralleled mining interests. The period after 1859 can also be characterized by a change in settlement patterns, away from the "boom-bust" camp structure common to the early mining frontier, and the growth of a more mature, stable, and diversified economy and social structure that was not based on mining alone.



The beginning of this period was heralded by a downturn in the county's mining economy, as mining in the American River basins was curtailed by the exodus of miners and capitalists to the Comstock rush of 1859-1865. By the late 1860s, the Placer County mines were again productive. Until 1884, when the hydraulic mines were restrained from dumping their tailings into the streams, the largest hydraulic mines in the world were operated here, providing the county's largest source of gold.

From the turn of the century to 1917, statewide gold production rose. With the restrictions imposed on hydraulic mining, lode mining, drift mining and gold dredging supplied the principal sources of gold. Inflation following World War I caused the continual decline of gold production until the early 1930s, when the prices increased during the depression years; gold output in the state was nearly as high as it had been during the gold rush. Thousands of urban unemployed rushed to the Sierran gold fields to prospect with pan and rocker. The revival of mining infused communities along the Foresthill Divide with new life and stimulated non-mining industries such as logging and agriculture. Many mines were shut down during World War II and reopened soon afterward, but with decreasing productivity. Gradually, outside investment capital was funneled away from mining into California agriculture and real estate. The Placer County gold mining industry has not since recovered. Cement mining operations during the 1920s revived the local economy.

After the discovery of gold and silver in the Comstock in 1859, traffic was sufficiently heavy to warrant major improvements on the trans-Sierra routes. Towns in the western part of the county, in an effort to position themselves at trans-mountain road termini and obtain a share of the rapidly growing Comstock trade, established connecting roads to the major trans-Sierran routes through Placer County. The present route of Highway 124 emerged as the main travelway connecting the Foresthill Divide to Auburn and beyond. By the 1860s, Butcher Ranch became an important stage and wagon stop along this road. The community grew, with a school being established in 1878. Other way stations/ranching communities within this main travelway are the Grizzly Bear House and the 1853 United States Ranch/U.S. House (also called the "Mile Hill Toll House" and "North Star Toll House" and currently near the site of the Monte Verde Inn). These communities ceased to exist as way stations, as the automobile and truck gradually replaced the stagecoach and freight wagon.

Lumbermen commenced cutting pine to meet the needs of the western mines for timbering and flume construction. On the Foresthill Divide, sawmills date back to the early gold rush period. They tended to be smaller, generally produced for local consumption, and usually operated on a seasonal basis. The men who worked in the mill and forest were usually settled members of the community in nearby towns. Foresthill's timber industry sustained the community after the decline of mining operations. However, the local timber industry was unable to compete with similar operations along the route of the transcontinental railroad. The onset of World War II prompted an increase in lumber production on the Foresthill Divide, as wartime demand stimulated the harvest of remaining large stands along the Divide. After the war, stands on nearby Mosquito Ridge were opened for harvest, with logs being milled in Foresthill.

As with lumber and other county industries, farm production for outside markets came after 1859 and was dependent on the development of better transportation systems. During the 1860s, settled

agriculture continued in the western part of the county on farms of varying sizes. Along the Foresthill Divide, agriculture/ranching centered on the ridge tops and on orchard crops and the production of hay and seasonal stocking of cattle.

The late 19th century brought a surge of interest and appreciation of wilderness recreation, and forest lands increasingly became the relocation focus for retirees during the 20th century. The Tahoe National Forest promoted the recreational potential of its lands, which were enhanced by Civilian Conservation Corps crews between 1933 and 1943. Within the last few decades, recreational interest in the region has dramatically increased. This interest is accompanied by a rise in incoming residents who desire to live in an aesthetically pleasing and historically rich area. The enhancement and interpretation of selected historic sites and buildings have boosted community economies throughout Placer County and the Foresthill Divide in the form of recreational tourism.

The Foresthill Divide Historical Society is committed to preserving the history of the Foresthill Divide, which it believes to be a strong point for the community (Moffet, pers. comm., 2000). The unique history of the Divide, along with its recreational potential, are viewed as critical elements in the economic well being of the community and quality of life for its residents. In so doing, there is concern that future developments on the Divide are careful not to alter the historic “flavor” of old townsites. The group wishes to be consulted regarding future development issues on the Divide in order to insure preservation of remaining heritage resources and monitor new development (Percival, pers. comm., 2000). The group has an active membership and conducts regular meetings and has established an Internet web site (<http://mmoffet.mystarband.net/>). Their web site averages from 20 to 40 “hits” a day, with inquiries throughout the U.S. and the world, especially from school districts. Greatest interest lies in topics involving gold mining, the gold rush, mining history, and Miwok-Maidu heritage. The society has a collection of over 800 historic photos, which are variously shown on their web site. The society is committed to sharing information regarding Foresthill Divide’s past within the medium of the future, the Internet, and in so doing they provide a model for other local historical organizations to also go on-line.

The “Foresthill Divide Historic Resources Survey” (4/20/1991) was a volunteer project sponsored in part by the Foresthill Divide Historical Society. The group compiled the survey of pre-1945 structures, objects and sites as part of a community awareness program and necessary first step for the economic rejuvenation of the old commercial core of Foresthill, and to assist the County Planning Department in drafting a historic preservation component for the General Plan update. The survey compiles the major historic sites and structures located on publicly owned lands of the Foresthill Divide, with a focus on the historic townsites of Foresthill, Michigan Bluff and Yankee Jim’s. Historic properties were evaluated for architectural, historical and/or cultural significance according to the guidelines set forth in the “California Historic Resources Inventory Survey Workbook.” The Historical Society is prepared to take a position involving the preservation of certain historic structures, and may consider expanding the current historic designations within the Foresthill townsite (Percival, pers. comm., 2000).

## Regulatory Framework

### Summary of California Laws and Local Ordinances Protecting Heritage Resources

The integrity of the unique and varied heritage resources of Foresthill Divide is being diminished daily by natural deterioration and the processes and the pressures of growth. A variety of California laws and local ordinances have been passed in the last few decades that are designed to protect archaeological resources. Key legislation is summarized below. Several California public resource codes make it illegal to damage objects of historical or archaeological interest on public or private lands or to disturb human remains, including those in archaeological sites. It is illegal to possess remains or artifacts taken from Native American graves, and the Native American Heritage Commission must be consulted whenever Native American graves are found.

#### California Environmental Quality Act ("CEQA")

CEQA requires that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects on historical resources.

#### Health and Safety Code, Section 7052 (Stats. 1939, C.60:672)

This code section establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

#### Penal Code, Section 622.5 (Stats. 1939, D.90:1605, 5.1)

This code provides misdemeanor penalties for injuring or destroying objects of historical or archaeological interest located on public or private lands. It specifically excludes the landowner.

#### Public Resources Code, Section 5097.5 (Stats. 1965, C.11362792)

An additional code defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands.

#### Public Resources Code, Section 5097.9

It is contrary to the free expression and exercise of Native American religion to interfere with or cause severe or irreparable damage to any Native American cemetery, place of worship, religious or ceremonial site or sacred shrine.

#### Health and Safety Code, Ch. 1492 (SB 297)

The Health and Safety Code requires that the Governor's Native American Heritage Commission be consulted whenever Native American graves are found. It makes it illegal to possess remains or artifacts taken from Native American graves. If human remains are discovered, all work should stop in the immediate vicinity of the find and the county coroner must be notified, according to Section 7050.5 of the Health and Safety Code. If the remains are Native American, the coroner

should notify the Native American Heritage Commission, which in turn will inform a most likely descendant. The descendant will then recommend to the landowner appropriate disposition of the remains.

#### Public Resources Code, Sections 5024 and 5024.5

These code sections require State agencies to inventory and protect historical structures and objects under their jurisdiction. The State Historic Preservation Officer must be consulted before any such structure or object is altered or sold.

#### Confidentiality

In order to prevent vandalism and unauthorized artifact collecting and to protect landowners from trespass, the locations of cultural resources are kept confidential. California Government Code Section 6254.10 exempts archaeological site information from the California Public Records Act, which requires that public records be open to public inspection. Location information is restricted and is not circulated as part of public documents, but is used for planning purposes only.

#### Data Sources

Research entailed a general literature review of prehistoric and historic sources concerning the Plan area. A windshield survey of portions of the Plan area was conducted. No on-the-ground archaeological field survey was performed.

In order to obtain a sense of the heritage resource for the Plan area, archaeological site records, held at the Archaeological Inventory, North Central Information Center (NCIC), California State University at Sacramento (CSUS) were reviewed. The NCIC maintains records of archaeological sites inventoried in Placer County, including the Foresthill Divide. Records are available to qualified researchers for use during the land development process. Basic heritage resource inventories reviewed at this facility include: the National Register of Historic Places (through current volume); the State of California Historic Landmarks and Points of Historic Interest (through current listings); Historical, Architectural and Archaeological Resources of Placer County (12/1992); Foresthill Divide Historic Resources Survey (4/20/1991); Directory of Properties in the Historic Property Data File for Placer County (1/13/00); Survey of Surveys-A Summary of California Historical and Archaeological Research Surveys (California Department of Parks and Recreation 1989); California Office of Historic Preservation Archaeological Determinations of Eligibility for Placer County (1/28/00); and Caltrans Bridge Survey (10/31/89). Other local histories and secondary sources consulted are listed in the references cited section of Appendix D.

To complete this survey of archaeological site records, contacts with a variety of public and private agencies were also initiated. These included the Tahoe National Forest, U.S. Bureau of Land Management, California Department of Forestry and Fire Protection, Placer County Historical Society/Museums/Archives, Foresthill Divide Historical Society, and Placer County Planning Department. The counsel of representatives of the local Todd's Valley Miwok-Maidu Cultural Foundation and the Washoe Tribe of Nevada and California was sought, in order to determine

known areas of Native American cultural ecology and history and management concerns over traditional tribal lands on the Divide. Field record reviews and telephone consultations with agency heritage resource personnel and local contacts for information regarding cultural/historical issues are listed below.

### Prior Heritage Resource Investigations

Archaeological investigations on the Foresthill Divide, or in western Placer County in general, are limited. Important archaeological sites have been studied within the Highway 124 corridor and the proposed Auburn Dam Project Area. Other minor excavations have been conducted in the Tahoe National Forest at elevations generally above 3,500 feet. Recorded sites on the Divide indicate a long time sequence of use; however, there have been few excavations to provide details and in-depth information. Work by Ritter (1970) in Spring Garden Ravine for the Auburn Dam Project and by Baker (2000), Baker and Shoup (1992), and Baker et al. (1993) along Highway 124 provide important archaeological references, as they are the only excavations conducted within the Plan area.



While numerous prehistoric sites were recorded during the series of archaeological surveys for the Auburn Dam during the 1960s-1970s, all that remains are bedrock milling features, with more portable prehistoric artifacts being obliterated by gold-mining activities and natural flooding of the river canyon. A review and reorganization of the Cultural Resource Inventory for the Auburn Dam Project was undertaken for the Army Corps of Engineers, Sacramento District, in response to the newly proposed Auburn Dam alternatives requiring reassessment of the database (McCarthy 1989). Previous research efforts by Rackerby (1965), Ritter (1971), and True (1975-1980) disclosed 493 sites, of which 460 are historic and 33 are prehistoric. Findings suggest that the most important site types are ones that represent a cluster of activities and are found at settlements or named locations. Sites have been heavily impacted by flooding and mining activities. The Spring Garden Ravine site (4-Pla-S101, as referenced by Baker 2000) was investigated in 1970 as part of the heritage resource studies for the Auburn Dam. Here, a rich artifact assemblage was radiocarbon dated to approximately 3500 years ago. Middle Archaic populations may have used the site as a base camp for embarking eastward into the higher Sierra, with Late Archaic populations using the site as a seasonal hunting camp.

The California Forest Highway 124 Project, located on the Foresthill Divide between Auburn Ravine and the community of Foresthill, generated a protracted period of archaeological fieldwork conducted intermittently between 1991 and 1997 (Baker and Shoup 1992; Baker et al. 1993). The work included archaeological excavations at two sites, CA-Pla-695/H, the Monte Verde site, and CA-Pla-728/H, the Old Joe site (Baker 2000). The project provided an opportunity for some of the first in-depth archaeological investigations on the Foresthill Divide. CA-Pla-725H is the location of the 1936 Monte Verde Inn and the former site of the 1875 Mile Hill Toll House (also known as

the North Star Toll House and the U.S. Ranch). Site CA-Pla-728/H is the location of a historic marker at the south side of Foresthill Road, commemorating the location of the grave of “Old Joe,” a stage horse killed during a robbery in 1901. Excavations at the Monte Verde site, CA-Pla-695/H, revealed a well-developed midden deposit that contained numerous artifacts. Site use dates from the Early Archaic Period (prior to 3000 B.C.), but the bulk of the evidence suggests that most intensive site use occurred during the Middle Archaic Period, beginning about 2500 B.C to 2000 B.C. and continuing to sometime between 500 B.C. and 100 B.C. The site was probably a small, permanent or semi-permanent village occupied by 40 to 70 people. Site occupation ended about A.D. 600. Excavations at CA-Pla-728/H disclosed human remains, which were removed with the approval of a Native American observer.

The Tahoe National Forest tested three prehistoric archaeological sites farther up on the Divide and outside the Plan area: the Sailor Flat Site (CA-Pla-500, Wohlgemuth 1984), the Sunflower Timber Sale Site (CA-Pla-664, Waechter 1989), and the Robinson’s Flat site (USFS 05-17-54-176, Smith 1995). These sites are located in close proximity at the 6,200 to 6,500 foot elevation, and appear to be seasonal base camps from which occasional hunting and gathering forays were made into nearby parts of the region during the Middle and Late Archaic periods.

Other excavations of relevance to the Plan area are at Bullards Bar Reservoir (Humphreys 1969), approximately 30 miles north of the Foresthill Divide, which yielded artifacts from the Middle Archaic Period. Large-scale excavations at CA-Nev-407, near Grass Valley, revealed site occupation from at least 1110 B.C. to A.D. 1500 (Clewlow et al. 1984:213).

### Archaeological Coverage

No exact information on archaeological coverage is currently available. Coverage strategies, which range from complete to cursory examinations, have not been consistently presented in archaeological reports. Beyond this, archaeological coverage figures are not always reported to the North Central Information Center, unless a report was prepared by a professional archaeologist. The Plan area contains 109 square miles, or approximately 69,760 acres, about half of which are public land. It appears that nearly 100 separate archaeological surveys have been conducted on land within the Plan area. Survey has been accomplished using mixed reconnaissance strategies. The total survey area is approximately 17,067 acres, or about 25 percent of the Plan area. This coverage figure does not include work done as part of the Auburn Dam Project, where coverage area is unclear. Most of the archaeological coverage occurs on the USGS 7.5’ Foresthill Quadrangle.

Number of Surveys	Acreage	USGS Quad
7	25	Auburn
5	800	Colfax
9 + UCD Sugar Pine Reservoir study	1600	Dutch Flat
5	212	Georgetown
8	560	Greenwood
49	7760	Foresthill
11	4590	Michigan Bluff
0	1520	Westville

The USFS has conducted archaeological surveys on approximately 50,000 acres; this comprises about one-third of the land under jurisdiction of the Foresthill Ranger District. Most of this coverage is outside the Plan area.

BLM manages large blocks of land in proximity to the North Fork American River. Here, archaeological coverage has been sparse. While dozens of small inventory surveys have been conducted, few large and comprehensive studies have been completed (Decker, pers. comm., 2000).

Most archaeological work within the Plan area has been accomplished by registered professional foresters (RPF) as part of timber harvest plans (THP). The California Department of Forestry and Fire Protection (CDF) forest practice rules require RPFs to submit archaeological reports within 30 days of a THP approval (D. Foster, pers. comm., 2000). These reports are then reviewed and field inspected by CDF archaeologists, and copies of the final report are filed with the appropriate information centers (e.g., NCIC-CSUS)). Prior to 1991, RPFs may not have fully complied with the rule. Between 1995 and 1999 compliance improved. After May 1999 compliance has been complete, as CDF archaeologists send copies of approved reports directly to the information centers. RPFs are para-professional archaeologists and conduct archaeological surveys during the course of their timber stand evaluations. Consequently, the thoroughness of the ground surface inspection and the quality of reporting are variable, and reports should be evaluated on an individual basis.

### Known Heritage Resource Inventory

#### Heritage Resource Types

The varied environmental zones, geological characteristics, and geographical position of the Foresthill Divide account for a heritage resource base that is exceedingly rich and complex. This explains the wide array of prehistoric and historic site types. Prehistoric site types that have been inventoried include villages, multi-task camps, single task-specific locales, and special use sites.

1. Village sites typically contain: (a) flaked stone tools; (b) portable milling implements such as mortars and pestles and manos and metates; (c) stationary features like bedrock mortars, which are sometimes accompanied by small-diameter pitted boulders (or “cupules”) that appear as miniature mortar cups; (d) discolored soil or “midden” which is usually deep and may contain animal bone, charcoal and organic residues; (e) house pit or dance house depressions; and (d) cemeteries.
2. Multi-task camps are not permanently occupied. They are characterized by: (a) both flaked stone and (b) ground stone tools and (c) sometimes bedrock mortars which may be associated with shallow middens or cupules.
3. Single task-specific locales are places where a single task is performed once or intermittently (seasonally) over successive years. They exhibit either flaked stone or ground stone tools. Isolated bedrock mortars with shallow middens and quarries, where rock sources were quarried and roughly fashioned into tool preforms, also fall into this category.

4. Special use sites involve: (a) petroglyphs (or rock writings); (b) hunting blinds; (c) cemeteries, (d) traditional plant collecting areas, etc.

Historic themes within the Plan area are manifest archaeologically by site types related to mining, water management, logging, transportation, and ranching/agriculture. Those sites containing evidence of habitation structures, but which cannot be directly related to any identifiable historic activity, are classed as settlement site types. These often occur in association with trash dumps and sometimes cemeteries. Historic site types that share multiple activities have been categorized according to their dominant historic theme. For example, a mining site that contains water ditches, dirt roads, remains of a habitation structure, livestock corral, garden, trash dump, and small cemetery is classified solely as a mining site.

### Inventory of Heritage Resources

Little of the Plan area has been subjected to systematic survey and many more sites are likely to exist than are summarized here. To best interpret the approximate tally of the numbers and types and statuses of sites recorded within the Plan area to date, certain limitations and problems inherent in the data base need clarification. While the inventory of National Register sites and State Landmark and Points of Historical Interest designations is complete and up to date, data on the total number of sites recorded and their breakdown according to site type represents only a rough estimate of the actual extent of heritage resources inventoried. Total site numbers presented below may be underestimated. No concise database exists for Placer County. The master archaeological site inventory for the County is housed with NCIC-CSUS. Only about half of the total number of archaeological site records have been processed and received official Smithsonian numbers. The many site records that are still assigned temporary site numbers have been recorded by a number of private and public archaeologists with varying philosophies regarding what constitutes a “site.” Consequently, some submitted site records may not ultimately qualify for site status. On the other hand, some resources, which should be considered sites, are treated as isolated artifacts or features, and are therefore never assigned a site number. There are a large number of informally reported isolated finds that fall into this latter category. Also, some sites, containing both a prehistoric and historic component, have not been uniformly assigned a single number, as is current practice. Consequently, some have been treated as two separate sites and have been counted twice in the tabulations presented here. Furthermore, for archaeological surveys completed decades ago, sites were not always formally reported. In addition, ground visibility on the Divide is often obscured by brush/slash, natural conditions of the landscape, fire, etc., and these physical changes can greatly hinder the detection of surface artifacts and features. For these and other reasons, the figures presented below should be considered as very rough estimates for planning purposes.

About 85 archaeological sites recorded within the Plan area have been assigned formal state trinomials by the NCIC and/or USFS. This number does not necessarily include sites inventoried on lands under the jurisdiction of the BLM. In addition, sites inventoried as part of THPs have been assigned primary numbers, but most have not been formally entered into the NCIC inventory. Sites with state trinomials and their corresponding USGS quadrangles are listed below:



Number of Sites	USGS Quad
11	Auburn
6	Colfax
10	Dutch Flat
5	Foresthill
2	Georgetown
43	Greenwood
8	Michigan Bluff

These numbers do not include the 493 sites recorded as part of the Auburn Dam project, of which 460 are historic and 33 are prehistoric. Many of these sites are within the Plan area but have not been assigned state trinomial numbers.

On adjoining USFS land, 422 sites have been recorded within the Foresthill Ranger District; most of these sites are located outside the Plan area, with only 14 falling within the Plan area. Approximately one-third of the USFS site total is prehistoric and two-thirds are historic and, within the latter category, 95 percent are associated with mining. Sites recorded on USFS lands within the Plan area and their corresponding USGS quadrangles are listed below:

The following heritage resources located within the Plan area are included in federal, state and/or local listings and inventories. Source numbers 1 through 10 are keyed to heritage property status.

1. National Register of Historic Places,
2. Archaeological Sites Determined Eligible for Inclusion on the National Register of Historic Places-California Office of Historic Preservation,
3. California Historical Landmarks,
4. California Points of Historical Interest,
5. Historic American Buildings Survey/Historic American Engineering Record,
6. Historic Highway Bridges of California-California Department of Transportation,
7. Historic Properties Directory-California Office of Historic Preservation,
8. Historic Sites Listing of the Placer County General Plan Recreation Element,
9. Five Views-California Office of Historic Preservation,
10. National Historic Civil Engineering Landmarks-American Society for Civil Engineers Sacramento Chapter.

Yankee Jim's (3,4,9)

Town of Forest Hill (3,4,9)

Town of Michigan Bluff (3,4,9)

Butcher Ranch (3,4,9)

Grizzly Bear House (3,4,9)

Spring Garden School (3,4)

Todd's Valley (3,4,9)

U.S. Ranch (3,4,9)

Baker Ranch (9)

Bird's Valley

Sunny South (9)

Forks House (9)

National Historic Trail – Michigan Bluff to Last Chance (Western States Trail)

Bridges for historical consideration within or near the Plan area as evaluated by Caltrans (Caltrans Bridge Survey 1989) include:

Bridge No.	Features Intersected	Facility Carried	Historical Significance
19C0001	North Fork American River	Old Auburn Foresthill Rd	no
19C0002	North Fork American River	Yankee Jim’s Rd	yes
19C0100	Shirtail Creek	Shirtail Cny Cr Rd	no
19C0175	Sugar Pine Dam Spillway	Iowa Hill Rd	no
19C0176	North Fork American River	Iowa Hill Rd	no

California Historical Landmarks (CHL) within the Plan area include:

Yankee Jim’s Townsite	CHL No. 398
Foresthill Townsite	CHL No. 399
Michigan Bluff Townsite	CHL. No. 402

The Directory of Properties in the Historic Property Data File for Placer County within the Plan area (Office of Historic Preservation 1/13/00) lists the following properties for consideration of eligibility to the National Register. Most of the properties have not been formally evaluated.

Address	Name	City	Date	*Status
Auburn Foresthill	Luster House	Foresthill	-	7
6120 Church St	Finning House	Foresthill	1860	7
Foresthill Rd	Town of Forest Hill	Foresthill	1850	7J
24469 Foresthill Rd		Foresthill	1880	7J/6Y2
24707 Foresthill Rd		Foresthill	1936	7J/6Y2
24825 Foresthill Rd		Foresthill	1900	7J
24442 Lowe St		Foresthill	1935	7J
24160 Main St		Foresthill	-	7J
24260 Main St	Red & White Store	Foresthill	1910	7J
24406 Main St	Schuyler House	Foresthill	1863	7J
24490 Main St		Foresthill	1910	7J
24500 Main St		Foresthill	1930	7J
24560 Main St	Foresthill Grocery	Foresthill	1860	7
24580 Main St	Foresthill Community Center	Foresthill	1910	7J
24590 Main St	Forest Hill Lodge	Foresthill	1947	7J
24640 Main St		Foresthill	1940	7J
24650 Main St		Foresthill	1890	7J
24680 Main St		Foresthill	1860	7J
24690 Main St		Foresthill	1890	7J
24708 Main St		Foresthill	-	7J

24750 Main St	Albrecht Store	Foresthill	1860	7J
SR49	Old Forest Hill Ranger Station	Foresthill	1934	6Y2
Yankee Jim's Rd	Yankee Jim's Rd	Foresthill	1867	7J/7L
5865 Church St		**Foresthill	-	7J
6040 Church St		**Foresthill	1930	7J
6055 Church St		**Foresthill	1901	7J
6070 Church St		**Foresthill	1930	7J
6121 Church St		**Foresthill	1900	7J
23801 Foresthill Rd		**Foresthill	1900	7J
24225 Foresthill Rd		**Foresthill	1880	7J
24245 Foresthill Rd		**Foresthill	1870	7J
24271 Foresthill Rd		**Foresthill	1870	7J
24281 Foresthill Rd		**Foresthill	1870	7J
24345 Foresthill Rd		**Foresthill	1930	7J
24407 Foresthill Rd		**Foresthill	1860	7J
24495 Foresthill Rd		**Foresthill	1920	7J
24515 Foresthill Rd		**Foresthill	1880	7J
24625 Foresthill Rd		**Foresthill	1900	7J
24645 Foresthill Rd		**Foresthill	1900	7J
24655 Foresthill Rd		**Foresthill	1900	7J
24675 Foresthill Rd		**Foresthill	1900	7J
24741 Foresthill Rd		**Foresthill	1900	7J
24781 Foresthill Rd		**Foresthill	1900	7J
24791 Foresthill Rd		**Foresthill	1900	7J
6060 Gold St		**Foresthill	1870	7J
24390 Lowe St		**Foresthill	1860	7J
24522 Lowe St		**Foresthill	1900	7J
24523 Lowe St		**Foresthill	1930	7J
8200 Michigan Bluff Rd	Michigan Bluff	**Foresthill	1850	7L
24370 Race Track St		**Foresthill	1950	7J
Yankee Jim's Rd	Suspension Bridge	**Foresthill	1930	7J
5765 Yankee Jim's Rd		**Foresthill	1880	7J
5781 Yankee Jim's Rd		**Foresthill	1920	7J
5840 Yankee Jim's Rd	Ford House	**Foresthill	1890	7J
5850 Yankee Jim's Rd		**Foresthill	1860	7J

\* 6Y = determined ineligible for listing in the National Register through a consensus determination of a federal agency and the State Historic Preservation Officer; 7 = not evaluated; some properties on the above list also appear in the inventory presented in the "Historical, Architectural, and Archaeological Resources of Placer County, Volume 3" December 1992]

\* 7J,7L = Unevaluated properties.

\*\* = vicinity of Foresthill

## Expected Heritage Resource Sensitivity

Some idea of expected heritage resource sensitivity can serve as a general guide to advanced planning by providing a means of estimating the probable likelihood of sites occurring within a given area proposed for development. Sensitivity ratings indicate the degree of probability of finding sites in a specific project area and the relative number and types of sites expected. In this way, project sponsors can anticipate, at the outset, the extent to which heritage resources may become an issue for consideration later on.

Heritage resource sensitivity predictions for the Plan area are derived from the collective results of many archaeological surveys in similar environments throughout the region and incorporate the obvious correlation between archaeological site locations and basic environmental variables (water, level ground, etc.). In a study undertaken by the Tahoe National Forest, significant correlation was found for the major types of sites and basic environmental variables (Markley and Henton 1985). Lindström (1991) also incorporated these variables into her archaeological sensitivity model for the Nevada County General Plan Update. An assessment of archaeological sensitivity for the Plan area draws directly from these two examples.

A checklist of environmental variables influencing heritage resource sensitivity assessment is presented below. Correlation with specific environmental variables is better for prehistoric site types than for historic sites. Historic activities, particularly mining, involved intensive use of specific locations with little reliance or dependence on local resources for subsistence or other economic needs.

### I. Environmental Variables

#### A. Topography

1. Elevation (600 to 4800 feet)
2. Percent slope (0-30%; 30-50%; 50+%)
3. Aspect (north; south; east; west)
4. Proximity to water (less than 1/4 mile; greater than 1/4 mile)
5. Water Type
  - a. Stream (intermittent, permanent)
  - b. Spring
6. Soils (agriculture/timber productive)/Geology (mineral deposits; quarry sources)

#### B. Flora (oak-grassland; hardwood/conifer; conifer; meadow; community ecotone)

#### C. Fauna

1. Deer Range
2. Fishery

### II. Other Considerations

- A. Ethnographic/historic data that document past land use
- B. Previously recorded sites
- C. Recent/historic land modifications and disturbance

## Native American Prehistory and History

For both the Nisenan and Washoe, territories encompassed wide-ranging elevations and varied environmental zones. Intense gathering was most effectively carried out in the grassland and oak woodland zone below 3,000 feet, where winter villages were located. Single task-specific locales, from which a multitude of plant and animal resources were procured, are found in higher numbers in proximity to winter villages. Cemeteries are generally restricted to the winter village area. Elevations above 3,000 feet on the west slope are beyond the range of permanent occupation but are moderately to highly sensitive to contain seasonal multi-task camps, single task-specific locales, petroglyphs and hunting blinds. Level ground is a basic determinant for any prehistoric habitation. Areas with greater than 30 percent slope may accommodate some specific short-term tasks and hunting blinds. Petroglyphs generally occur on large horizontal bedrock outcrops.

Southern and eastern exposure was generally advantageous for warmth and protection from storms.

Villages are dependent upon a permanent water source. Seasonal multi-task camps occur around springs and along intermittent streams during their periods of flow. Camps along streams are most likely to occur at the confluence of a major creek flowing down from the ridge, thereby providing an access corridor up to the ridge.

Geological variables are centered upon rock sources used in fashioning stone tools; namely, metasediments that contain chert outcrops and volcanic flows which are comprised of basalt. Granite was favored for milling equipment. Horizontal smooth surfaces of granite or metasediments were preferred for petroglyphs.

The floral component is important in the prediction of prehistoric site locations, in that plant resources made up a significant percentage of the subsistence base of the aboriginal inhabitants of the county. Elevation and microenvironmental diversity enhanced the rich and varied seasonal resources that were regularly available for human use. However, past plant and animal communities were different both in make-up and distribution than those found today. Changes are due to historic impacts associated with mining, logging and grazing, to the introduction of non-native plant species, and to the cessation of regular aboriginal burning, which was practiced to improve the vigor of plant resources. The pine forests, particularly in the purely coniferous areas, were not as productive for aboriginal exploitation as were areas containing hardwoods (especially oaks) and a wide variety of brush and grass species. Ecotones, where plants were procured from the junctions of two or more vegetation communities, were the most productive and efficient zones. Areas corresponding to more diversified plant species are designated as highly sensitive.

Animal resources, including large and small mammals, a variety of avifauna, large anadromous fish (salmon and steelhead trout), and smaller suckers and minnows, were significant food items. Deer herds are migratory, wintering in the major river canyons and moving upslope in elevation in the spring (a pattern not unlike that practiced by the Nisenan and Washoe). Zones that accommodate deer migration routes and winter ranges or support productive fisheries are highly sensitive.

Disturbed areas are less likely to contain sites that are intact and may be less sensitive. Areas containing known heritage resources for which there is some type of formal record are, of course, extremely sensitive. Heritage resource sensitivity goes beyond the archaeological record. Both the Maidu/Miwok and the Washoe have expressed a concerted interest in maintaining access to traditional lands upon which important medicinal and food plants continue to thrive.

A checklist of variables influencing prehistoric resource sensitivity is presented below. Prehistoric site types are abbreviated: V=village; MT=multi-task site; ST=single task-specific site; SU=special use; C=cemetery; HB=hunting blind; and P=petroglyph.

Variable	Predicted Site Type	Sensitivity Level
Elevation:		
600-3000	V/MT/ST/SU-C	high
3000-4800	MT/ST/SU-P,HB	moderate
Percent slope:		
0-30%	V/MT/ST/SU-C,P	high
30-50%	ST/SU-HB	moderate
50%+	ST/SU-HB	high-low
Aspect:		
Southern	V/MT/ST	high
Eastern	V/MT/ST	high
Western	V/MT/ST	moderate
Northern	MT/ST	high-low
Proximity to water:		
less than 1/4 mile	V/MT/ST	high
greater than 1/4 mile	ST	high-low
Water type:		
Stream – permanent	V/MT/ST	high
Stream – intermittent	MT/ST	moderate
Spring	V/MT/ST	high
Geology:		
Chert/metasediment outcrops	ST	high
Large, flat granite/ metasedimentary surface	SU-P	high
Flora:		
Oak grassland	V/MT/ST/SU-C	high
Hardwood/conifer	MT/ST	high
Conifer	ST	mod-low
Meadow	V/MT/ST	high
Ecotone	V/MT/ST	high

Fauna:

Deer range	V/MT/ST/SU-HB, P	high-mod
Fishery	V/MT/ST	high-mod

Other:

Ethnographic/historic documented land use	V/MT/ST/SU-C, HB, P	high
Previously recorded sites	V/MT/ST/SU-C, HB, P	high
Recent land modifications		
Undisturbed	V/MT/ST/SU-C, HB, P	high
Disturbed	V/MT/ST/SU-C, HB, P	mod-low

**Euroamerican History**

Historic site locations are much less dependent upon environmental variables and correlation is less direct. Prehistoric and historic sites tend to be distributed differently, at least with regards to elevation. Lower elevations have a consistently higher than average density of historic sites, with mining sites generally located below 5,000 feet.

Geological data are key to predicting historic mining sites. All areas which fall within zones containing: (1) deposits formed by hydrothermal processes, e.g. gold, silver, copper, zinc; (2) placer gold deposits; (3) industrial mineral deposits, e.g. barite, clay, and silica; (4) sand and gravel resources of alluvial and glacial origin; and (5) crushed stone resources consisting of metamorphic and volcanic rocks are highly sensitive. Other important independent variables include steep slopes and the presence of water. The positive correlation with water is to be expected, since many of the placer deposits are located near streams and rivers. The correlation with steeper slopes is also not surprising, as many of the mining sites are either located in the bottom of steep drainages or on canyon sides where rivers have cut through the gold-bearing deposits. Water management activities are initially tied to water, with sources generally at higher elevations. The correlations between ditches and flumes and environmental variables end there, however, except for a preference for slopes with southern exposure.

Transportation routes are relatively free of environmental constraints. While more moderate terrain was favored, steep slopes were still traversed. The main road along the ridge of the Divide, along with intersecting road systems, is considered to be the major sensitive transportation corridor within the Plan area.

Logging is tied to a forest vegetation type and the productivity of soils. More moderate slopes, sunny exposures and the presence of water are important considerations in historic logging camp locations.

Ranching/grazing activities are tied to elevation and soil productivity. The main constraints on historic agricultural activities were elevations below the frost zone and relatively level terrain. Although the Foresthill Divide is not considered a major agricultural area, ranches along the ridge supported localized crops of fruits, and vegetables and hay. Ranching activities required water and sufficient feed for livestock and somewhat level terrain. Associated archaeological sites most

closely conform to the combination of environmental variables requisite for prehistoric sites (level spots near water, etc.). Historic settlement is less dependent upon environmental variables than is prehistoric settlement. The need for level ground for habitation was overcome by artificial terracing. Water was brought in by ditch or flume and foodstuffs and supplies were transported to the living site.

Disturbed areas are less likely to contain sites that are intact and may be less sensitive. Areas containing known heritage resources for which there is some type of formal record are, of course, extremely sensitive.

A checklist of variables influencing historic resource sensitivity follows. Historic site types and their abbreviations include: M=mining; S-D=settlement site with dump; W=water management; L=logging; T=transportation; C=cemetery, R-A=ranching and agriculture; and G=grazing.

Variable	Predicted Site Type	Sensitivity Level
Elevation:		
600-4800	M/S-D/W/T/C	high
600-3000	M/S-D/W/T/C/R-A	high
3000-4800	M/S-D/W/L/T/C/G	high
Percent slope:		
0-30%	M/S-D/W/L/T/C/R-A/G	high
30-50%	M/W/L/T	high
50%+	M	high
50%+	W/L/T	moderate
Aspect:		
Southern	S-D/W	high
Proximity to water:		
less than 1/4 mile	M/S-D/W/L/R-A/G	high
greater than 1/4 mile	M/S-D/R-A/G	mod-low
Water type:		
Stream – permanent	M/S-D/W/R-A/G	high
Stream – intermittent	M/S-D/W/R-A/G	mod
Spring	S-D/R-A/G	high
Geology/soils:		
Mineral bearing deposits	M/S-D/W	high
Productive soils	L/S-D/R-A/G	high
Flora/Fauna:		
Oak-grassland	S-D/W/R-A/G	high
Hardwood/conifer	L	moderate
Conifer	L	high



Meadow	R-A/G	high
Other:		
Historic documentation of land use	M/S-D/W/L/T/C/R-A/G	high
Previously recorded sites	M/S-D/W/L/T/C/R-A/G	high
Recent land modifications		
Undisturbed	M/S-D/W/L/T/C/R-A/G	high
Disturbed	M/S-D/W/L/T/C/R-A/G	mod-low

4. IMPLEMENTATION

1. Review development projects for compliance with the goals and policies contained in the Cultural Resources Section, throughout the FDCP, and the criteria in the Foresthill Community Design Guidelines.

**Responsible Agency/Department:** Land Development Departments/Foresthill Forum (MAC)/Planning Commission/Board of Supervisors  
**Time Frame:** Ongoing  
**Funding:** Application Fees

2. The County shall prepare, adopt and implement procedures for review and approval of all County-permitted projects involving ground disturbance and all building and/or demolition permits that will affect buildings, structures, or objects 45 years or older. As appropriate, project applications shall be distributed to the Foresthill Divide Historical Society and the Todd’s Valley Miwok-Maidu Cultural Foundation for review and comment.

**Responsible Agency/Department:** Planning Department/Department of Museums/Board of Supervisors  
**Time Frame:** Fiscal Year 2003-2004; Ongoing  
**Funding:** Mitigation Fees/Permit Fees

3. The County shall develop preservation incentive programs for owners of important cultural resources, especially in the Core Area and Historic Outlying Commercial Areas, using such mechanisms as the Mills Act, the Historic Preservation Easement program, the Certified Local Government program, and the Heritage Tourism program.

**Responsible Agency/Department:** Planning Department/Department of Museums/County Assessor  
**Time Frame:** Fiscal Year 2003-2004; Ongoing  
**Funding:** General Fund/Grants

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

**Responsible Agency/Department:** Department of Museums  
**Time Frame:** Fiscal Year 2004-2005; Ongoing  
**Funding:** General Fund/Grants

5. The County shall consider pursuing the following cultural resource management programs and explore possible funding sources to support these programs:
  - a. Pursuit of status as a Certified Local Government to facilitate state funding and technical assistance from the State Office of Historic Preservation;
  - b. Preparation, adoption, and implementation of a cultural resources ordinance that provides definitions and standards for identification and protection of cultural resources and provides penalties for their disturbance; and

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

**Responsible Agency/Department:** Department of Museums  
**Time Frame:** As funds become available  
**Funding:** Grants/Permit Fees/General Fund

- 6. Because of the moderate to high sensitivity rating for most of the Plan area, it is prudent that all future projects which will involve potential ground disturbance be required to provide a project specific record search as part of the environmental review process. Based on the results of the record search, specific recommendations for archaeological or historical field survey, archival research, architectural evaluations, etc. could be made.

**Responsible Agency/Department:** Department of Museums/Planning Department  
**Time Frame:** Ongoing  
**Funding:** Permit Fees/Mitigation Fees

- 7. Require site-specific studies for archaeological or historical sites within the federal government’s definition of “historical context” in all instances where land development has the potential to have a detrimental impact on these sites.

**Responsible Agency/Department:** Department of Museums/Planning Department  
**Time Frame:** Ongoing  
**Funding:** Permit Fees/Mitigation Fees

- 8. If, as a result of an archaeological or historical field survey, sites of significance are discovered, the sites should be made known to the Placer County Department of Museums and Placer County Historical Advisory Board. The Board may support and recommend a listing of the site with the State of California as a National Register nomination, a State Landmark nomination or a Point of Historical Interest. All known sites should be brought to the attention of the Department of Museums’ office for incorporation in a cultural resource inventory.

**Responsible Agency/Department:** Department of Museums/Planning Department  
**Time Frame:** Ongoing  
**Funding:** Permit Fees/Mitigation Fees

- 9. In the event that Native American remains and/or associated grave goods are discovered at any time during project review or construction, the project proponent should stop work (if during construction or excavation) and notify the County Coroner, the Native American Heritage Commission, and the Department of Museums.

**Responsible Agency/Department:** Department of Museums/Planning Department  
**Time Frame:** Ongoing  
**Funding:** Permit Fees/Mitigation Fees

- 10. Except for extremely sensitive archaeological sites, all sites not recognized and identified by signs or monuments as part of a State or federal program should be identified and nominated for appropriate historical designation by the Placer County Historical Advisory Board.

**Responsible Agency/Department:** Department of Museums/Planning Department  
**Time Frame:** Ongoing  
**Funding:** Permit Fees/Mitigation Fees

- 11. Historical sites, including heritage trees and groves of historic and/or cultural significance, should be protected from destruction or demolition. Avoidance/protection is preferred over recordation and destruction. The remaining significant structures in the area should be protected by the existing owners or purchased by the appropriate public or nonprofit agencies.

**Responsible Agency/Department:** Department of Museums/Planning Department  
**Time Frame:** Ongoing  
**Funding:** Permit Fees/Mitigation Fees

C. AIR QUALITY

1. PURPOSE

Air quality is an important resource in the Foresthill Divide Community Plan area. Clean, fresh air is one of the features that attracts people to live in rural areas such as the Foresthill Divide. The Plan area is less subject to severe inversion conditions in the winter months than other Placer County communities. The ridgetop location of most development avoids the effects of strong inversions in winter that affect communities located in valleys. The Plan area is adversely affected by the transport of ozone into the local air basin from areas to the west into an area that would otherwise be fairly pristine. The purpose of the Air Quality section is to underscore the importance of air quality to Plan area residents, and to assure that all feasible actions are taken in the Plan area to maintain and improve air quality. Improving air quality in other regions is outside the jurisdiction of Placer County.

2. GOALS AND POLICIES

**Goal 4.C.1. Accurately determine and fairly mitigate the local and regional air quality impacts of projects proposed in the county.**

**Policies**

4.C.1-1 The County shall determine project air quality impacts using analysis methods and significance thresholds recommended by the PCAPCD.

*Note: The District is preparing guidelines that will provide standard criteria for determining significant environmental effects, that will provide a uniform method of calculating project emissions, and that will provide standard mitigation measures to reduce air quality impacts. The District now has interim thresholds of significance (10 tons ROG or NO<sub>x</sub> per year) and recommends analysis methods on a project by project basis.*

*Projects analyzed in sufficient detail to determine air quality impacts in an EIR or negative declaration could be exempt from further analysis during subsequent discretionary approvals such as zone changes or subdivision maps. For projects where insufficient details were known at the time the EIR was prepared, the analysis should be focused on specific impacts not previously addressed.*

4.C.1-2 The County shall ensure that air quality impacts identified during CEQA review are consistently and fairly mitigated.

4.C.1-3 The County shall ensure all air quality mitigation measures are feasible, implementable and cost effective.

4.C.1-4 The County shall reduce the air quality impacts of development projects that may be insignificant by themselves, but cumulatively are significant.

4.C.1-5 The County shall encourage innovative measures to reduce air quality impacts.

**Goal 4.C.2. Educate the public on the impact of individual transportation, lifestyle, and land use decisions on air quality.**

**Policies**

4.C.2-1 The County shall work to improve the public's understanding of the land use, transportation, and air quality link.

4.C.2-2 The County shall encourage local public and private groups that provide air quality education programs.

**Goal 4.C.3. Ensure that new development provides the facilities and programs that improve the effectiveness of transportation control measures and congestion management programs.**

**Policies**

4.C.3-1 The County shall work with employers and developers to provide employees and residents with attractive, affordable transportation alternatives.

4.C.3-2 The County shall work to establish public/private partnerships to develop satellite and neighborhood work centers for telecommuting.

*Note: This policy is intended for communities with significant numbers of information based workers who are now commuting long distances for employment.*

**Goal 4.C.4. Provide adequate sites for industrial development while minimizing the health risks to people resulting from industrial toxic or hazardous air pollutant emissions.**

**Policies**

4.C.4-1 The County shall require residential development projects and projects categorized as sensitive receptors to be located an adequate distance from existing and potential sources of toxic emissions such as freeways, major arterials, industrial sites and hazardous material locations.

*Note: This policy is intended to protect existing residential development and other sensitive receptors from conflicts with new industrial development. The types of businesses that are categorized as point sources are often incompatible with residential uses for a number of reasons including noise, truck traffic, visual concerns, and air quality. These are not the types of businesses encouraged for mixed-use developments or for commercial/office activity centers where we would expect more people to walk to work. The policy recognizes that businesses that are point sources are vital to the economy of Placer County and will be built, but that cities and counties must use care in planning their sites to avoid conflicts.*

4.C.4-2 The County shall require new air pollution point sources such as, but not limited to, industrial, manufacturing, and processing facilities to be located an adequate distance from residential areas and other sensitive receptors.

**Goal 4.C.5. Reduce emissions of PM<sub>10</sub> and other particulates with local control potential.**

**Policies**

- 4.C.5-1 The County shall work with the PCAPCD to reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible.
- 4.C.5-2 The County shall reduce PM<sub>10</sub> emissions from County-maintained roads to the maximum extent feasible.

**Goal 4.C.6. Develop local programs to minimize emissions from residential woodburning.**

**Policies**

- 4.C.6-1 The County shall encourage developers to limit fireplace installations in new developments.
- 4.C.6-2 The County shall encourage developers to install low emitting, EPA certified fireplace inserts and/or wood stoves, pellet stoves or natural gas fireplaces.
- 4.C.6-3 The County shall encourage the Air Pollution Control District to establish a buy-back program for older, non-certified wood burning stoves.

**Goal 4.C.7. Employ land use utilization strategies as a means of reducing mobile emissions.**

**Policies**

- 4.C.7-1 The County shall encourage the Mixed-Use areas to provide commercial services such as day care centers, restaurants, banks, and stores near employment centers.
- 4.C.7-2 The County shall work closely with school districts to help them choose school site locations that allow students to safely walk or bicycle from their homes.
- 4.C.7-3 The County shall plan park and ride lots at suitable locations serving long distance and local commuters.
- 4.C.7-4 The County shall encourage infill of vacant parcels.
- 4.C.7-5 The County shall encourage project sites designed to increase the convenience, safety and comfort of people using transit, walking or cycling.
- 4.C.7-6 The County shall require an air quality/transportation design analysis for projects exceeding District CEQA significance thresholds (interim thresholds are 10 tons/year for ROG and NO<sub>x</sub>).

*Note: The design analysis should be prepared by a civil engineer, architect, or urban designer familiar with design measures that can reduce trips. It could be part of the traffic study normally required for large development projects. This policy is intended to apply to large projects such as regional shopping centers and large subdivisions. Projects consistent with adopted County Design Guidelines or with a previously reviewed specific plan or community plan could be exempt.*

- 4.C.7-7 The County shall ensure that upgrades to existing roads (widening, curb and gutter, etc.) include bicycle and pedestrian improvements in their plans and implementation where appropriate.
- 4.C.7-8 The County shall discourage open outdoor burning in new residential development with densities greater than two dwelling units per acre.
- 4.C.7-9 The County shall require new large residential development proposals to reduce project air quality impacts below the significant level.

### 3. DISCUSSION

#### Climate/Air Quality

This section examines the climatic influences that affect air quality of the Foresthill Divide Community Plan area and describes available data on measured contaminant levels near the Plan area. It outlines the regulatory and planning agencies and programs that must be reflected in the Foresthill Divide Community Plan.

#### Climate and Meteorology

The Foresthill Divide Community Plan area is located within the jurisdiction of the Placer County Air Pollution Control District (PCAPCD). The Placer County APCD is subdivided into three different air basins: the Lake Tahoe Air Basin, the Mountain Counties Air Basin, and the Sacramento Valley Air Basin. The Plan area is located at the west end of the Mountain Counties Air Basin portion of the county, and is very close to the boundary with the Sacramento Valley Air Basin.

Climatic factors that affect air quality near the Plan area are wind and atmospheric stability. The daytime wind direction is generally westerly, which is the result of up-river breezes typical in mountainous terrain. During the nighttime, down-river “drainage” flows are frequent, particularly in winter. These nighttime winds are generally light, and follow the watercourse in a downstream direction.

Atmospheric stability is a measure of the atmosphere’s ability to vertically dilute pollutants. When the atmosphere is very stable (i.e., inversion conditions), pollutants may accumulate within a shallow layer near the ground, with resulting poor air quality. In the Plan area, these conditions are most likely to occur in winter.

Potential air quality problems near the Plan area are directly related to climatic factors. During the summer months, the general wind circulation has the potential to transport ozone from the adjacent Sacramento Valley Air Basin into the Plan area, and Particulate Matter 10 microns or less in diameter (PM<sub>10</sub>) concentrations can be elevated by local burning, controlled burns and forest fires. During the winter months, more localized problems can arise when PM<sub>10</sub> emissions from wood burning have the potential to accumulate under inversion conditions.

#### Existing Air Quality

#### Criteria Air Pollutants

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called “criteria” pollutants because the health and other effects of each pollutant

are described in criteria documents. Table 4.C-1 identifies the major criteria pollutants, characteristics, health effects and typical sources.

**Table 4.C-1 Major Criteria Pollutants**

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive photochemical pollutant created by the action of sunshine on ozone precursors (primarily reactive hydrocarbons and oxides of nitrogen.) Often called photochemical smog.	<ul style="list-style-type: none"> <li>• Eye Irritation</li> <li>• Respiratory function impairment</li> </ul>	The major sources of ozone precursors are combustion sources such as factories and automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	<ul style="list-style-type: none"> <li>• Impairment of oxygen transport in the bloodstream.</li> <li>• Aggravation of cardiovascular disease.</li> <li>• Fatigue, headache, confusion, dizziness.</li> <li>• Can be fatal in the case of very high concentrations</li> </ul>	Automobile exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	Reddish-brown gas that discolors the air, formed during combustion.	<ul style="list-style-type: none"> <li>• Increased risk of acute and chronic respiratory disease.</li> </ul>	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
Sulfur Dioxide	Sulfur dioxide is a colorless gas with a pungent, irritating odor.	<ul style="list-style-type: none"> <li>• Aggravation of chronic obstruction lung disease.</li> <li>• Increased risk of acute and chronic respiratory disease.</li> </ul>	Diesel vehicle exhaust, oil-powered power plants, industrial processes.
PM <sub>10</sub>	Solid and liquid particles of dust, soot, aerosols and other matter which are small enough to remain suspended in the air for a long period of time.	<ul style="list-style-type: none"> <li>• Aggravation of chronic disease and heart/lung disease symptoms.</li> </ul>	Combustion, automobiles, field burning, factories and unpaved roads. Also a result of photochemical processes.

Source: Donald Ballanti, Certified Consulting Meteorologist, 2000, Quad Knopf, 2006.

The federal and California state ambient air quality standards are summarized in Table 4.C-2 for important pollutants. The federal and state ambient standards were developed independently with different purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and PM<sub>10</sub>.

Table 4.C-2 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	--	0.09 ppm
	8-Hour	0.08 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.05 ppm	--
	1-Hour	--	0.25 ppm
PM <sub>10</sub>	Annual	--	20 µ/m <sup>3</sup>
	24-Hour	150 µ/m <sup>3</sup>	50 µ/m <sup>3</sup>
PM <sub>2.5</sub>	Annual	15 µ/m <sup>3</sup>	12 µ/m <sup>3</sup>
	24-Hour	35 µ/m <sup>3</sup>	--

ppm = parts per million

µ/m<sup>3</sup> = Micrograms per Cubic Meter

Source: California Air Resources Board, Ambient Air Quality Standards (11/10/06)

The USEPA in 1997 adopted national air quality standards for ground-level ozone and for fine Particulate Matter. In 2006, the USEPA adopted a new 8-hour standard of 0.08 ppm for ground-level ozone. USEPA strengthened the 24-hour fine particle matter (diameter 2.5 microns or less) standard from the 1997 level of 65 micrograms per cubic meter to 35 micrograms per cubic meter. New national standards for fine Particulate Matter have also been established for 24-hour and annual averaging periods. The current PM<sub>10</sub> standards remained the same.

Implementation of the new ozone and Particulate Matter standards was further complicated by litigation (*American Trucking Association, Inc., et al.v. United States Environmental Protection Agency*; No. 97-1440 and 97-1441). On May 14, 1999 the Court of Appeal for the District of Columbia Circuit issued a decision ruling that the Clean Air Act, as applied in setting the new public health standards for ozone and particulate matter, was unconstitutional as an improper delegation of legislative authority to the USEPA. The decision was appealed to the U.S. Supreme Court, which when deciding the case in February 2001 made no rulings regarding the PM<sub>2.5</sub> standards, so that rulings made in the Court of Appeal stand. The Court of Appeal remanded the case to EPA for further consideration of all standards at issue.

### Ambient Air Quality

The Placer County APCD operates air quality monitoring sites in nearby Colfax and Auburn measuring ozone and PM<sub>10</sub>. Data from these monitoring sites is summarized in Table 4.C-3. Table 4.C-3 shows that the state and federal ozone standards are not met in the vicinity of the Plan area, primarily due to transport of ozone into the area from the greater Sacramento area. PM<sub>10</sub> air quality meets federal and state standards at both monitoring sites.



Table 4.C-3 Summary of Air Quality Data for Colfax and Auburn, 2003-2005

Pollutant	Standard	Year	Days Exceeding Standard in Colfax	Days Exceeding Standard in Auburn
Ozone	1-Hour State	2005	18	11
		2004	12	14
		2003	13	14
Ozone	1- Hour Federal	2005	1	0
		2004	0	0
		2003	0	0
Ozone	8-Hour Federal	2005	13	10
		2004	9	12
		2003	12	11
PM <sub>10</sub>	24-Hour State	2005	0	0
		2004	0	0
		2003	0	0
PM <sub>10</sub>	24-Hour Federal	2005	0	0
		2004	0	0
		2003	0	0

--There was insufficient (or no) data available to determine the value.

Source: California Air Resources Board, APCD, 2006.

### Existing Emission Sources

The Plan area contains few industrial sources of pollution. Major emission sources in the Plan area are motor vehicles, open burning, and residential wood burning. Unpaved roads, lumbering operations and construction activities contribute to the level of PM<sub>10</sub>.

### Regulatory Framework for Air Quality

#### Local APCD Jurisdiction

The Placer County APCD is responsible for regulation and permitting of stationary sources and some area sources of pollution. The District monitors air quality and is responsible for preparation of regional air quality plans.

#### Regional Air Quality Planning

Both the federal and state governments have enacted laws mandating the identification of areas not meeting the ambient air quality standards and development of regional air quality plans to eventually attain the standards. Under the federal Clean Air Act, Placer County is considered “unclassified” or “attainment” for all pollutants except ozone. For the state standards, Placer County is “non-attainment” for PM<sub>10</sub> and ozone, and either “attainment” or “unclassified” for other pollutants. The designation with respect to ozone stipulates that the Mountain Counties Air Basin portion of Placer County is affected by ozone transported from upwind air basins.

## Greenhouse Gas Emissions and Global Climate Change

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect and is primarily attributed to increased levels of CO<sub>2</sub> in the atmosphere.

At the time of this writing, there are no regulations setting ambient air quality emissions standards for greenhouse gases; however, it is anticipated that such will be developed in the near future in accordance with recently enacted California legislation and Executive Orders.

In 2003, global emissions of carbon (i.e., only the carbon atoms within CO<sub>2</sub> molecules) solely from fossil fuel burning totaled an estimated 7,303 million metric tons (Marlands et al. 2006). This translates to approximately 29,400 million tons of CO<sub>2</sub>. This is only a portion of global CO<sub>2</sub> emissions because it addresses only fossil fuel burning and does not address other CO<sub>2</sub> sources such as burning of vegetation. Total estimated CO<sub>2</sub> emissions from all sources associated with the Foresthill Divide Community Plan would be less than 0.0005% of this partial global total. CO<sub>2</sub> emissions in California totaled approximately 391 million tons in 2004 (California Energy Commission 2006). As stated in the Draft Environmental Impact Report prepared for the FDCP, total CO<sub>2</sub> emissions from the Foresthill Divide Community Plan is estimated to be 0.033% to 0.037% of this statewide total.

In consideration that, at worst case, Buildout of the FDCP is anticipated to generate only .033% (without inclusion of the Forest Ranch Concept Plan) or .037% (with inclusion of the Forest Ranch Concept Plan) of statewide total GHGs, the potential impact of GHG emissions resulting from FDCP Buildout is considered less than significant.

## 4. IMPLEMENTATION

1. Review development projects, including projects in Mixed-Use areas, for compliance with the goals and policies contained in the Air Quality Section and throughout the FDCP.

**Responsible Agency/Department:** Land Development Departments/Foresthill Forum (MAC)/Planning Commission/Board of Supervisors

**Time Frame:** Ongoing

**Funding:** Application Fees

2. Opportunities exist during discretionary project review to analyze air quality impacts and apply appropriate mitigation measures in compliance with Placer County APCD's Air Quality Attainment Plan. To ensure that the requirement of an air quality analysis and application of mitigation measures are consistently applied to projects with significant air quality impacts, PCAPCD has established project size/type thresholds. Development projects with air quality impacts below the thresholds will not be required to produce an air quality analysis; however, the project will be subject to APCD's standard project conditions.

**Responsible Department/Agency:** Planning Department/PCAPCD  
**Time Frame:** Ongoing  
**Funding:** Permit Fees

3. Apply mitigation measures as applicable during the environmental review of projects from a list developed by the APCD. The list includes measures related to project design/construction, traffic flow improvements, public/private trip reduction programs, parking, ridesharing, telecommunications, alternative transportation, transit, and bicycle/pedestrian use.

**Responsible Agency/Department:** Planning Department/PCAPCD  
**Time Frame:** Ongoing  
**Funding:** Permit Fees

4. Review development proposals for compliance with the County’s Trip Reduction Ordinance.

**Responsible Agency/Department:** Department of Public Works  
**Time Frame:** Ongoing  
**Funding:** Permit Fees