8 Environmental Protection

Historic and Archaeological Resources

The indigenous Nisenan people, and possibly some northerly Miwok, occupied the Valley View site for many centuries and left a number of scattered sites containing archaeological evidence of their occupation and a few scattered artifacts. This Plan has been developed with knowledge of known sites as identified though professional research and surveys. Neither prehistoric Native American nor historic sites are depicted in this Plan, in keeping with standard archaeological practice designed to protect them from vandalism and theft.

Prehistoric sites which have been verified are all bedrock mortar associations or other milling sites. These sites were used for the milling of acorns and other foodstuffs and are common in the entire foothill belt. No known prehistoric habitation sites are known to exist within the Valley View Specific Plan.

Generally, isolated milling sites, once professionally recorded, are not significant. However, it is the policy of this Plan to avoid known sites wherever possible and to incorporate then into open spaces and yard spaces. This policy is to be implemented through the following overall cultural resources program:

1. During construction, prehistoric sites which have been found to be significant shall be located and protected. To the extent feasible, subdivision design shall take known sites into account by siting roads and probable building locations away from the cultural site or artifact. Notification of the presence of bedrock mortars or other cultural features contained within a parcel to be created shall be made to buyers of such parcels.

2. No excavation shall occur within the boundaries of known or suspected prehistoric sites which may have a subsurface component. Based upon the advice of a professional archaeologist, sites may be protected by covering with suitable material, collection and recordation or other suitable mitigation approved by El Dorado County.

3. Should any previously unknown site be uncovered during construction activities, all construction shall be halted in the area of the suspected site and a qualified archaeologist shall be consulted and a plan for mitigation prepared prior to the resumption of construction.

Historic Sites

A number of sites in the historic period have been identified within the Plan area. These include sites associated with 19th century mining activities, a small suspected hotel site associated with the early road and supply system involving the nearby community of Clarksville, evidence of early ranching and settlements, and physical features associated with this period including old road alignments, ditches and rock wall features.

Individually Significant Resources

While no historic buildings survive to the present day, a number of the sites have partial foundations or other structural artifacts associated with their former use. In particular, the site identified with a preliminary designation of VV-13, a complex of historic occupation most likely associated with early ranching; and VV-18, the site of a probable hotel/residence are potentially individually significant.

It is the policy of this Plan that historic sites which may be individually significant shall be treated as follows:

1. Preservation through avoidance by placing the site within a publicly owned or commonly owned open space or one in which the site is not disturbed by planned uses; or,

2. Professional documentation and collection of artifacts including excavation where indicated; or,

3. Other mitigation measures which may be recommended by a professional archaeologist and approved by the County.

Resources Collectively Significant but Individually Not Significant

Some historic resources such as placer tailings, rock walls, and historic ditch and road features have widespread occurrence within the Plan area or in the County generally. While these types of historic artifacts are important collectively as a connection and physical link to the heritage of the region, they are not generally significant individually. It is the policy of this Plan that these types of resources shall be treated as follows:

1. Representative examples of such features including sections of linear features such as rock walls shall be preserved through incorporation into publicly owned or commonly owned open space or one which is not disturbed by planned uses. Representative locations shall be determined on the basis of professional archaeological advice with a preference for locations which provide public exposure to the historical significance of the feature without jeopardizing its integrity by making it more susceptible to damage from public access.

2. Durable features such as rock walls and placer tailings may be contained within private parcels intended for sale or developed use. The design of subdivisions and the location of building envelopes shall integrate such features in areas unlikely to be disrupted by roads, utilities or buildings to the extent feasible but the integration of such features into developed portions of the Plan area shall not prevent nor hinder the attainment of planned uses.

Oak Woodland

Oak woodland and other native tree resources for the Valley View Specific Plan area were extensively surveyed and analyzed as to tree density, type, habitat and scenic values and development potential in 1994 and 1997 (Jeffrey A. Hart, *Valley View Tree Report*, April 25, 1997). The purpose of the study was to provide information on the nature of oak and other native tree cover as it may relate to the design of the project and to determine compliance with relevant adopted policies of El Dorado County (In particular Policy 7.4.4.4 relating to retention of existing tree canopy cited in Chapter 2.) The study emphasized an ecological approach to woodland communities rather than the more mechanical approach of counting, measuring and plotting individual trees. In this way, a more useful description could be made of native trees in their ecological context, and their relative value in contributing to biological diversity and the scenic qualities of the site could be made.

Based upon the methodology employed, an estimated 36,000 trees currently exist on the 2,037 acre site. Tree cover is largely confined to the more favorable slopes having deeper soils and cooler slopes, and in those areas along drainage courses and at higher elevations.

Nine distinct tree communities were identified and mapped in the study. These were distinguished by dominant tree type, density of trees, nature of understory plants and growing conditions. Figure 8-1, *Woodland Community Table,* summarizes the determinant features associated with each of the nine woodland types and shows the qualitative assessment of resource values and development potential from the study. In general, the Plan for Valley View places development densities either where woodland resources are not identified or within the first five categories of woodland communities which have higher scenic values and development potential and lower wildlife and fire haz-

ard potential. Other factors including slope, the presence of wetland or cultural resources and constraints imposed by the necessity for efficient utility and road design also influence the land plan.

Figure 8.1
Woodland Community Table

Woodland Community	Tree Density	Coverage	Shrub Understory	Wildlife Value	Fire Hazard	Scenic Value	Tree Hazards	Development Potential
Blue Oak Woodland/Sparse Rock	79.0	55	None	Low	Low	Moderate	None	Moderate to High
Blue Oak/Sparse Rock Mosaic	36.8	55	None	Low	Low	Highest	None	High
Blue Oak Woodland/Sparse	29.2	51	None	Low	Low	Highest	None	High
Blue Oak Woodland/Dense	170.0	90%+	None	Low to Moderate	Low to Moderate	Low	Low	Moderate
Foothill Pine/Blue Oak	64.8	55%	Occasional	Moderate	Low to Moderate	Moderate	High	Moderate
Foothill Pine/Live Oak	82.1	90%+	Present	High	High	Low	High	Low
Live Oak Woodland	129.4	90%+	Present	High	High	Low	High	Low
Mixed Woodland	88.4	90%+	Present	High	High	Low	Moderate	Low
Mixed Mesic Woodland	124.0	90%+	Present	High	High	Low	High	Low

Four primary oak species are represented within the Plan area with Blue oaks and Interior live oaks predominating.

Valley Oaks are characterized by massive trunks and large, gnarled limbs that support a massive crown when mature. Where soils are deep and ground water available throughout most of the growing season, these trees can exhibit quite rapid growth rates.

The Blue Oak is the most drought-adapted of California's oak species and tolerates shallow, poor soils. In moist locations this smaller, deciduous oak may retain most of its leaves throughout the year, while drier locations cause a number of drought-adaptive responses in this species including modifications to leaf structure and chemistry to prevent wilting even though up to 30% of its moisture is lost.

Interior Live Oaks are an evergreen variety also adapted to sparse water conditions. Their high tannin levels make them less palatable to insects and browsing mammals but this quality also makes their canopies more enduring. Growth characteristics result in a tree more broad than tall and often with many branching trunks. It is sometimes dominant along streams and other locations.

While uncommon at lower elevations such as those present in Valley View, a few representatives of the Black Oak are present on north facing slopes in the East Ridge area. Acorns from the Black Oak were a preferred food of indigenous people and their wood has a typically higher commercial value.

Development Requirements Within Oak Woodlands

Within areas of East Ridge Village where lots include portions of oak woodland the following additional development requirements shall be met:

1. Policy 7.4.4.5 of the General Plan requires continuity of concentrations or stands of oaks. Within developed areas, individual stands of oaks may be removed or divided without connecting corridors, provided that they do not affect the continuity of intact riparian systems. Continuity of woodland is generally achieved through the designation of transitional open spaces within ER lots in East Ridge Village.

2. Improve regeneration rates by removal of cattle grazing in oak woodland areas and the techniques identified in Chapter 9.

3. Protect driplines of oaks to be retained in proximity to improved uses during construction and in the design of irrigation systems.

4. Restrict improvements in ER areas to an area of 12,000 square feet or 25% of the total lot area, which ever is greater (the building "envelope"). Such restriction shall apply to all structural improvements, fencing and clearance of oaks necessary for development but shall not conflict with approved fire safety plans.

5. All trees above 24" in diameter at breast height shall be shown on the plan. If any trees 36" in diameter at breast height and above are slated for removal, the program shall demonstrate that either the tree is unhealthy, or that all possible methods of avoidance have been attempted in the design process.

Oak Tree Conservation Program

The Valley View oak tree conservation program involves the following concepts:

1. Designation of open space contiguous preserves.

2. Avoidance of tree impacts during construction.

3. Designation of transitional open space areas.

4. The deployment of arborist techniques to protect trees during construction.

5. Development of a landscaping maintenance program compatible with oak trees.

6. Development and implementation of an oak tree regeneration program.

7. A Primary Building Area or building envelope shall be delineated on the tentative map concurrent with tentative map application.

Open Space Designation

The Valley View project site consists of approximately 2,000 acres, and of these, annual grassland habitat comprises 1,400-1,500 acres, approximately 15 acres is made up of wetlands, and 500 acres (or approximately 36,000 trees) consists of oak woodland habitat. The forest canopy types have been divided into 9 different cover classes, as described in an earlier report (Hart, 1997) that summarized preliminary recommendations for development and conservation.

The first element of the tree mitigation program consists of setting aside open space woodland areas within the project area. At the present time, approximately 560 acres are designated as open space preserve (OS District) with a small amount in the MOS District (Oak Tree Park). All healthy trees will be preserved in this area.

Avoidance of Trees During Construction

The second element of the tree mitigation program consists of avoiding tree impacts, to the extent practically feasible, wherever construction is being proposed near oak trees. Impact to trees should be lessened by aligning roads, driveways, and houses to avoid direct tree impact. Subdivision designers should work closely with an arborist or botanist to avoid trees wherever possible.

Designation of Transition Open Space Area

In addition to hardscape features (e.g., roads, buildings, yard areas) and open space areas, another important conservation area consists of transition open space areas. within ER lots, themselves. These areas vary from 50% to 75% of the total area within all ER lots in East Ridge Village.

An estimate of the total number of canopy acres (and trees) will be determined for the transition open space areas. It is estimated that approximately 67% of all ER-2, 78% of all ER-1, and 82% of all ER-LL land within these lots will be preserved.

Land use activities that are not permitted within transition open space areas include the construction of gazebos and other structures, fences, swimming pools and hardscape improvements. Activities which are permitted may include planting and pruning of compatible landscape plantings, limited irrigation outside the driplines of existing oaks, paths and minor temporary improvements such as bird blinds, benches and tables.

The land owner may occasionally lightly prune trees in order to improve viewsheds from their house and to control wildland fire fuel. However, general pruning within the transition open space area is not recommended since dead wood in trees serves as valuable habitat for wildlife. It is recommended that no more than 10% of the trees (or canopy area) be pruned in the transition open space areas.

Light irrigation, to encourage natural fire breaks, may also be permitted within the transition open space areas. Perennial bunch grasses, such as blue wild rye, should be planted in a zone within the transition zone, but adjacent to the built environment, where light irrigation (occasional deep watering punctuated by relatively long dry periods) can foster a permanently green zone that would retard wildfire.

Primary Building Area

The primary building area, or building envelope, contains those areas within the private lots where the driveway, house, yard, outbuildings (*e.g.*, tool sheds), pools, and landscaping are permitted. No more than 12,000 square feet (or 25% of the individual lots, whichever is greater) within each lot will consist of the primary building area.

Several issues relative to tree preservation and conservation are pertinent, including: 1) avoidance of impact; 2) arboricultural techniques necessary to protect trees; and 3) landscaping.

Impacts to trees may be direct, in which there is a need to occasionally remove entire trees that may be in the path of structures and roads, or indirect, largely due to impacts to the trees root zone. To avoid direct impacts, driveways leading to the developed site should be designed to follow a meandering path to avoid trees wherever possible. Meandering driveways would also create softer lines than straight roads. Roads and driveways requiring grade changes within the trees root zone (*i.e.* dripline) constitute indirect impacts. Some impact to this zone may be safely permitted, provided that mitigating measures are followed, including: 1) not impacting more than 1/3 of the root zone; 2) promoting measures such as mulching, fertilizing to promote tree health; 3) providing root aeration systems for grade changes (See Chapter 9 for a more complete description). An experienced arborist should be on site during construction to monitor these activities.

Oak trees preserved within the primary building area add considerably to the quality of living. Additional measures to promote tree health in intensively used environments

include corrective tree pruning, fertilization, and other measures detailed in Chapter 9. Grade changes can be detrimental to tree health, since either grade lowering will injure roots, and raising grades will deplete available oxygen required for root growth and overall tree health. Appropriate aeration systems, as detailed in Chapter 9 should be followed.

Landscaping in the vicinity of oak trees can add to the aesthetic quality of the site. However, the amount and frequency of irrigation required to sustain exotic, non-native plantings can be detrimental to oak tree health. To the extent feasible, the use of drought tolerant landscaping plants (including California native species), will promote tree health. Irrigation schedules that include occasional deep watering regimes alternating with extended dry periods should permit the planting of luxuriant landscape plants yet not impair the health of oak trees. Landscaping techniques, and recommended drought tolerant species are included in Chapter 9.

Oak Regeneration Program

The oak regeneration program is designed to compensate for tree loss through 1) fostering natural regeneration; 2) direct seeding of oak acorns; 3) direct planting of oak tree seedlings; and 4) transplanting of oak trees. Four species of oak are found on the site: blue oak, valley oak, interior live oak, and black oak.

Natural Regeneration. The effect of many years of grazing at the Valley View site has impaired the natural regeneration process. While many large oak trees are found on the site, small trees indicative of frequent regeneration pulses are very uncommon. Cows tend to eat young oak trees, especially after the annual grasses have dried out by early summer. The effect of removing the cows from the property will likely enhance the natural regeneration process. At the same time, however, the increased growth of annual as a consequence of removing the cattle may compete with oak seedling establishment. Various measures will be taken to ensure regeneration success.

Arborists have long recognized that wood chips placed as mulch beneath oak trees provide conditions that foster natural regeneration. The beneficial influence of wood chip mulch would appear to be reduction of weed competition and increase of relative soil moisture. Acorns can either fall directly from the tree into the mulch, or often blue jays and other birds "plant" the acorns. Since blue oaks and valley oaks tend to regenerate around the dripline, selected placement of woodchip mulch, averaging 5-6 inches deep, should be placed at selected locations. Any trees removed from the site should be chipped and the mulch used to foster regeneration.

This natural process of oak establishment can be augmented by collecting acorns in the fall, storing them in cold refrigeration, and after the first fall rains, planting them in the top 2-3 inches of the mulch.

Another strategy would be to grow young seedlings from the acorns, which would be planted as one year old plants the following fall.

Methods for collecting acorns, storage, planting, and container plant establishment is described in Chapter 9.

Noise

The acoustic environment of the Valley View Specific Plan is generally free of the interference by significant noise, making it very suitable for residential uses. The exception is the immediate frontage of Latrobe Road which is subject to traffic noise and large vehicle noise from truck traffic generated by the El Dorado Hills Business Park. Traffic noise exceeds an L_{dn} of 70 dBA at the property line. Freeway noise from Highway 50 is generally not a problem within the Plan area due to the separation of that major highway and the presence of intervening topographic features.

The use of sound walls along Latrobe Road is strongly discouraged. Instead, separation of the right of way from adjacent residential uses by a landscape strip including landscape berms or combination berm/walls is to be preferred. Such landscaping and acoustic attenuation may be provided within an expanded right-of-way, within a separate landscape easement, or may be designed integrally with residential improvements and maintained by the residential user. Noise attenuation shall be installed at the time of development of residential structures and shall meet the design criteria of Chapter 9 or be designed according to the recommendations of an acoustic engineer, subject to the approval of the County.

Wetlands

Valley View contains a total of 14.47 acres of land classified as "wetlands" as shown in Figure 8.2. These lands are subject to the jurisdiction of the Army Corps of Engineers under §404 of the Federal Clean Water Act.

Figure 8.2 Wetlands Table

Vernal Pools	0.08	acres
Seeps and Springs	2.21	acres
Seasonal Wetland	5.76	acres
Intermittent Creek	0.30	acres
Intermittent Drainage	6.12	
Total Wetlands	**14.47**	acres
Area Impacted (filled)	**2.29**	**acres**

Of the 14.47 acres of wetlands, proposed development occupies approximately 2 acres. It is assumed that all of these areas are "filled", which is the term employed by the Corps of Engineers in defining impacted wetlands. The impact may not involve the depositing of earth or other material and the term is used generally to describe the displacement of wetlands by other uses or improvements. Some fills will occur as the result of road construction.

Although the amount of wetlands affected by developed uses is only a fraction of the total acreage present within the Plan area, it is anticipated that it will require some level of permit from the Army Corps of Engineers. In most cases, such permits require mitigation and monitoring. Mitigation usually involves the enhancement of wetlands or the development of new wetlands often in higher acreages than the amount lost. This can occur either on-site or off-site as may be approved under the terms of the federal permit. Mitigation may also include contributions into a wetland mitigation bank established under the regulatory authority of the Corps of Engineers and California Department of Fish and Game. Such mitigation banks have been particularly useful in preserving the extent and viability of vernal pool habitats.

Wetlands mitigation areas may also be developed in any OS or MOS land use district within or outside the Plan area. Wetlands which occur or are developed as mitigation areas in the large passive open spaces within the Plan (OS district) are essentially preserved in their native context by the Plan. Where bikepaths, trails or other improvements may occur within the OS areas they shall be sited at least 25' away from the designated wetlands. Wetlands shall generally not be fenced except as may be required under the terms of federal permits.

Scenic Resources

The scenic qualities of a site within a community region are assets giving added values to residential properties by incorporating views of surrounding landscapes and distant views of Sacramento and beyond. Hillside neighborhoods such as Governors Village, Ridgeview Village and the Marina Village area have all been developed in a manner consistent with the native land form. Elevated locations within Valley View, like other parts of El Dorado Hills, enjoy expansive westerly views of the Sacramento region. For many, such views are a primary reason for choosing to live in the community.

Public views of ridges and hillsides areas are also important in the community. In developing hillside locations, El Dorado Hills has avoided terracing and other major modifications to native land forms which have detracted from the visual quality of other metropolitan regions. This Plan seeks to retain the pattern of reduced densities and construction which prevails within the community, thus conserving the essential character of the Plan area.

8 Environmental Protection

Public and private scenic resources within Valley View shall be conserved by the following measures:

1. Local roads shall be designed to run parallel to existing contours or transition up slopes obliquely. Roads which extend directly up or down slopes from public vantage points shall be avoided in order to prevent hard, linear edges within the landscape.

2. No rooftop mounted mechanical equipment shall be permitted. Roof materials shall be muted and darker colors shall be preferred.

3. The landscape palate shall prohibit tall, dominant nonnative trees which contrast with the rounded canopy of the native oak woodland including such species as Italian cypress *(Cypress, sp.)*, palms *(Palmae, sp.)* and eucalyptus as reflected in the Plant Palette in Chapter 9.

4. Residential lots on ridgelines shall be subject to special design requirements contained in Chapter 9.