

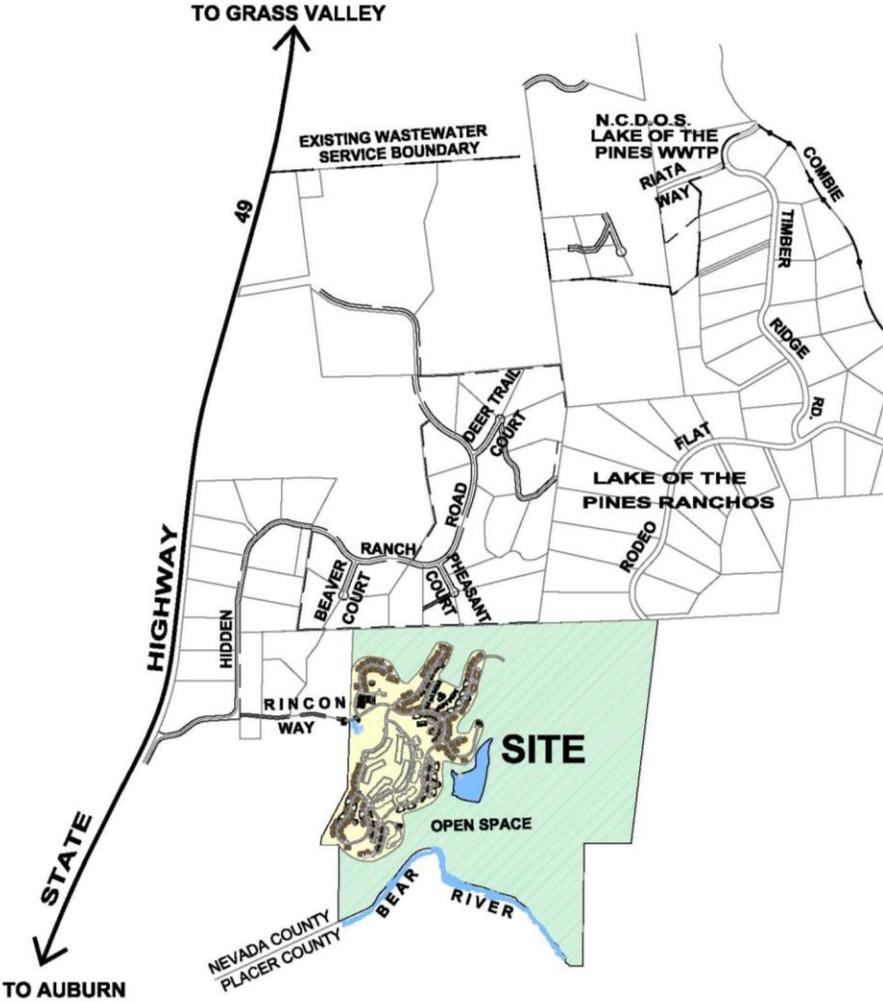
**3.2-A – RINCON DEL RIO  
AGRICULTURAL, HABITAT AND  
STEEP SLOPE MANAGEMENT PLANS**



# AGRICULTURAL MANAGEMENT PLAN

## *Rincon del Rio*

Prepared by: SCO Planning & Engineering  
August 15, 2010



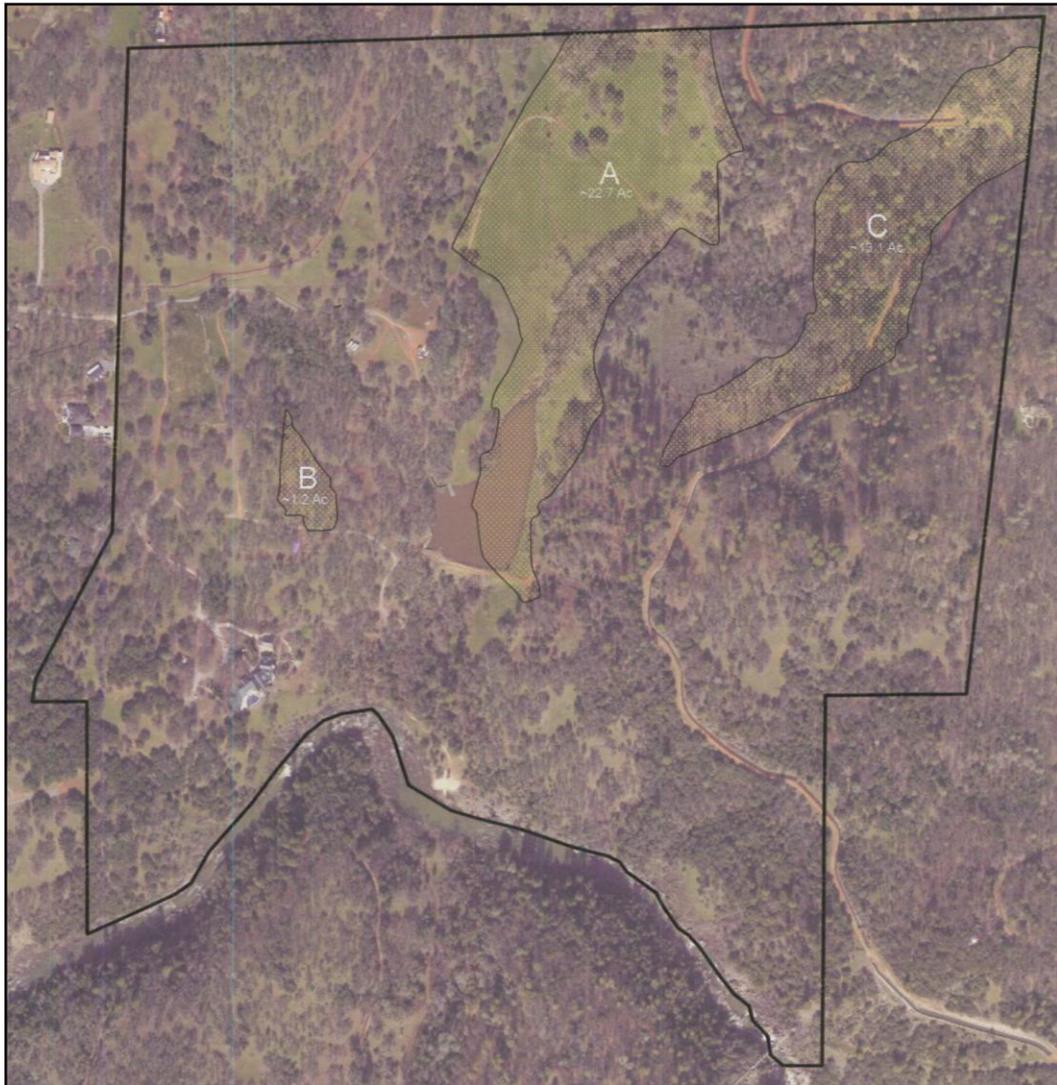
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## I. Introduction

This Management Plan has been prepared pursuant to Section L-II 4.3.3 of the Nevada County Zoning Regulations, requiring the submittal of a Management Plan for projects on or adjacent to Important Agricultural Lands. The purpose of this Management Plan is to minimize the conversion of important agricultural areas to non-agricultural uses and the impairment of agricultural productivity of important agricultural land.



*Exhibit A – Farmlands of Local Importance*

The overall project site is approximately 214 acres. There are two categories of Important Farmlands identified on the Nevada County Important Farmland 2008 map (referred herein as “Map”) which are located on the property: (1) Farmland of Local Importance; and (2) Grazing Land.

**Farmlands of Local Importance** is defined as land which has been determined by Nevada County to be important to the local agricultural economy. This includes farmlands that have physical characteristics that would qualify for Prime or Statewide importance, except for the lack of irrigation water. Farmlands that produce crops that are not listed under Unique Lands but are important to the economy of Nevada County are: Christmas trees, Sudan grass, Meadow hay, chestnuts, poultry houses and feedlots, improved dryland pasture (not rangeland), and irrigated pasture.

Exhibit A depicts the approximate location(s) of the Farmlands of Local Importance, as identified on the Map. The three areas (A, B & C) total approximately 37 acres (17% of the overall site).

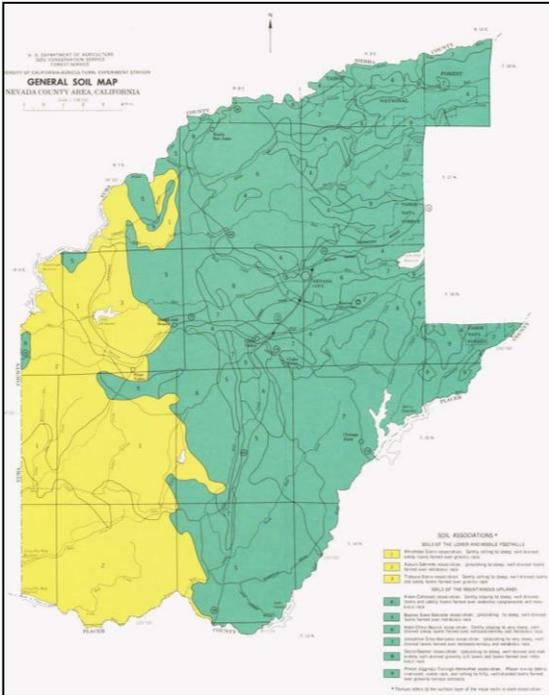
- Area A (~22.7 acres) consists primarily of a large grassland pasture north of the existing pond, surrounded by woodland areas. The large pasture supports a mixture of annual and perennial non-native grasses: bromes, wild oats, orchard grass, tall fescue, blue wild-rye, and dog-tail grass. Of the three areas shown on Exhibit A, this area has the best combination of physical features which are most suitable for agricultural activities.
- Area B (~1.2 acres) is a small isolated area within an oak woodland with moderate slopes ranging from 16% - 20%. This specific area of oak woodland is defined in the Biological Inventory as Foothill Hardwood (blue oak). The canopy is somewhat open and the trees are of small to moderate size (generally 6 to 18 inches dbh). Due to the greater slopes, this area is less suitable for agricultural activities. In fact, we question why this small, isolated area is mapped as Important Farmland, given the steeper slopes in excess of 15%, lack of irrigation and the classification as "Foothill Hardwood" in the Biological Inventory.
- Area C (~13.1 acres) is located primarily within a woodland area consisting of ponderosa pine and oak woodlands adjacent to the existing NID canal. Most of the area is located on steep slopes greater than 30%. Due to the steep slopes and heavy tree cover, we also question the classification of this area as an Important Farmland.

**Grazing Land** is defined as land on which the existing vegetation is suited to the grazing of livestock. Grazing Land does not include land previously designated as Farmlands of Local Importance or heavily brushed, timbered, excessively steep or rocky lands which restrict the access and movement of the livestock. The Map identifies approximately 133 acres (62% of the overall site) of the subject property as "Grazing Land", located primarily on the northeastern and southern portions of the site. The remainder of the property (~44 acres / 21% of the overall site) is located primarily within the northwest corner of the site and is mapped as "Other Land".

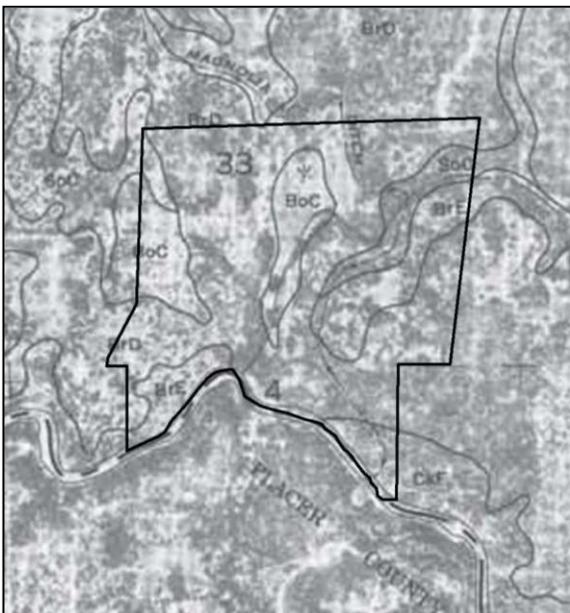
It is important to note that the areas which have been identified on the Nevada County Important Farmland Map were done so in the past based on general area soils data and old aerial photography. Other factors were not necessarily considered on a site specific basis such as topography, irrigation, vegetation and/or other physical features. As such, many of the mapped areas which are not suitable for agricultural reproduction and/or grazing have been improperly identified as Important Farmlands or Grazing Lands. Areas B and C are examples of these mapping inconsistencies.

The U.S. Department of Agriculture (USDA) General Soil Map, compiled in 1973, defines the area east of Hwy 49 and north of Bear River as “Boomer-Sites-Sobrante association: undulating to steep, well-drained loams formed over metabasic rock”.

In order to classify as Important Farmlands of either State or Local importance, the Natural Resources Conservation Service determined that the soil mapping units must meet the following criteria: AdB, AfC, AtC, BoC, ChC2, CiC, CmC, HrC, JoC, SdC, or SoC.



**Exhibit B – General Soil Map**



**Exhibit C – Site Specific Soil Map**

The Rincon del Rio site includes 3 areas that meet the soil criteria: BoC (Area A & B) and SoC (Area C).

- **BoC** – Boomer Loam, 5 to 15% slopes
- **SoC** - Sobrante Loam, 2 to 15% slopes

Based on the soil criteria alone, Areas A, B & C are mapped as Farmlands of Local Importance. However, only Area A has the additional values necessary for important farmlands such as gentle to moderate slopes, little woodland vegetation, and natural year-round irrigation.

## **II. Property Description**

The Rincon del Rio site consists of 4 contiguous parcels (APN's 57-240-17, 18, 19 and 57-130-13) totaling approximately 214 acres, mostly covered by Ponderosa Pine - California Black Oak and several kinds of oak-dominated woodlands, and Annual Grassland. There are small areas of Foothill Riparian, Freshwater Emergent Wetland, and Wet Meadow habitats.

The Bear River is located adjacent to the property and runs along the southern property boundary. Other water bodies found within the site include one main unnamed tributary, which was dammed at some unknown time in the past to create a large pond in the center of the site. There is also a smaller tributary which flows into the main unnamed one just north of the pond. Both tributaries support woody riparian and some herbaceous wetland habitat. Three small areas of mixed riparian and herbaceous wetland habitat, which are supported by springs emanating from rocky slopes, are found adjoining the Bear River in the southeastern part of the site. There are two sections of Nevada Irrigation District irrigation canals, one being the named Magnolia Ditch.

Sixteen landmark oak trees and many areas of landmark oak groves (>33 percent hardwood canopy coverage) are found within the site.

Slopes range from gentle to steep. The elevation of the site varies from approximately 1,280 to 1,700 feet.

The majority of the site is undeveloped except for a single-family residence and landscaped area within the southwest portion of the site along with many natural, soft-surface trails throughout the property.

## **III. Project Description**

This project proposes a Continuing Care Retirement Community (CCRC), clustered within the western portion of the site. Primary access is provided via Rincon Way off of State Route 49. Emergency access will be provided via Rodeo Flat Road at the northeast corner of the property.

The project will be constructed in multiple phases. The first 3 phases will include construction of the Village Center which will provide housing for Independent Living, Assisted Living and Nursing Care as well as several project amenities. As the Village Center is completed, additional phases allow for build-out of cottage homes, duplexes, 4-plexes, group homes and additional project amenities.

The project offers seniors a variety of housing options, all of which will be constructed with Universal Design principles aimed at ensuring an age-in-place option, no matter how challenging the circumstance.

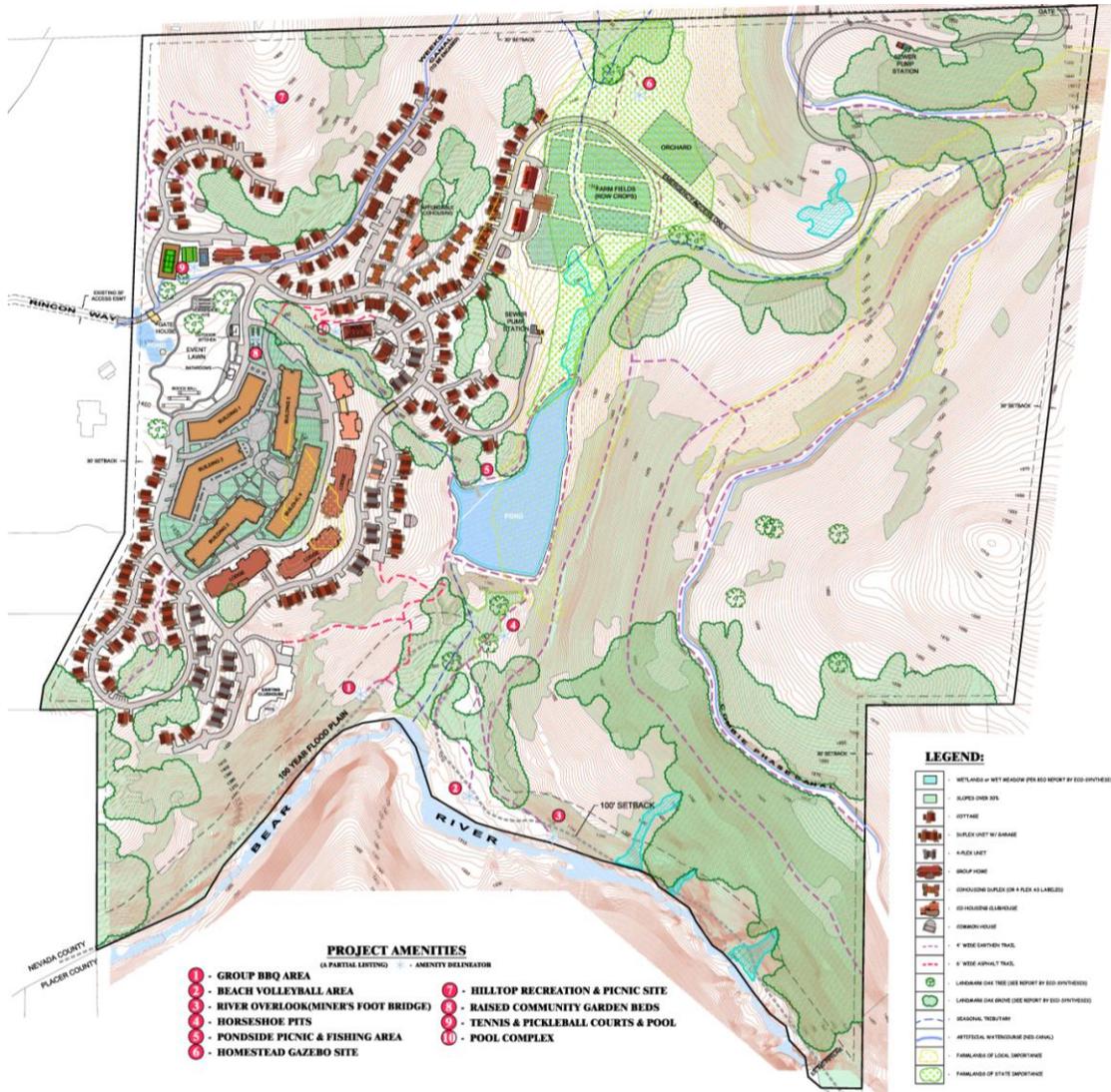
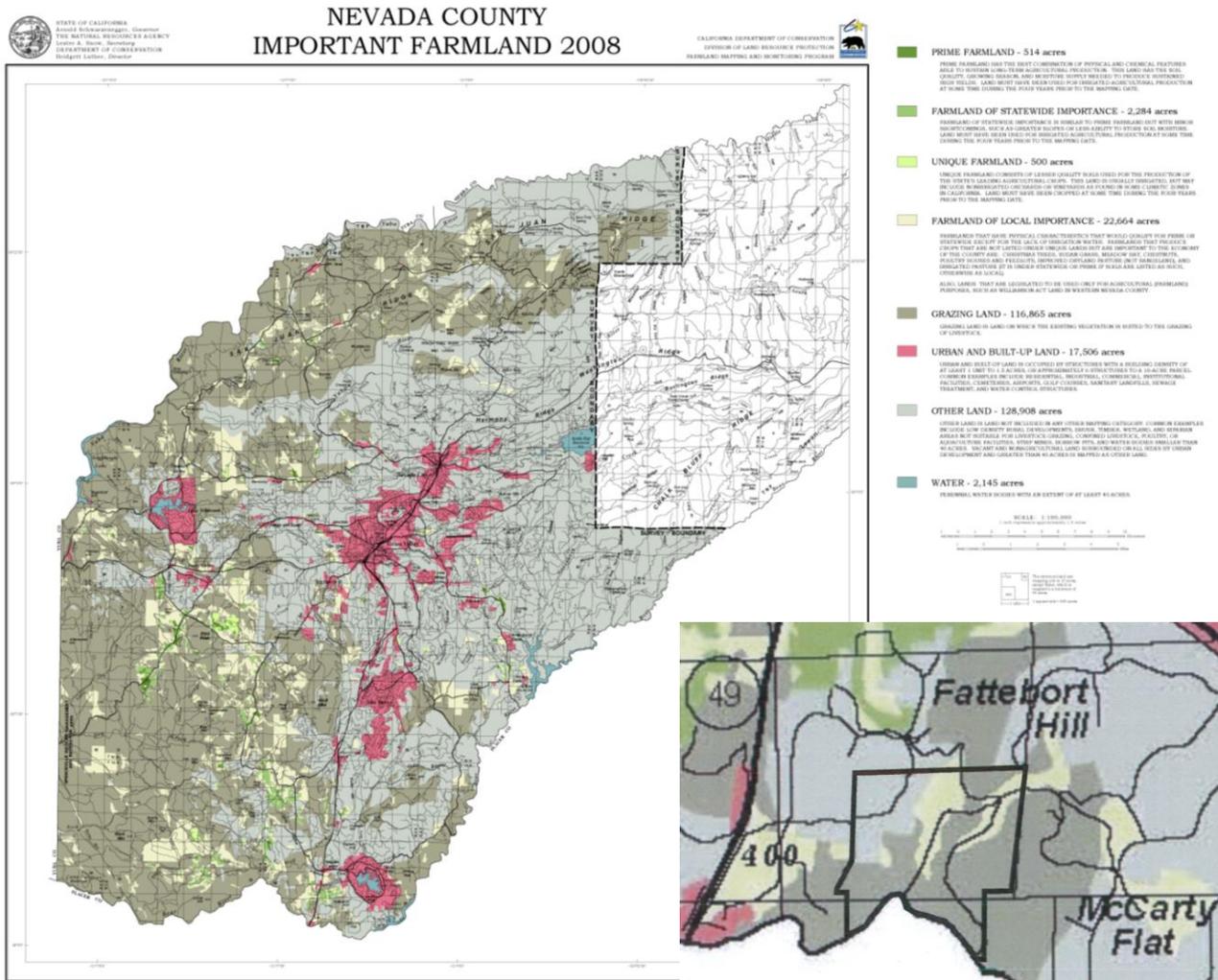


Exhibit D – Overall Site Plan

By clustering all development on the western half of the site, the project avoids the most suitable areas of the site for farming and/or grazing as well as the higher habitat values on the eastern half. Also, the clustered design allows significantly larger and contiguous areas of open space that can be preserved or used for agricultural purposes.

## IV. Analysis of Potential Impacts



*Exhibit E – Nevada County Important Farmland 2008*

Research of the soil types and a field review of the site were conducted to determine the value/potential of the areas designated as “Farmlands of Local Importance”. Soil types, vegetation, irrigation and topography were analyzed using field data, Geotechnical Report, Biological Inventory and record data from U.S. Department of Agriculture.

As stated in the introduction, the purpose of this Management Plan is to minimize the conversion of important agricultural areas to non-agricultural uses and the impairment of agricultural productivity of important agricultural land.

Analyses of the 3 areas of Farmlands of Local Importance are as follows:

- **Area A** is the largest area (~22.7 acres) of local importance and is most suitable for agricultural activities.



The project proposes to enhance Area A by creating on-site food production through the use of row farming, fruit tree orchard(s) and agricultural ancillary buildings for the storage of agricultural equipment.



There is additional pasture land along the west side of Area A which totals over 1.2 acres which is of much higher value than Area B for agricultural activities. This area along with other unused areas within Area A will be maintained as irrigated pasture land.

- **Area B** is the smallest area (~1.2 acres) of local importance and is less suitable for agricultural activities due to steeper slopes and tree growth. This area is proposed as part of the clustered development in order to save the area with higher agricultural value. This area can be combined along the west side of Area A where there is a more suitable and a higher value agricultural area. As stated in the Introduction, we question the mapping of Area B as an Important Farmland.

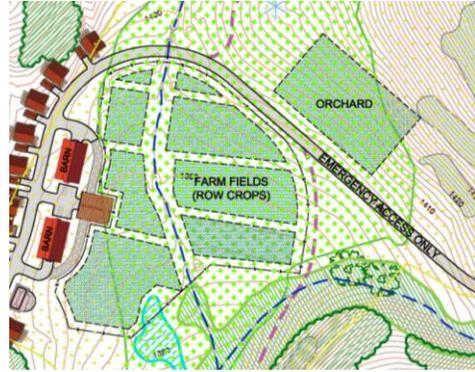


- **Area C** is located adjacent to the NID canal on the eastern portion of the property. This area is also less than suitable for agricultural productivity due to steep slopes and heavy tree cover, however this area (and surrounding area) will remain undisturbed and can potentially be used for open range grazing land.



The only impact to Farmlands of Local Importance on the property as a result of the proposed project would be the loss of Area B. However, due to the small area (~1.2 acres), slopes in excess of 15%, foothill hardwood vegetation and lack of irrigation, Area B is significantly less suitable for agriculture.

The standards set forth in Section L-II 4.3.3.B of the Nevada County Zoning Ordinance require either avoidance of the impact, minimizing the impact or compensating for the impact. By combining the land area of Area B (~1.2 acres) with Area A, preserving Area C and utilizing Area A for row farming, gardening and on-site food production, Rincon del Rio meets the County's stated purpose of minimizing the conversion of important agricultural areas to non-agricultural uses.



The clustered design of this project on the western portion of the site where there is significantly less farmland and other environmental resources ensures the preservation of a much larger portion of the property. This also ensures preservation of the majority of the grazing land and avoids fragmentation into several small areas.

## V. Recommended Mitigation Measures

The following mitigation measures are recommended to meet the purpose of this Management Plan:

- a. Area B is not considered to be suitable as Important Farmlands (see “IV. Analysis of Potential Impacts”). Due to steeper slopes, lack of irrigation and oak woodland vegetation, Area B has lesser value for agricultural productivity than Area A which includes more moderate slopes, natural irrigation and less woodland vegetation. As such, the land area of Area B (~1.2 acres) results in no net loss of important farmlands and increases the potential farmland of Area A which has a greater agricultural value.
- b. As part of the Rincon del Rio project and as shown on the Overall Site Plan (Exhibit B), Area A should be enhanced to provide agricultural opportunities through row farming, gardening, fruit tree orchards and ancillary buildings to provide agricultural opportunities for on-site food production.

The mitigation measures are intended to show that impacts to Important Farmlands are less than significant through clustering of the development and enhancement of suitable agricultural areas.

## VI. Justification to Support Management Plan

This Management Plan is consistent with the provision set forth in Section L-II 4.3.3.B of the Nevada County Zoning Ordinance. The standards set forth in that section require

either avoidance of farmland encroachment, minimizing the loss or compensation for the loss of farmlands. Rincon del Rio minimizes the impact by clustering the project within an area least suitable for agricultural value.

As part of the development submittal, Rincon del Rio has been designed to minimize impacts to natural constraints and resources, and enhances agricultural uses and protects grazing lands as defined within this Management Plan.

## **VII. References**

- a. Nevada County Agricultural Commission – May, 2009
- b. Nevada County Resource Conservation District
- c. U.S. Department of Agriculture
- d. [www.conservation.ca.gov](http://www.conservation.ca.gov)
- e. [www.mynevadacounty.com](http://www.mynevadacounty.com)
- f. [www.nrcs.usda.gov](http://www.nrcs.usda.gov)

## **VIII. Statement of Qualifications**

The County guidelines for preparing a Management Plan for Important Agricultural Lands lists the following professionals as qualified to prepare the plan: (1) Registered Professional Forester; (2) Certified Rangeland Manager; or (3) USDA/NRCS-certified Conservation Planner.

We have not been able to identify any local foresters practicing in Ag Land Management or that have the necessary experience to evaluate Important Agricultural Lands. Additionally, we have been unable to locate anyone certified as a Rangeland Manager or Conservation Planner. In speaking with Nevada County Resource Conservation District, they indicated that they are unaware of any qualified professionals to meet the County's guidelines. With the absence of local, qualified professionals in the field of Ag Management, the guidelines above are not achievable and we are hereby requesting a waiver to this requirement.

SCO Planning & Engineering has prepared previous Management Plans for Important Agricultural Lands for Nevada County. In preparation of this Management Plan, SCO staff has conducted numerous field surveys and extensive research to compile the necessary technical data including soil types, site constraints, topographic & aerial mapping, vegetation types, etc. In addition to field surveys, a variety of resources were utilized such as the USDA, Nevada County Resource Conservation District, Nevada County Ag Commission, consultation with the Resource Conservation District staff and technical reports including Geotechnical Report and Biological Inventory. We believe

our experience allows us to provide and evaluate the technical base line data necessary to accurately define and determine the areas of important farmlands and to recommend design methods which enhance farming and grazing opportunities and develop appropriate mitigation measures that will avoid or minimize impacts to the County's Important Farmlands.

# HABITAT MANAGEMENT PLAN

## SITE INFORMATION

- Site name:** Rincon del Rio
- APN:** 57-240-17, -18, -19, and 57-130-13
- Location:** Section 33, T. 14 N, R. 8 E and Section 4, R. 13 N, R. 8 E (USGS Lake Combie quadrangle). Site adjoins the Bear River on the north side, approximately 0.3 to 1 mile to the east of Highway 49.
- Prepared for:** Rincon del Rio LLC.
- Report date:** March 11, 2009
- Biologist:** Adrian Juncosa, Ph.D.

## SUMMARY

This draft Habitat Management Plan was developed to specify mitigation actions for potential direct and indirect impacts on a tributary and adjacent riparian areas, and upon landmark oak groves. It was prepared in conjunction with the biological inventory report for the same site, to which the reader should refer for more detailed descriptions of vegetation and habitat values.

Refinement of the project design and various related documents (most notably, the fire protection plan) which will occur during project review may affect which of the oak grove protection measures are appropriate, and the specifications for their implementation. A final Habitat Management Plan will be prepared at the time of project approval to accommodate any changes that are made to bring the Plan into conformity with other project elements.

The management plan provisions for protection of water bodies and adjacent hydrophytic vegetation include during-construction measures for control of erosion and sediment transport, permanent soil surface stabilization, and protection of wildlife habitat values by controlling direct illumination of the riparian habitat.

The provisions for landmark oak grove mitigation include a conservation easement over portions of the site, with specifications for habitat management to reduce the likelihood

that wildfire will cause lasting damage to the high-canopy-coverage oak woodlands within and outside the easement area.

## INTRODUCTION

### Tributary, Wetland, and Riparian Areas

Unnamed tributaries cross the site from the northern and eastern boundaries to the southern boundary (Bear River). The entry point for the secondary road access (fire safety requirement) is at the terminus of Rodeo Flat Road, in the northeastern property corner. Therefore, there is no feasible way to design the project without crossing the north-south tributary and the NID Magnolia Ditch. Also, it is not possible to construct the required second road access to the residential units from the available entry point (northeast corner of the site) without passing within 100 feet of wetland and riparian areas and the two water bodies which it crosses. Therefore, both the direct and indirect impacts on the tributaries and associated wetlands or riparian areas are permitted under §4.3.17 of the Zoning Ordinance contingent upon the approval and implementation of a Habitat Management Plan.

The direct impacts are uncertain but likely. A culverted crossing of the tributary already exists, but this may need to be upgraded in size, length, or alignment in order to satisfy engineering requirements of a County-standard road. Also, installation of the sewer main or other infrastructure may require excavation and backfill of the tributary. The potential for indirect effects from constructing the secondary access road within 100 feet of riparian and wetland areas is unavoidable because of the prevalence of slopes >30 percent in the area and the fact that the wetland and riparian area between which the road must pass are separated by less than 100 feet.

### Landmark Oak Groves

The project design provides for preservation of all of the individual landmark oak trees (>36 inches dbh) on the site; these are not discussed further in this Plan.

Two overriding factors constrain the project design in ways that make it infeasible to avoid any impacts on landmark oak groves. One is the location of existing landmark oak groves and areas of slopes that are steeper than 30 percent gradient in the northeastern part of the site, where the secondary road access must be located. The other is the guiding principle of clustering all development in the western part of the site so as to avoid fragmentation of the woodland habitats in the eastern part, which support significantly higher habitat values than do the woodlands in the western part, where development is designated to occur. The highly desirable environmental goal of clustering the units in the western part of the site constrains the alignment of internal roads and the locations of building sites, making it infeasible to avoid all of the many

scattered patches of landmark oak groves. Abandoning this goal and distributing the units more widely throughout the site would result in additional fragmentation of the high-value habitats and complexes in the eastern part of the site.

In the context of these considerations relating to feasibility and other environmental goals, the minor impacts of the proposed project on existing landmark oak groves are permitted under §4.3.15 of the Zoning Ordinance contingent on the approval and implementation of a Habitat Management Plan.

## AFFECTED RESOURCES

General descriptions of the Rincon del Rio site and its plant communities and other biological resources are provided in the biological inventory report which this Plan accompanies. This section provides additional details about the specific areas that would experience direct or indirect impacts from the proposed project.

### Tributary, Wetland, and Riparian Areas

The north-south unnamed tributary that will be crossed by the secondary access road and other infrastructure is a small, seasonal drainage feature that has probably been altered multiple times during the history of grazing, mining, and/or other human activities in the region. At present, it is a seasonal tributary with a bankfull depth of about 6 to 8 inches and a width averaging about 6-8 feet. There is little or no emergent wetland vegetation either within the channel or on the bank in the vicinity of the likely crossing location. There is no known fishery, shellfish, or other aquatic resource of particular economic or ecological importance other than the passage of flood flows.

The isolated Freshwater Emergent Wetland near the secondary access road alignment is supported by a spring at its upper end, which results in saturation at or near the surface throughout most of the wetland area. This spring may in turn actually result from seepage from the NID ditch above, which is a common circumstance. The vegetation of this wetland consists of native and non-native plants with varying wetland indicator status: *Juncus* spp., *Muhlenbergia rigens* (deer grass), an undetermined *Carex* species, and both native and non-native grasses. The wetland vegetation is of relatively low stature and the entire patch is less than 0.5 acre. The site survey took place in winter, at which time it is not possible to determine what level of bird or other wildlife use would be expected at this site.

The Foothill Riparian area downslope of the road alignment is a narrow strip of riparian vegetation lying in a moderately sloped ravine, closely adjoined by oak woodland on both sides. The predominant riparian species is white alder (*Alnus rhombifolia*); also valley oak (*Quercus lobata*) and scattered willows (*Salix* sp.). Herbaceous wetland species such as chain fern (*Woodwardia fimbriata*) and soft rush (*Juncus effusus*) occur here and there in the channel or on its banks. The riparian and adjacent oak woodland vegetation is relatively dense right along the tributary, becoming more open further away. As noted

in the biological inventory, this area (and others within the site) provides potentially suitable nesting habitat for yellow warbler, a DFG species of special concern. The loose soils and large amount of leaf and branch litter, and decomposed organic material, that are present within and near the tributary channel are very important in attenuation of flood flows and in filtering pollutants (e.g., sediment) from surface runoff before it enters the tributary.

## Landmark Oak Groves

Oak woodlands with canopy cover that was estimated, during the wintertime site surveys, to be likely to exceed 33 percent during the growing season occur in 24 patches scattered in all parts of the Rincon del Rio site. Although all of these patches are shown with the same map designation, they differ greatly in species composition, stature of the constituent trees, structure and diversity of associated vegetation, and relationship to adjacent habitat patches.

The Rincon del Rio site is naturally divided into eastern and western parts by a large grassland area, pond, and riparian area extending directly south from the pond to the Bear River. Most of the landmark oak patches in the western part of the project site, which is where all of the proposed development except the secondary access road is located, are dominated by interior live oak (*Quercus wislizenii*), sometimes in combination with blue oak (*Q. douglasii*), and are composed of trees of relatively small stature (fewer trees larger than 12-18 inches dbh than is the case elsewhere in the site). These patches also support low structural and woody plant diversity (little or no other canopy tree species, little or no understory), and feature few of the late-seral-stage (“old-growth”) oak woodland elements that are of particular value to regional wildlife. Specifically, there are few tree cavities formed by lost branches and decomposed portions of trunks, which are a natural and desirable feature of oak woodlands (albeit considered undesirable in standard arborists’ tree assessments). This description also characterizes the landmark oak groves on the hillside above the Magnolia Ditch, which will be affected by the secondary access road.

In contrast, the majority of the landmark oak groves found in the eastern part of the site, where there will be no development except for the aforementioned road, are dominated by canyon live oak (*Q. chrysolepis*), blue oak, or a combination of species (usually interior and canyon live oak). Furthermore, the eastern oak groves are mostly much larger in contiguous densely wooded area, include larger individual trees and a greater variety of size (age) classes, and support a greater diversity of oak and associated species. In terms of landscape habitat values, in the eastern part of the site, a more complex mosaic of different types of habitat occurs adjacent to the landmark oak groves (riparian areas, mixed oak-pine woodland, seep supported wetlands, and grassland gaps). Finally, a particularly high-value example of non-landmark woodland occurs in the area above the Magnolia Ditch. This area, described in the biological inventory report, includes five landmark-sized black oak trees (the only ones of this species within the Rincon del Rio site) in a broken canopy black oak-ponderosa pine vegetation which also includes several large pines with thick bark, which have been converted into acorn storage “granary trees” by woodpeckers. Such food storage opportunities, which are scarce elsewhere in the site, are very important to wildlife (not just the woodpeckers).

Thus, the landscape ecological values of the woodlands in the eastern part of the site are overall much higher than those in the western part, and it is therefore far preferable to

cluster all development in the western part and mitigate for minor impacts on the periphery of many of the small landmark oak groves than it would be to space the development more widely and consequently to fragment the habitats in the eastern part.

## IMPACTS

### Tributary, Wetland, and Riparian Areas

#### DIRECT IMPACTS

Backfill for the culverted road crossing and/or infrastructure installation will result in a small area (probably about 0.01 acre) of temporary and/or permanent fill within a probable water of the U.S. (intermittent tributary). Little or no wetland habitat will be affected for this action. Hydrogeomorphic and biological values of the tributary at the approximate location of the crossing are very limited and will be largely restored when the culvert or other crossing is completed.

#### INDIRECT IMPACTS

Two categories of indirect impact could potentially result from the construction of the secondary access road within 100 feet of the seep-supported wetland, the narrow riparian area along the east-west tributary, and the NID ditch itself:

1. Erosion could result from disturbance of the presently stable soil surfaces (compaction, removal of vegetation, and disruption of soil structure), and sediment could travel from the construction area into surface waters. This impact could occur either during construction or afterward (during project operations), or both.
2. Noise and/or lighting could disturb wildlife that depend on the riparian area for nesting and/or foraging. If construction takes place during the breeding/nesting seasons, this impact could occur both during construction and afterward; if not, it could still occur during operations.

### Landmark Oak Groves

#### DIRECT IMPACTS

Small portions of many of the existing patches of landmark oak groves in the western part of the site would be removed to construct buildings and roads. In nearly all cases, the impact would affect only small portions of the edges or ends of the groves, to a distance of 10-30 feet toward the interior. In two cases, both of which are relatively narrow patches of woodland (less than 90 feet), the majority of the patch would be removed. The total landmark oak grove impact, based upon the current project proposal, is approximately 1.35 acre. The precise acreage and the exact number and species of trees to be removed cannot be determined until after project approval, at which time

engineering plans would show the location and size of all trees to be removed for construction and to create defensible space. Most of the affected trees in landmark oak groves would be interior live oak, which is the most common tree species in the lower elevations parts of Nevada County. The remainder would be mostly or all blue oaks, which is probably the most abundant, or second most abundant, tree species on the Rincon del Rio site.

#### INDIRECT IMPACTS

The nature of potential indirect impacts on the portions of groves that are avoided by construction impacts are similar to those noted above for the riparian area: primarily lighting disturbance to species (birds, particularly) that nest in the high-canopy-coverage oak woodlands (see impact number 2, above). However, unlike the circumstance in riparian areas, which support several special-status wildlife species and surround aquatic habitat which can support additional diversity, the species that nest in high-canopy-coverage live and blue oak woodlands are probably exactly the same, or nearly the same, as those which nest in oak woodlands generally. Impact on these common and widespread species is not significant under applicable CEQA guidelines and County General Plan policy.

## MITIGATION MEASURES

### Tributary, Wetland, and Riparian Areas

#### COMPENSATORY MITIGATION

Prior to construction of the infrastructure/road crossing, the following discretionary approvals must be obtained:

- Section 404 nationwide permit (U.S. Army Corps of Engineers);
- Section 401 water quality certification (California Water Quality Control Board, Central Valley Region; a mandatory condition for the Section 404 permit); and
- Section 1600 streambed alteration agreement (California Department of Fish and Game).

Acquisition of the Section 404 permit requires delineation of jurisdictional boundaries and satisfaction of all permit conditions. The latter include, among other provisions, the requirement that water quality be protected (as certified by the Regional Water Quality Control Board) and that no impact on listed endangered or threatened species occurs. In order to ensure the latter condition, the Corps may, upon review of the permit submittal, elect to consult with the U.S. Fish and Wildlife Service regarding impacts on listed species that are known from the region. In this event, additional surveys and during-construction protective actions may be necessary.

The direct loss of wetlands and/or other jurisdictional waters is estimated to be approximately 0.01 acre. Impacts within this range are authorized under the existing nationwide Section 404 permits, if all conditions are met. For the Rincon del Rio project, the compensatory mitigation requirement will be satisfied by payment of in-lieu fees to a non-profit independent habitat mitigation company designated by the Corps, and according to the current rates that are established by the Corps at the time of permit approval.

#### WATER QUALITY PROTECTION

At a minimum, the specifications provided below for control of erosion and sediment transport, or the functional equivalent, should be included in construction plans.

1. Permanent slopes in the immediate vicinity of wetlands or other waters should be no steeper than 3:1, or, where steeper slopes are environmentally preferable to minimize the footprint of wetland impact, the slopes steeper than 3:1 should be protected with vegetated topsoil-matrix riprap. If any fill slopes (hopefully short ones) must exceed 1.5:1, these shall be stabilized with rock or concrete.
2. *Temporary BMPs*: In all situations where wetlands or other jurisdictional waters lie directly downslope from areas where grading (cut or fill, including temporary

stockpiling of soils) will occur, silt fencing should be installed as close as possible to topographic contours, preferably as close to the construction area as possible, but in any case a minimum of 10 feet outside the wetland or riparian edge, with the entire bottom edge buried to the standard depth of six inches. When work is complete AND all disturbed surfaces, including accumulated sediment, are permanently stabilized with sufficient vegetative cover to provide effective erosion and sediment control, silt fencing shall be completely removed. This requirement should be expected to result in maintenance of temporary BMPs for a minimum of one complete growing season (more likely two) following completion of construction.

3. *Winterization*: If soil stockpiles are to remain in place at any time between October 15 and May 1, they should be surrounded by an additional line of silt fence or straw wattles and should be kept covered with plastic sheeting, weighted with rocks or sandbags, at all times except while being actively worked. All disturbed soil surfaces that are to remain exposed during this period, but which will not be subject to additional grading work, should be hydromulched with tackifier.
4. *Permanent revegetation*: Topsoil shall be salvaged during initial site clearing and reapplied to all disturbed areas that are to be revegetated. Stockpile locations shall be shown on construction plans. Final slopes should be thoroughly revegetated using the following seed mix, which is based upon species observed on the site. Minimum application rates are suggested.

*Vulpia myuros* (foxtail fescue), 10 lbs/acre

*Bromus hordeaceus* (Blando brome), 10 lbs/acre

*Dactylis glomerata* (orchard grass) and/or *Festuca arundinacea* (tall fescue), 20 lbs/acre either species or combined

*Elymus glaucus* (blue wild-rye), 30 lbs/acre

*Lupinus nanus* (sky lupine) and/or *Trifolium hirtum* (rose clover), 5 lbs/acre

Hydraulic application of seed and mulch should be implemented in two steps: seed is applied first, then hydromulch and tackifier are applied shortly afterward to the wet surface. The latter should be applied at manufacturer's suggested rates for the slopes in question. In case of use of straw or other loose mulch (only applicable on slopes less than 10:1), the coarse mulch should be applied so as to leave 5-10 percent of the soil surface still visible, to allow for germination of pre-applied seed.

If erosion control mats are employed, they should be composed entirely of natural materials (jute twine and/or coconut fiber), including no plastic fiber of any kind. Suitable materials include RoLanka BioD Mat (70 or 90), RoLanka BioD-OCF30, Bonterra CF7 or CF9, or North American Green BioNet series (e.g., C125BN), *no other substitutes*. Plastic fibers used as netting can entrap some wildlife species, and they create a source of plastic fiber pollution when they degrade. This in turn is carried downstream into aquatic habitats where they can adversely affect fish or other aquatic species. If

permanent turf reinforcement mats are desired, the recommended alternative is RoLanka BioND-TRM, which is similar to BioD Mat but more durable.

In the event that slopes that are steeper than 3:1 are required by the engineering design, additional specifications shall be determined by the project engineer in consultation with a revegetation specialist who has field experience with steep slopes.

#### WILDLIFE HABITAT PROTECTION

The biological inventory includes recommendations for pre-construction surveys for nesting birds, which would preclude any during-construction disturbance impact.

Ideally, there should be no roadside illumination that points toward the riparian habitat, over the entire length of the road segment that runs along the east-west tributary. However, if illumination is required, the roadside lighting shall be of the minimum wattage allowable by road standards, and shall be fully shielded (not merely full cutoff as for dark sky requirements) so that the bulbs are not directly visible from any part of the riparian habitat within 100 feet. Preferably, shielding would preclude a direct line of sight from *any* part of the riparian area to the bulbs, but this is probably technologically infeasible and should be regarded as an ideal rather than a requirement.

#### Landmark Oak Groves

The Rincon del Rio site provides a unique opportunity to provide a combination of compensatory and other mitigation for the minor proposed losses of landmark oak groves, which will to achieve long-term replacement and maintenance of the ecological values of oak woodlands that is superior to a simple replacement planting plan. The proposed mitigation will ensure the long-term replacement of lost landmark oak grove area with oak woodland that is newly established (reconverted from non-native grassland) at a minimum area ratio of 2:1, planted so as to initiate ecological succession into landmark oak grove canopy status. In addition, some areas of existing landmark oak groves in the eastern part of the site will be protected by a conservation easement and management plan including ecologically sustainable fuels management to minimize the damage that wildfire could cause to the habitat values of the protected areas.

#### COMPENSATORY MITIGATION (REPLANTING)

Prior to the initiation of project construction, an estimate of the total number of trees to be removed for the entire project (all phases) and their diameter shall be made, and the locations for replacement plantings shall be designated. Although the replanting shall occur in parallel with the phases of project construction, it is important that the total replanting opportunity be specified before the first phase of construction, so that off-site planting areas or other compensatory mitigation options can be identified in the event that there is insufficient space within the site for the amount of replacement plantings that will be needed.

The total landmark oak grove impact is estimated to be about 1.35 acres. At a 2:1 ratio, about 2.7 acres of oak woodland restoration would be required to provide adequate compensatory mitigation opportunity. There is much more than this area of highly suitable restoration opportunity within the site, in situations where overall habitat values would be substantially increased by the restoration, therefore this approach is feasible on site.

At this same time (prior to initiation of construction of any project element that entails removal of any portion of a landmark oak grove), a final oak mitigation and restoration plan shall be submitted for County approval. This plan shall be based upon the guidelines provided below, which are intended to identify the mitigation actions with sufficient specificity to complete CEQA compliance and project approval.

- The replanting sites shall be of sufficient size that replacement trees that survive long-term can be expected to be able ultimately to grow to mature crown size in the designated planting spaces. At a minimum, lost landmark oak grove area will be replaced by restoration of non-native grassland to oak woodland at a minimum area ratio of 2:1. Additional replanting, in the form of interplanting in woodland areas that would benefit from supplement to the natural level of regeneration, may also be desirable.
- The preferred method for oak replanting is not based upon individual plantings and numbers, but upon habitat goals. The Zoning Ordinance oak replacement specifications for impacts on landmark oak groves are based upon inch-for-inch replacement of the diameter of trees that are removed. However, the well-documented literature on oak woodland restoration science suggests that this is an ineffective and undesirable way to replace lost oak trees, because it encourages the planting of large diameter replacement trees, indeed, as large as can be obtained. This is undesirable for long-term ecological sustainability for two reasons. Firstly, purchased large-sized oak container stock, which takes many years to grow up to that size, will almost never be derived from local genetic stock, which is best adapted to the ecological conditions of the planting site. Secondly, the long-term survival of native California oaks in a natural habitat setting depends largely upon whether the root system has developed, during early seedling and sapling growth, to take best advantage of the soil of the planting site. Specifically, our native oaks depend upon developing a vigorous and deep tap root, which cannot occur during long years of cultivation in a container. Consequently, oak regeneration in a natural habitat setting that is based on planting of container stock with 1/2 to 1 inch stem diameter will inevitably result in trees that are of poor vigor (and, the larger the container stock, the worse the results). The exceptions that exist to this principle (maintained landscaping plantings) are not applicable to the present project.
- To the extent that is ecologically appropriate in the restoration sites that are selected, oak woodland restoration and interplanting shall emphasize valley oak and blue oak, which are known not to regenerate with as much facility, or as rapidly, as other

native oak species. Oak woodland restoration opportunities exist in several parts of the grasslands in the center of the project site which have deep soils and mesic soil moisture regimes (indicated by the species composition of the existing grassland vegetation), and are therefore highly suitable for successful planting of these specific oak species.

- All phases of the oak compensatory mitigation actions shall be carried out under the direct and continuous supervision of a restoration ecologist with specific expertise in the collection and establishment of native California species. General methodology is provide below, however, many details of timing and minutiae of handling and planting procedure cannot be specified in writing, but depend upon the expertise and field judgment of the supervising restoration ecologist.
- Oak replacement will be undertaken by means of planting acorns that are collected within the Rincon del Rio project site and/or very small sized container stock that has been grown from acorns harvested on the site and grown in pots which encourage the development of a vigorous, deep tap root. Acorns shall be collected as they become mature, selected to eliminate non-viable acorns, and stored (if necessary) under cool dry conditions until planting in mid- to late autumn.
- Oak restoration and planting areas shall be greatly overplanted in terms of numbers of propagules, then thinned to a density of saplings that is appropriate based upon studies within, or as near as possible to, the Rincon del Rio site. Planted areas, whether established from acorns directly or from appropriately container-grown seedlings, shall be protected from herbivory by cattle and deer. The extent and nature of individual plant protection, which may be necessary to reduce rodent damage, will be determined by the supervising restoration ecologist.

#### OAK WOODLAND HABITAT PROTECTION

Rincon del Rio shall grant a conservation easement to an appropriate public entity (such as Department of Fish and Game) or non-profit habitat protection entity (such as a land trust), which provides for the permanent preservation, as sustainable native habitat, of an area of oak woodlands within the site that is equal to or greater than the area of landmark oak woodlands that presently exist within the portion of the site designated for development. This includes all patches of landmark oak grove west of the main north-south tributary (excepting those groves that directly abut the Foothill Riparian habitat or the pond), plus the landmark oak groves north of the subsidiary east-west tributary. The conservation easement shall be recorded prior to construction of any project elements that entail the removal of any portion of a landmark oak grove.

Preferred habitat areas to be considered for coverage by the easement include portions of the mixed habitats east of the Magnolia Ditch, the extensive landmark oak grove area between the ditch and the Bear River, and the area which adjoins the Foothill Riparian habitat south of the pond, and on its east side.

The conservation easement shall include an operations and maintenance (O&M) plan and shall specify a funding mechanism for its implementation. The O&M plan shall include specifications for fuel management that are acceptable to fire protection officials but which also allow for the long-term natural regeneration of the native species which constitute the desired oak woodland vegetation.

It is almost certainly not possible to maintain the high canopy coverage of landmark oak groves of the types which occur at the Rincon del Rio site (specifically, those groves which are entirely or primarily comprised of interior and canyon live oak) and also remove sufficient fuel from the plant communities to preclude the possibility of a crown fire. Therefore, in the conservation easement areas, the fuel management provisions must balance the desire to reduce the intensity of an inevitable wildfire against the importance of maintaining the very habitat elements and vegetation density that qualifies an area of oak woodland as landmark oak grove under the County definition, and that provide the special habitat values for which County policy requires protection of such groves.

The following conceptual recommendations are provided as guidelines for the development of the O&M plan:

- Specify the location, size, and maintenance regime for fuel breaks that will minimize the likelihood that fires which are ignited in developed areas can spread into the easement area, and vice versa. Fuel breaks shall be designed so that they do not become sources of invasive weed seeds and so that they retain sufficient soil structure (high capacity for infiltration) to minimize the potential for erosion. Ideally, fuel breaks shall be greatly thinned woodland areas rather than completely cleared strips of grassland.
- Remove much of the ground fuel loads, especially medium-caliber material, but preserve a limited number of down logs as habitat elements and retain sufficient quantities of the finest caliber twigs and leaves to maintain the health of the duff layer.
- Specify the degree of ladder fuel reduction that is necessary to minimize the intensity of a wildfire, but also retain a sufficient number of saplings in various size/age classes so as to preserve the long-term ecological regeneration of the oak canopy. Thinning of lower-canopy or understory fuels should be undertaken in rotating patches so that all stages of succession and vegetation structure are represented somewhere in the easement area at all times.
- Preserve all large snags and trees with flaws and cavities, which provide both a basis for the invertebrate food chain upon which native vertebrate wildlife depends, and the nesting sites for many such species.
- Provide for long-term monitoring and adaptive revision of the O&M plan in accordance with monitoring results and the continuing development of the science

of fire risk reduction that is compatible with long-term ecological values and sustainability of native, fire-adapted plant communities.

The funding mechanism for the long-term monitoring and maintenance cannot be fully specified until the easement area and O&M plan are finalized. Alternatives could include either a community services district which specifies the deposit of conservation area maintenance costs in a separate account, available only for that purpose, or the establishment of an endowment. In the latter case, the endowment could be accumulated gradually as units are sold, with the project retaining responsibility for implementation of the monitoring and maintenance until proceeds from the endowment are sufficient for that purpose.

## MONITORING

### Tributary, Wetland, and Riparian Areas

Monitoring of the specifications for slope and lighting design of the secondary access road will be provided by County plan check.

Monitoring of the implementation of these specifications is best provided by the project engineer during construction, and by County inspection during or at the conclusion of construction.

Monitoring of the success of disturbed-soil revegetation shall be specified by the Regional Water Quality Control Board, which has oversight responsibility for control of pollution by stormwater runoff.

### Landmark Oak Groves

Because the specifications for oak planting and habitat management will continue to be refined during the development of the restoration plan, conservation easement, and fire protection plan, the monitoring methods, performance standards, and contingent maintenance actions are not specified here, but will be provided in those three project documents.



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## **STEEP SLOPE MANAGEMENT PLAN**

### **Rincon del Rio**

April 8, 2010

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#### **PURPOSE AND INTENT**

Nevada County Zoning Regulations, Sec. L-II 4.3.13

*Purpose: To preserve the natural, topographic, and aesthetic characteristics of steep slopes, and to minimize soil erosion, water quality impacts, earth movement and disturbance, and the adverse impact of grading activities, while providing for reasonable use of property. (Ord. #2152, 5/25/04)*

Pursuant to the above-reference Zoning Ordinance and the Grading Ordinance, limited development is allowed on steep slopes, subject to a grading permit and disturbance within the defined area is allowed subject to the approval of Management Plan. This Steep Slope Management Plan is being provided in compliance with County requirements, for a limited and defined area of disturbance associated with the Rincon del Rio project.

#### **PROPOSED DEVELOPMENT IN STEEP SLOPE AREAS**

The proposed development of Rincon del Rio includes avoidance of steep slope areas for all buildings residences and driveways. The only proposed use within steep slope areas is:

- Emergency Access Roadway, as shown on the Tentative Map
- Existing Soft Surface Trails, that may/may not require improvement

Disturbance within steep slope area is unavoidable since there is no other alternative that is feasible or available for emergency secondary access to the proposed development. The emergency access roadway shall be constructed to minimum width allowed per Fire Dept. standards and shall follow along natural contour lines where possible to preserve natural land forms and minimize grading disturbance. All



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associated cut/fill slopes shall be graded to the natural, varied contour of the surrounding terrain. Significant rock outcroppings shall be preserved.

Grading disturbance associated with trail reconstruction or maintenance will be minimized in steep slope areas and will only be performed where necessary for long-term stability and/or safety.

### EROSION AND SEDIMENT CONTROL PLAN

1. During construction, Best Management Practices (BMP's) for temporary erosion control shall be implemented to control any pollutants that could potentially affect the quality of storm water discharges from the site. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared in accordance with California State Water Resources Control Board (SWRCB) requirements. This SWPPP includes the implementation of BMP's for Erosion Control, Sediment Control, Tracking Control, Wind Erosion Control, Waste Management and Materials Pollution Control.
2. Topsoil shall be removed and stockpiled for later reuse prior to excavation activities. Topsoil shall be identified by the soil-revegetation specialist who will identify both extent and depth of the topsoil to be removed.
3. Upon completion of grading, stockpiled topsoil shall be combined with wood chips, compost and other soil amendments for placement on all graded areas. Revegetation shall consist of native seed mixes only. The primary objectives of the soil amendments and revegetation is to create site conditions that keep sediment on site, produce a stable soil surface, resist erosion and are aesthetically similar to the surrounding native forest ecosystem.
4. Geo-fabrics, jutes or other mats may be used in conjunction with revegetation and soil stabilization.

These erosion and sediment control notes will be shown on the roadway improvement plans and grading plans. Erosion control BMP's will also be shown on the plans with the final design for County review and approval.

Please contact our office at (530) 272-5841 with any questions regarding this analysis.

SCO PLANNING & ENGINEERING, INC.

*Bryan McAlister* 6-9-10

Bryan McAlister, P.E.  
Project Manager



