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MEMORANDUM

To:	Shawna Purvines, Principal Planner El Dorado County
From:	Cathy Spence-Wells, Principal
Subject:	Biological Resources Policy Update: In-Lieu Fee Program, Infill Exemption Option Analysis, Response to Comments Received, and Edits to the Draft Policies and Draft Oak Resources Management Plan
Date:	June 16, 2015
Attachment(s):	Attachment A: Draft Oak Resources In-Lieu Fees Nexus Study Attachment B: Revised Draft General Plan Biological Resources Policies, clean Attachment C: Revised Draft General Plan Biological Resources Policies, changes tracked Attachment D: Revised Draft Oak Resources Management Plan, clean Attachment E: Revised Draft Oak Resources Management Plan, changes tracked

1.0 INTRODUCTION

The purpose of this memo is to introduce the draft El Dorado County Oak Resources In-Lieu Fees Nexus Study. The in-lieu fee program is a proposed component of the County's oak resource mitigation program outlined in the Draft Oak Resources Management Plan (ORMP). In addition, this memo provides an analysis of a potential infill exemption for impacts to oak resources, summarizes recent edits to the draft biological resources policies and ORMP, and responds to comments raised by stakeholders and the public following review of the first draft of the updated biological resources policies and ORMP (presented to the Board on May 18, 2015).

2.0 OAK RESOURCE IN-LIEU FEE NEXUS STUDY

An Oak Woodland Management Plan (OWMP) was prepared and adopted by the Board of Supervisors (Board) on May 6, 2008. The in-lieu mitigation fee established in the OWMP for impacts to oak woodlands was intended to be consistent with a future conservation fund to be established under the Integrated Natural Resources Management Plan. The fee was established through an economic analysis that was presented to the Board in April 2008. The in-lieu fee was originally established at a rate of $4,700 per acre of land acquired. Option B of Policy 7.4.4.4

required mitigation at a 2:1 ratio, thus the required fee payment for each acre of impact would have been $9,400. This fee was intended to cover the acquisition, management, and ongoing monitoring of conserved oak woodlands.

A lawsuit challenging the County's approval of the OWMP and its implementing ordinance (Oak Tree Replacement Ordinance) was filed. The lawsuit ultimately resulted in the Board's rescission of the OWMP and its implementing ordinance in September 2012. At the same time, the Board directed that an update to biological resources policies in the General Plan be undertaken. As part of that update, a draft ORMP based on Board direction has been prepared, including a mitigation fee program for impacts to oak woodlands and individual oak trees (collectively, oak resources). The draft Oak Resources In-Lieu Fees Nexus Study has been prepared to support the in-lieu fee mitigation program component of the draft ORMP (attached).

The purpose of the Nexus Study is to establish the legal and policy basis to allow the County to impose two in-lieu fees within the County to mitigate impacts to oak resources - one fee for oak woodlands and a separate fee for individual native oak trees, including Heritage Trees, located outside of oak woodlands. The ORMP outlines mitigation options for impacts to oak resources. The in-lieu fee would provide one mitigation option for projects that create an impact on eligible oak resources; other options would include replacement tree planting on- or off-site and conserving off-site, as described in the ORMP.

The El Dorado County Oak Resource In-Lieu Fee Nexus Study determines in-lieu fee rates for mitigation of impacts to eligible oak resources. Payments made under the in-lieu fee program would be deposited in the County's Oak Woodland Conservation Fund. The County would use this fund to acquire oak woodlands (either through fee title or conservation easements) for conservation. It is expected that responsibility of maintenance and monitoring of conserved land would be transferred to a new or existing Land Conservation Organization (LCO) through fee title acquisition and/or conservation easements. Figure 3.2 in the attached draft Nexus Study lists the LCOs in the study and summarizes their responsibilities and the key land holding characteristics (conservation easements, fee title ownership or other ownership).

The Nexus Study proposes a fee designed to pay the full cost of the mitigation for development impacts, including:

- Acquisition
- Initial Management & Monitoring (Initial M&M)
- Long-Term M&M
- Administration

The study assumes that the fee program will fund M&M in perpetuity. The scale of cost incurred by a series of existing LCOs that actively acquire and manage conservation land is detailed in the study. These costs are utilized to develop key assumptions that shape the oak resource in-lieu fees. Costs associated with acquisition of land or conservation easements are detailed from LCO case studies and through real estate sales transaction data available from El Dorado County (Appendix A). The real estate sales transaction data reflects land values for various locations throughout the County. While several LCO case studies were compiled and reviewed, the in-lieu fee amounts recommended in the draft Nexus Study are based on the costs identified by the American River Conservancy and Placer Land Trust, as the data from these two LCOs is most applicable to El Dorado County. In addition, costs associated with Initial M&M were included from the Placer County Conservation Plan.

The approach utilized to develop the oak resources in-lieu fee includes the following general steps:

1. Define the types of oak resources subject to mitigation and the mitigation ratios for each resource.
2. Review the costs associated with acquiring, and managing and monitoring oak woodland areas in perpetuity; review the costs associated with planting and establishing individual oak trees. Convert costs to a per-acre basis.
3. Establish a per-acre cost for oak woodland areas and a per diameter inch cost for individual oak trees not in oak woodland areas.
4. Summarize the nexus for each fee.
5. Review administrative and implementation processes.

Based on the analysis in the draft El Dorado County Oak Resources In-Lieu Fees Nexus Study, the following in-lieu fees are proposed:

Oak Woodland Area In-Lieu Fee (per acre)

The oak woodland area in-lieu fee is $7,954 per acre of impacted oak woodland, as shown in Table 1.

Table 1
Oak Woodland Area In-Lieu Fee

Cost Components	Amount
Acquisition	$4,400
Initial M&M (Years 1-5)	$2,300
Endowment (Long-term M&M)	$875
Subtotal	***$7,575***
Administration (5%)	$379
Total Cost	**$7,954**

The draft ORMP proposes mitigation ratios of 1:1 for projects that impact up to 50% of the oak woodlands on-site, 1.5:1 for projects that impact 50.1% to 75% of the oak woodlands on-site, and 2:1 for projects that impact more than 75.1% of the oak woodlands on-site. Based on these ratios, the in-lieu fee ranges from $7,954 to $15,908 per acre of impacted oak woodland, depending on the mitigation ratio level (see Figure 4.2 in the attached Nexus Study). This rate funds the cost of land acquisition, Initial M&M (years 1-5), and Long-Term M&M (years 6-perpetuity).

Individual Oak Tree In Lieu Fee (per diameter inch)

The individual oak tree in-lieu fee is $186 per diameter inch for individual native oak trees and at the proposed 3:1 mitigation ratio for Heritage Oak trees the fee is $558 per diameter inch. This amount funds the cost of tree acquisition and planting as well as Initial M&M (years 1-7). The Nexus Study presumes that Long-Term M&M costs will be nominal and can be covered by the LCO through its routine property maintenance activities.

3.0 POTENTIAL INFILL EXEMPTION FOR OAK RESOURCES IMPACTS

On February 23, 2015, the Board discussed the potential for exempting infill projects from oak resources impact mitigation requirements. To better understand the effect of this potential policy language modification, an analysis of County parcel data and oak woodland distribution data was conducted. The analysis uses geographic information systems (GIS) tools, County Assessor's parcel data, and oak woodland distribution data available from CAL FIRE's Fire and Resource Assessment Program (FRAP 2006) to evaluate the quantities of parcels that may be affected by

an infill exemption. Potential infill parcels are those that are 5 acres and smaller, vacant, and abut at least two developed parcels.

Table 2
Summary of Infill Parcel Sizes with Oak Woodlands in El Dorado County

Parcel Size	Total in County*	Total Infill Parcels in County	Quantity of Infill Parcels with Oak Woodlands (% of Total)
<= 1 acre	50,999	5,873	1,181 (1.3%)
> 1 and <= 2 acres	6,806	1,694	326 (0.4%)
> 2 and <= 5 acres	10,318	3,439	828 (0.9%)
Total:	**68,123**	11,006	2,335 (3.4%)

*Excludes parcels within the Cities of Placerville and South Lake Tahoe

As shown in Table 2, a total of 11,006 parcels in the County meet the requirements for classification as infill. Of that total, 2,335 parcels have some level of oak woodland coverage, based on the extent of the FRAP oak woodland distribution data. Providing an oak resources exemption for infill parcels could affect up to 2,335 parcels in the County (3.4% of all parcels <=5 acres in the County).

4.0 COMMENTS ON DRAFT BIOLOGICAL RESOURCES POLICIES AND ORMP

Written and verbal comments were received on the Draft Biological Resources Policies and ORMP during or following the Board hearing on May 18, 2015. The discussion below summarizes and responds to the comments received.

Comments Focused on Biological Resources Policies

Integration of Biological Resource Objectives/Policies

Concern was raised that objectives 7.4.1 and 7.4.2 included in the Conservation of Biological Resources section of the Conservation and Open Space Element of the General Plan are not integrated or presented in a clear and consistent fashion and should be integrated into one (or two) that complement each other and are consistent.

> To clarify the relationship between objectives 7.4.1 and 7.4.2, Objective 7.4.1 is proposed to be revised to address only the Pine Hill rare plant species rather than all State and Federally recognized rare, threatened, or endangered species.

Previously Objective 7.4.1 read: "The County shall protect State and Federally recognized rare, threatened, or endangered species and their habitats consistent with Federal and State laws."

Now Objective 7.4.1 is proposed to read: "The County shall protect Pine Hill rare plant species and their habitats consistent with Federal and State laws."

As proposed, Objective 7.4.1 would continue to protect the Pine Hill rare plant species and preserve their habitat through the establishment of Ecological Preserves (EP) and an EP overlay area. Policy 7.4.1 also identifies the mitigation ratios for Gabbro soil endemics as required under Chapter 130.71 of the County's code. None of the proposed policy revisions would affect the applicability of the County code.

With the proposed revision to Objective 7.4.1 to specifically address only the eight Pine Hill endemic plant species, the following two Policies, which originally appeared under Objective 7.4.1, are proposed to be moved to Objective 7.4.2:

Policy 7.4.2.1 The County will coordinate wildlife and vegetation protection programs with appropriate Federal and State agencies.

Policy 7.4.2.2 The County shall continue to support the Noxious Weed Management Group in its efforts to reduce and eliminate noxious weed infestations to protect native habitats and to reduce fire hazards.

Objective 7.4.2 continues to include policies that define special-status species and their habitats; identify specific measures to assess potential impacts to special-status species and their habitats; encourage resource preservation, impact avoidance and/or minimization; and establish minimum ratios for compensation/mitigation for project-related impacts to these resources. The consolidation of this information into Objective 7.4.2 and associated policies is designed to provide quick and easy identification of protected species and the requirements surrounding them, including impact assessment and mitigation requirements.

Language has been added to draft Policy 7.4.2.8 to indicate that oak woodlands would be mitigated in accordance with the ORMP (see General Plan Policy 7.4.4.4), and Pine Hill rare plant species and their habitat would be mitigated in accordance with County Code Chapter 130.71 (see General Plan Policy 7.4.1.1).

Pine Hill Preserve

Comments were received suggesting that the Pine Hill Preserve policies, in-lieu fee, and conservation efforts should be integrated with the overall biological resources mitigation program established in Policy 7.4.2.8.

> As discussed previously, Objective 7.4.1 is proposed to be revised to address only the Pine Hill rare plant species rather than all State and Federally recognized rare, threatened, or endangered species. El Dorado County has been working with state and federal resources agencies since the late 1980s to establish the Pine Hill Preserve system. This effort has been and is expected to be separate from the County's efforts to address other biological resource issues. The Pine Hill rare plant species occur within a discrete and unique habitat type - they are dependent on gabbro soils, thus it is appropriate for the County to handle this effort as a distinct component of the County's management of biological resources.

Biological Resources In-Lieu Fee

Another concern raised is whether the County is planning on developing an in-lieu fee for mitigation required under Policy 7.4.2.8 and how this fee program would be incorporated with the oak tree in lieu fee program included in the ORMP.

> Policy 7.4.2.8 does not include an in-lieu fee program. Policy 7.4.2.8 indicates that project applicants would be responsible for complying with the minimum mitigation ratios identified. To assist project applicants with finding suitable mitigation sites the County would maintain a list of willing sellers of potential mitigation areas within the County. For wetland mitigation local and regional mitigation banks within or outside of the County would be acceptable provided they are in the same watershed as the impact.

Habitat Mitigation Summary Table

A comment states that the Habitat Mitigation Summary Table may not be entirely consistent with requirements from California Department of Fish and Wildlife (CDFW) and other agencies, noting that CDFW requires mitigation for species but that the Table speaks to habitat.

> The comment is correct that CDFW requires mitigation for impacts to species. As stated in draft Policy 7.4.2.8, one of the key goals of the Biological Resource Mitigation Program is to conserve habitats that support special status species. The draft policy defines the categories of species that are considered special-status, and the mitigation ratios in the Summary Table identify the mitigation requirements for projects that impact

habitat that supports or may support special-status species. Preservation and creation of vegetation communities at the minimum ratios defined in the Summary Table would ensure the current range and distribution of special-status species within the County are maintained. Each individual project would still be required to comply with state and federal laws, such as the Endangered Species Act, and would need to obtain take permits for any actions that would result in take of an endangered or threatened species. Additionally, through the state and federal permitting processes, resource agencies may require additional mitigation beyond the County's requirements for individual projects that impact jurisdictional waters and wetlands and/or special-status species.

Another comment notes that the proposed mitigation ratios in the Summary Table overlap with federal and state regulation and asks the County to consider amending the policies and mitigation ratios to allow lesser ratios if approved by federal or state resource agencies.

The second comment is also correct, that the habitat mitigation requirements proposed in draft Policy 7.4.2.8 address resources that are also regulated by state and federal agencies. However it is important for El Dorado County to define the minimum ratios acceptable to the County to achieve the goals of the Biological Resource Mitigation Program, including streamlining the environmental review process, as discussed in the following section. State and federal resource agencies have indicated it is preferable for the local jurisdiction to define minimum mitigation ratios. As an example, having the minimum mitigation ratios established facilitates CDFW in reviewing and approving Streambed Alteration Agreements.

<u>California Environmental Quality Act (CEQA) Streamlining</u>

A comment indicates that it may not be feasible to streamline future environmental review due to the lack of integration among the biological resources policies and required mitigation ratios.

The intent is that with the biological resources mitigation program, the County would have established an approach to ensure adequate mitigation of cumulative impacts from development under the General Plan. The project-specific mitigation requirements would be based on the land cover types (biological resources) at the project site, the amount of impact to each land cover type, and the mitigation ratios established in the General Plan. The Environmental Impact Report (EIR) analysis for the biological resources policy update would provide support for the project-specific mitigation requirements by documenting whether these mitigation ratios are sufficient to mitigate the cumulative impacts in the region.

Individual projects would still be subject to CEQA, as well as other state and federal regulations. Project-specific impacts would be evaluated as usual by the County and state and federal resource agencies as applicable. For the analysis of the project's contribution to cumulative impacts, to the extent that the project is consistent with the development assumptions made in the General Plan and General Plan Amendment EIRs, the project-specific CEQA analysis could rely on the analysis from those prior EIRs. This could be done through a number of CEQA mechanisms, including tiering, preparation of subsequent and supplemental analyses and incorporation by reference.

Regarding ratios, the resource ratios were designed to offset impacts to special-status species habitat within the County and to be consistent with the types of mitigation used by surrounding jurisdictions. Under the proposed policy updates, the General Plan would establish minimum ratios and during the CEQA review process for individual projects, project-specific issues would be evaluated and higher ratios can be required, as appropriate. Implementation of mitigation in compliance with the ratios is intended to reduce impacts to a less-than-significant level for the purposes of CEQA.

Conservation Management Program

The comment questions how land set aside for conservation would be managed and protected and states that the cost of conservation should need to be factored into the in-lieu fee program for oak woodlands and other biological resources. The comment also requests that the County establish a system to track and monitor the success of conservation areas.

As noted in the draft ORMP, conservation easements shall be granted in perpetuity to the County or a land conservation group approved by the County. The in-lieu fee includes costs associated with acquisition, managing and monitoring the land. It is assumed a non-profit LCO (or the County) would be the entity actively managing and monitoring any conservation lands in perpetuity. Lands directly acquired by a LCO would also be managed by the organization. However, very little, if any, active management would be needed. The goal would be to ensure the land and the protected resources present are not disturbed.

With respect to conservation of lands in accordance with Policy 7.4.2.8 that are not required by the ORMP, it would be up to the non-profit LCO (or the County) holding the conservation easement to determine the level of active management and monitoring required and obtain an endowment from the project applicant as appropriate. For conservation lands set aside via a deed restriction rather than a conservation easement, it

is not anticipated that active management and monitoring would occur but rather that the land and the protected resources would not be disturbed.

A tracking system to monitor the success of the conservation areas would be addressed in the General Plan Biological Resource Policies Update EIR and the effectiveness of the tracking program will be described. This will include a statement of how planners at the counter will know if a potential project site is encumbered by a conservation easement and/or deed restriction related to biological resources. Standardized language for conservation easements and deed restrictions and some mapping of the conserved lands would be appropriate.

Any lands outside Priority Conservation Areas (PCAs) and Important Biological Corridors (IBCs) would be selected based on the criteria described in Policy 7.4.2.8(D) (location within other important ecological areas, diversity of age structure of woodland, forest and shrub communities, presence of or potential to support special-status species, connectivity with adjacent protected lands, etc.).

Comments on Important Biological Corridors

The comment notes it is the commenter's understanding that the IBC overlay included in the 2004 General Plan has not been updated.

The current IBC overlay includes 64,600 acres, linking PCAs, natural vegetation communities and/or areas having Natural Resource, Open Space, and/or Agricultural base land use designations in the western portion of the County. Two studies have addressed landscape-level habitat connectivity in the project region: (1) the California Essential Habitat Connectivity Project (Spencer et al. 2010); and (2) the California Missing Linkages study (Penrod et al. 2001). In general, the IBCs are consistent with these two studies and implementation of the General Plan would not conflict with these studies.

Because wildlife movement corridors are inclusive of a variety of land covers and topographic features, rather than focusing on specific narrow movement corridors or pathways such as along specific drainages, the County should be viewed as a broad mosaic of topographic and vegetation features that provide a range of habitats for the different species and support diffuse movement across the landscape. Updated Policy 7.4.2.8 recommends that mitigation occur within the County on a minimum contiguous habitat block of 5 acres. Therefore, we are not proposing that the IBC overlay be updated at this time. This approach is consistent with Board direction on Decision Point 8 discussed at the March 30, 2015 meeting. Rather as outlined in Policy 7.4.2.8, each

project will evaluate impacts to wildlife movement and provide feasible mitigation. Where a project occurs within the IBC overlay, the project may not result in a net loss of wildlife movement functions and values.

Willing Sellers Program

A general concern was also raised recommending including an implementation measure that requires active engagement by the County and promotion of mitigation programs to willing sellers.

Project proponents will need to find willing sellers, as will the County when implementing the in-lieu fee program. If the passive approach of maintaining a willing sellers list does not yield sufficient sellers, the county can reevaluate the need for a more active approach to identifying mitigation opportunities.

Comments Focused on the ORMP

This section presents and addresses comments received regarding the Draft ORMP (May 2015).

Exemptions

Comments were received regarding the 1-acre exemption for impacts to oak woodlands. One comment requested a consideration to allow a "disturbance area" exemption for oak woodlands measuring 1-acre and larger, rather than an exemption for parcels measuring 1 acre or less in size that cannot be further subdivided. Another comment expressed concern that the current exemption (for parcels measuring 1-acre or less that cannot be further subdivided) may have a large effect on oak woodlands and questioned if the exemption would apply only to current parcels that meet this size or to smaller parcels created in the future.

An analysis of parcel sizes was conducted for the Board's consideration of Decision Point 4, as presented in Table 3 below, which was included in the memorandum for the Board hearing on February 23, 2015.

Table 3
Summary of Parcel Sizes with Oak Woodlands in El Dorado County

Parcel Size	Total in County*	Quantity with Oak Woodlands (% of Total)	Quantity with Oak Woodlands and Not Classified as Developed (% of Total)
<= 1 acre	50,999	8,550 (9.7%)	1,938 (2.2%)
> 1 and <= 2 acres	6,806	4,363 (4.9%)	771 (0.9%)

Table 3
Summary of Parcel Sizes with Oak Woodlands in El Dorado County

Parcel Size	Total in County*	Quantity with Oak Woodlands (% of Total)	Quantity with Oak Woodlands and Not Classified as Developed (% of Total)
> 2 and <= 5 acres	10,318	7,919 (8.9%)	1,523 (1.7%)
> 5 and <= 10 acres	8,798	7,488 (8.5%)	1,685 (1.9%)
> 10 and <= 40 acres	7,267	5,990 (6.8%)	2,327 (2.6%)
> 40 acres	3,970	2,437 (2.8%)	1,962 (2.2%)
Total:	**88,158**	**36,747 (41.7%)**	**10,206 (11.6%)**

*Excludes parcels within the Cities of Placerville and South Lake Tahoe

As shown in Table 3, a total of 50,999 parcels in the County are less than or equal to 1 acre, excluding those in the Cities of Placerville and South Lake Tahoe. Of that total, 8,550 parcels have some level of oak woodland coverage, based on the extent of the FRAP oak woodland distribution data. Of the parcels that are equal to or less than 1 acre with some level of oak woodland coverage, 1,938 are not classified as developed by the County Assessor. Providing an oak resources exemption for parcels less than or equal to 1 acre could affect between 1,938 and 8,550 parcels in the County (2.2% to 9.7% of all 1 acre and smaller parcels in the County).

The analysis of impacts associated with this exemption will be presented in the General Plan Biological Resource Policies Update EIR. The exemption as currently written is intended to apply to only current parcels and future subdivisions would be subject to General Plan policies and ORMP requirements. Language in the ORMP will be modified to clarify this exemption's applicability to current parcels only.

Also shown in Table 3, there are 36,747 parcels in the County with oak woodlands. This includes parcels classified as both developed and not developed. Although it is not expected that all parcels with oak woodlands would contain an acre of oak woodland or would disturb an acre of woodland, providing a 1-acre "disturbance area" exemption could affect up to 36,747 parcels in the County (41.7% of all parcels in the County). Quantifying a one-acre oak woodland disturbance area exemption in the General Plan Biological Resources Policies Update EIR analysis would be difficult and could overestimate the impact and required mitigation.

A comment was also received regarding the exemption for road widening and suggested that this exemption should not be in place as road widening is driven by development, which is subject to oak woodland mitigation. Additionally, this comment suggested that potential impacts to valley

oak woodlands, a sensitive resource in the County, could be disproportionate from road widening projects.

> During its February 23, 2015 hearing in considering Decision Point 5, the Board elected to keep the existing exemption for road widening where the new alignment is dependent on the existing alignment to facilitate safe travel. The ORMP does not exempt any new road projects (private or those in the County's Capital Improvement Plan (CIP)). Future widening as currently planned under the CIP is fairly limited and the extent of likely impacts under this exemption will be analyzed in the General Plan Biological Resource Policies Update EIR. Additionally, using FRAP oak woodland data, the potential impact to valley oak woodlands resulting from County road widening projects will be analyzed in the General Plan Biological Resource Policies Update EIR.

Priority Conservation Areas

Comments were received emphasizing the importance of oak woodland conservation within the US 50 corridor area, Community Regions, and Rural Centers. One comment states that this importance should be more clearly acknowledged in the ORMP while recognizing that the inclusion of oak woodland conservation opportunities in the US 50 corridor area is an improvement over the previous plan. The comment also states that there is value in identifying one or more Priority Conservation Areas in the US 50 corridor area.

> At its February 23, 2015 hearing, the Board elected to retain the existing PCAs (Decision Point 6) and to add language to the ORMP and General Plan Policy 7.4.2.8 outlining standards for conservation outside of PCAs. Conservation outside of PCAs may include areas within Community Regions, Rural Centers, and the US 50 corridor area. In addition, IBCs occur within these areas and provide opportunities for habitat conservation.

A comment states that cattle grazing should not be allowed in oak woodland conservation areas, stating its detrimental effects on oak woodlands in the long-term.

> Cattle grazing in conserved oak woodland areas is consistent with General Plan Objective 7.4.4:
>
> "Protect and conserve forest, oak woodland, and tree resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values."
>
> Current research notes potential positive effects of grazing in controlling competing non-native grasses and forbs and its potential negative effects of seedling trampling and soil compaction. Additionally, the timing and intensity of grazing are primary contributors to its effect on oak woodland regeneration. The Draft ORMP allows grazing in conservation

easements if grazing occurred prior to establishment of the easement. This will be evaluated further in the General Plan Biological Resources Policy Update EIR.

Retention Standards

A comment was received that opposes allowing 100-percent removal of oak woodlands from a project site, stating that retention is necessary to avoid fragmentation, and asks which other jurisdictions endorse 100-percent removal of oak woodlands.

The ORMP outlines mitigation requirements for impacts to oak woodlands and provides an incentive for retention by increasing the required mitigation ratios with increasing impact levels. At its February 23, 2015 hearing, the Board gave direction to replace the retention standards included in General Plan Policy 7.4.4.4 (Option A) with this incentive-based approach (Decision Point 4). As discussed at the February 23 hearing, the retention standards in Policy 7.4.4.4 do not require any level of retention if an in-lieu fee option is used. Therefore, the allowable level of impact for oak woodlands remains unchanged in the current draft of the ORMP. Additionally, the County's 2004 General Plan and the state-level oak regulations (Kuehl Bill) do not require any amount of retention. Retaining small amounts of onsite oak woodlands does not necessarily prevent fragmentation. The development of PCAs for conservation of oak woodlands was identified as a means to offset and mitigate the loss or fragmentation of oak woodlands in other areas as a result of implementation of the 2004 General Plan.

Individual Native Oak Trees

A comment states that oak trees measuring less than 6-inches in diameter should be protected for their value in woodland regeneration.

The contribution of oak trees less than 6-inches in diameter to oak woodland value is addressed under the requirements to mitigate for impacts to oak woodlands. Individual native oak trees less than 6-inches in diameter that occur outside of oak woodlands are not protected under the individual tree standards included in the ORMP.

Heritage Trees

A comment was received suggesting that the Heritage Tree definition be revised to include oak trees measuring 24-inches and greater and cites Placer and Tuolumne Counties as examples.

The 36-inch threshold for defining heritage oak trees in the Draft ORMP was derived from General Plan Policy 7.4.5.2, which afforded greater protection to oaks measuring 36 inches and greater. Definitions of heritage trees vary by county throughout the state, for those that have provided diameter measurement threshold in their definitions. The variations in trunk diameter thresholds range from 19 inches (Sacramento County), to 24

inches (Placer and Tuolumne Counties), to 36 inches (Los Angeles County), up to 48 inches (San Mateo County). In addition, some counties provide no specific definition other than designation of specific trees by the Board of Supervisors (e.g., Nevada and Sonoma Counties) and some counties provide no definition for heritage trees (e.g., Calaveras, Amador, and Butte Counties). Lowering the 36-inch threshold for the Heritage Tree definition in El Dorado County would increase the number of trees required to mitigate at a 3:1 ratio potentially resulting in greater tree replanting or in-lieu fee mitigation payments.

Replacement Planting

A comment was received that suggests that acorn planting should not be a mitigation option. The comment acknowledges that it is an accepted practice but expresses concern that the replacement value is decades away, and requests an example in El Dorado County where acorn mitigation has been effective.

The Draft ORMP outlines mitigation options, one of which is replacement planting, which is also consistent with state-level oak regulations (Kuehl Bill). Acorn planting is an accepted and often preferable practice. The provisions in the ORMP require planting at a 3:1 ratio if acorns are used in replacement planting mitigation efforts to account for potential mortality or predation of acorns. As discussed by McCreary[1], the conditions of a planting site can dictate the suitability of using acorns and growth rates of acorn plantings may equal or surpass those for container plantings. The ORMP provides this option so that a replacement planting effort can be developed for a project that considers the specific suitability of the planting site. As with all planting programs under the proposed draft ORMP, acorn plantings would be required to meet the 7 year survival standard, consistent with the requirements of the Kuehl Bill.

A comment suggests that monitoring of oak replacement plantings needs to be realistically planned, stating that the County does not have adequate resources to ensure it is done.

The Draft ORMP requires that monitoring and reporting for oak replacement planting mitigation efforts are conducted by the project applicant, land owner, or conservation easement holder. The County will not bear responsibility for monitoring oak replacement planting sites. Oak Resources Technical Reports, as defined in the ORMP, will address the project-specific monitoring and reporting responsibilities of the developer/applicant. It is expected that annual monitoring reports would be submitted to the County for review

[1] McCreary, D. 2009. Regenerating Rangeland Oaks in California. University of California Agriculture and Natural Resources, Publication 21601e.

and acceptance. The General Plan Biological Resource Policies Update EIR will describe how the monitoring and reporting process would work and how it would be implemented.

Oak Resources Mitigation

A comment states that current maps of existing oak woodlands are needed, requesting a comparison of current oak woodland maps with 20-year-old maps to discern removal and mitigation trends.

Figure 2, which presents PCAs, oak woodlands, and public lands in El Dorado County, has been provided in the Revised Draft ORMP. A summary of oak woodland coverage changes in El Dorado County will be presented in the General Plan Biological Resource Policies Update EIR.

A comment states that ministerial development should not be exempt from oak resources mitigation.

As presented in the Draft ORMP, ministerial projects are not exempt from mitigation requirements for impacts to individual native oak trees (including Heritage Trees). Oak woodland impact mitigation would be exempt for non-discretionary projects (ministerial). An analysis of the environmental effect of this exemption will be included in the General Plan Biological Resource Policies Update EIR.

5.0 EDITS TO THE DRAFT BIOLOGICAL RESOURCES POLICIES AND ORMP

Following the Board hearing on May 18, 2015, review of comments provided on the draft policies and ORMP, and subsequent meetings and coordination with County staff, recommended revisions to the Draft Biological Resources Policies and ORMP were made, as summarized below.

Draft Biological Resources Policies

Edits to the Draft Biological Resource Policies are presented in Table 4.

Table 4
Summary of Changes to the Draft Biological Resources Policies

General Plan Policy/Objective/ Implementation Measure	Changes Made
Policy 7.4.1.6	• Text revised and moved to Policy 7.4.1.1.
Policy 7.4.1.7	• Text moved to Policy 7.4.2.2.
Policy 7.4.2.8	• Text was added to clarify that the Habitat Mitigation Summary Table in Section D does not apply to Pine Hill rare plant species habitat

Draft Oak Resources Management Plan

Edits to the Draft ORMP were focused on language clarification and corrections for consistency within the document. Additionally, Figure 2, a map of oak woodlands in the County, and the oak resources in-lieu fee amounts have been added to the revised Draft ORMP. A summary of changes is presented in Table 5.

Table 5
Summary of Changes to the Draft Oak Resources Management Plan

ORMP Section	Changes Made
2.1 (Applicability and Exemptions)	• Clarification added to agricultural exemption to exclude commercial firewood operations, consistent with permitting requirements included i ORMP • Exemption added for tree removal associated with an approved Timbe Harvest Plan (THP)
2.2.1 (Oak Woodland Removal Permits)	• Clarification regarding consistency findings necessary prior to issuing an oak woodland removal permit • Clarification of fines required for non-permitted oak woodland impacts
2.2.2 (Oak Woodland Mitigation)	• Mitigation requirements clarified in respect to need for placing a deed restriction/conservation easement over retained woodlands and conservation easement acquisition off-site.
2.3.1 (Oak Tree Removal Permits)	• Clarification regarding consistency findings necessary prior to issuing an oak tree removal permit • Clarification of fines required for non-permitted oak tree impacts
2.4 (Replacement Planting Guidelines)	• 90-percent survival threshold edited for consistency with planting approach to meet impacted woodland density. • Clarification of replacement tree sizes • Clarification of responsible party for monitoring/maintenance of replacement trees
3.1 (Oak Woodlands)	• Oak woodland in-lieu fee information updated based on report from New Economics.
3.2 (Oak Trees)	• Individual native oak tree in-lieu fee information updated based on report from New Economics. • Clarification of fee deposition into County Oak Woodland Conservation Fund
4.1 (Identification of Priority Conservation Areas)	• Added Figure 2: Priority Conservation Areas, Oak Woodlands, and Public Lands in El Dorado County • Clarification of option to purchase land or conservation easements
4.3 (Conservation Outside of PCAs)	• Clarification of option to purchase land or conservation easements • Clarification of definition of 'contiguous habitat blocks'
5.0 (Application of ORMP to Development Review Process)	• Clarification of fee payment requirements for phasing
6.0 (Definitions)	• Revised definition of 'Removal' to 'Impact' and clarified definition • Added definition of 'Replacement Tree'

Attachment A:

Draft Oak Resource In-Lieu Fees Nexus Study

NEW ECONOMICS & ADVISORY®

LAND USE ANALYSIS & STRATEGIES

El Dorado County Oak Resources In-Lieu Fees Nexus Study

PUBLIC REVIEW DRAFT

Prepared by New Economics & Advisory

June 16, 2015

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List of Acronyms

ARC	American River Conservancy
CAL FIRE	California Department of Forestry and Fire Protection
CE	Conservation Easement
CEQA	California Environmental Quality Act
CIP	Capital Improvement Project
CPUC	California Public Utilities Commission
FRAP	Fire and Resource Assessment Program
GIS	Geographic Information Systems
HRS	Habitat Restoration Sciences, Inc.
Initial M&M	Initial Management and Monitoring
INRMP	Integrated Natural Resources Management Plan
IOT	Individual Oak Tree
LCO	Land Conservation Organization
Long-Term M&M	Long-Term Management and Monitoring
LOS	Level of Service
NACUBO	National Association of College and University Business Officers
ORMP	Oak Resources Management Plan
ORTR	Oak Resources Technical Report
OWA	Oak Woodland Area
OWMP	Oak Woodland Management Plan
PCA	Priority Conservation Area
PCCP	Placer County Conservation Plan
PLT	Placer Land Trust
PRC	California Public Resources Code
SACOG	Sacramento Area Council of Governments
SF	Sempervirens Fund
SFC	Sierra Foothill Conservancy
SRAS	State Responsibility Areas
SRL	Save the Redwoods League
STF	Sacramento Tree Foundation
SVC	Sacramento Valley Conservancy
TAZ	Transportation Area Zones

1. Introduction

This Oak Resources Nexus Study (Nexus Study) has been prepared for El Dorado County (County) pursuant to the "Mitigation Fee Act" found in California Government Code 66000. The purpose of this Nexus Study is to establish the legal and policy basis to allow the County to offer two in-lieu fee options for new development within the County to mitigate impacts to these Oak Resources: Oak Woodland Areas (OWAs) and Individual Oak Trees (IOTs), (which include Heritage Oak Trees and Native Oak Trees). The In-Lieu Fees would provide one mitigation option for projects that impact Oak Resources; other mitigation options include replacement tree planting on- or off-site or conserving existing oak woodlands off-site, as described in the draft 2015 Oak Resources Management Plan (ORMP).

Oak Resources Conservation Strategy Background

The County's 2004 General Plan Environmental Impact Report identified substantial fragmentation and/or elimination of Oak Resources by residential and commercial development that would occur as a result of new development in El Dorado County[1]. The projected growth in the County increases the potential for significant oak woodland loss.

In 2008 the County prepared an Oak Woodland Management Plan (OWMP), which outlined the County's strategy for conservation of oak woodland areas. The in-lieu oak woodland mitigation fee was intended to be consistent with a future conservation fund to be established under the Integrated Natural Resources Management Plan (INRMP). The fee was established through an economic analysis that was presented to the Board in April 2008. However, a lawsuit challenging the County's approval of the OWMP and its implementing ordinance (Oak Tree Replacement Ordinance) ultimately resulted in the Board's rescission of the OWMP and its implementing ordinance in September 2012. At the same time, the County decided to update biological resources policies in the General Plan. As part of that update, a draft ORMP based on Board direction has been prepared, including a mitigation fee program for impacts to oak woodlands and individual oak trees. This 2015 Nexus Study reflects the parameters described in the draft ORMP prepared by Dudek in May 2015 and has been prepared to support the in-lieu fee mitigation program component of the draft ORMP.

The draft ORMP also defines mitigation requirements and options for impacts to Oak Resources, which include OWAs and IOTs. IOTs include individual Native Oak Trees and Heritage Trees.

[1] As cited in the draft Oak Resources Management Plan prepared by Dudek, May 2015, page 1.

Overview of 2008 In-Lieu Mitigation Fee

An in-lieu mitigation fee was originally developed concurrently with the 2008 OWMP. Calculation of the 2008 in-lieu fee utilized a Level of Service (LOS) methodology, as opposed to a Capital Improvement Program (CIP) methodology, as the basis for its technical approach. While a CIP approach relies on a fixed set of improvements—in this case a known number of acres that can be acquired for a known cost— the LOS approach relies on a service target or standard—in this case a mitigation ratio and mitigation cost per acre. The 2008 analysis relied on the OWMP standard of conserving existing oak canopy of equal or greater biological value as those lost at a conservation mitigation ratio of 2:1[2].

The 2008 analysis developed a per-acre cost for three broad oak woodland conservation activities: acquisition, management, and monitoring. The study estimated cost assumptions for each activity based on a variety of sources, and then applied these assumptions to a hypothetical conservation easement of approximately 125 acres in size. This parcel size was selected because it reflected the average parcel size within Priority Conservation Areas (PCAs)[3].

The OWMP in-lieu fee study established a total cost of $4,700 per acre of canopy impact to fund the acquisition, management, and ongoing monitoring of oak woodland. Based on the 2:1 mitigation ratio, the 2008 OWMP In-Lieu Fee was established at a rate of $9,400 per acre. **Figure 1.1** provides a summary of the cost and fee per acre.

[2] El Dorado County Oak Woodland Management Plan, April 2, 2008, page 9.

[3] Areas where oak woodland conservation efforts may be focused. The draft ORMP contains a map showing the location of PCAs.

1.1 ***2008 OWMP In-Lieu Mitigation Fee Rate***
2008$

Activity	Amount Per Acre
Cost Components	
Acquisition [1]	$2,300
Management [2]	$1,200
Monitoring [3]	$1,200
Total Cost Per Acre	$4,700
Mitigation Ratio For In-Lieu Fee	2:1
Proposed Fee per Acre	**$9,400**

Prepared by New Economics & Advisory, May 2015.
[1] Conservation easement on rural land acquistion of 125 acres, which is the average parcel size within the PCAs. Acquisition costs include the easement land value (approximately $1,800, or 40% discount value) and conveyance costs.
[2] Includes biological survey/ baseline documentation, weed control, and fuels treatment.
[3] Includes endowment for on-going monitoring.
Source: El Dorado County Oak Woodland Management Plan, April 2, 2008, Page 10, Table 4.

The 2008 analysis did not include an in-lieu fee for individual Heritage Trees or Oak Trees.

As described previously, the 2008 OWMP In-Lieu Fee was only in effect for a limited time because the OWMP itself was the subject of litigation. The County has prepared a draft ORMP reflecting a number of policy changes directed by the County Board of Supervisors. This Nexus Study has been prepared to update the assumptions and costs in support of the in-lieu fee mitigation component of the draft ORMP.

New Proposed Fee: Purpose, Approach, and Amount

Purpose of the Nexus Study and Fee

The purpose of the 2015 El Dorado County Oak Resources Nexus Study is to determine in-lieu fee rates for mitigating impacts to eligible Oak Resources, including OWAs, and IOTs.

This Nexus Study proposes a fee designed to pay the full cost of the mitigation for development impacts, including Acquisition, Initial Management & Monitoring (Initial M&M), Long-Term Management & Monitoring (Long-Term M&M), and associated Administrative functions.

Nexus Study Approach

Typically one of two methodologies is utilized to prepare a nexus study: a CIP approach and a LOS approach. The CIP approach relies on a known amount of improvements that must be funded by the fee program and a known amount of new development that will participate in the fee program. The CIP approach is appropriate when the improvements and scale of new development is known. The LOS approach relies on an established level of service and is used in cases where the amount of development is not certain.

This 2015 Nexus Study is an update to the 2008 in-lieu mitigation fee study and continues to utilize a LOS methodology. LOS standards for Oak Resources mitigation, developed in the draft ORMP, are summarized in **Figure 1.2**. This 2015 Nexus Study also notes that the LOS approach remains preferable because the amount of OWAs and IOTs ultimately conserved by one or more Oak Resources Land Conservation Organization(s) (LCOs) with funds from Oak Resources In-Lieu Fees cannot be reasonably predicted at this time, for the following reasons:

- Impacts to Individual Oak Trees could occur as a result of improvements constructed on property that is already developed, unrelated to new development proposals; the County has no projections for the potential scale at which improvements to existing developed property may occur.
- The amount of impacts to Oak Resources as a result of new development is uncertain because it is not known to what extent land-use plans would avoid and/or lessen impacts to existing Oak Resources.
- For new projects that do impact Oak Resources, the mitigation requirement will depend on the percentage of woodland impact.
- The draft ORMP provides three options to mitigate impacts to Oak Resources. Developers can choose one of the three options to meet their mitigation requirements. The Oak Resources In-Lieu Fees represent one of the three options. It is not known in what proportion each option will be selected; therefore it is not known how much land would be conserved under the in-lieu fees.

Certain development activities are exempted from mitigation requirements, including small parcels that cannot be further subdivided, agricultural activities, creating defensible space/undertaking fire safe measures, qualified affordable housing projects, and certain public roads and public utility projects. **Section 7** of this Nexus Study describes these exemptions in more detail.

1.2 *Standards for Oak Woodland Resources*

2015 Draft ORMP

Standard	Oak Woodland Areas (OWAs)	Individual Oak Trees (IOTs)	
		Heritage Oak Trees	Native Oak Trees
Definition	Oak stand that contains greater than ten percent canopy cover. [1]	Native oak trees, outside of Oak Woodland Areas, with a single main trunk measuring measuring 36 dbh or greater, or with a multiple trunk with an aggregate trunk diameter measuring 36 inches or greater.	Individual oak tree, outside of Oak Woodland Areas, with a single main trunk measuring greater than 6 but less than 36 inches dbh, or with a multiple trunk with an aggregate trunk diameter measuring greater than 10 but less than 36 inches dbh.
Mitigation Ratio	00.1-50.0% of Oak Woodland Impact = 1:1 Ratio 50.1-75.0% of Oak Woodland Impact = 1.5:1 Ratio 75.1-100% of Oak Woodland Impact = 2:1 Ratio	Inch-for-inch replacement at a 3:1 ratio	Inch-for-inch replacement at a 1:1 ratio
Mitigation Obligations	Conservation, Tree Planting, Management & Monitoring	Conservation, Tree Planting, Management & Monitoring	Conservation, Tree Planting, Management & Monitoring
Duration of Conservation	Perpetuity	Seven (7) years	Seven (7) years

[1] The definition of OWAs also includes an oak stand that "may have historically contained greater than ten percent canopy cover," per Article 3.5 (commencing with Section 1360) of Chapter 4 of Division 2 of the Fish and Game Code. However, page 3 of the draft ORMP clarifies that ORMP conservation efforts focus on existing woodlands.

Prepared by New Economics & Advisory, May 2015.

Source: Draft ORMP, May 2015.

For oak woodland impacts that do not fall under an exemption category, mitigation options include on- or offsite tree planting, offsite conservation, and/or in-lieu fee payment. For IOT impacts (including Heritage Oak Trees and Native Oak Trees) that are not otherwise exempt, mitigation options include on- or offsite tree planting and/or in-lieu fee payment. This Nexus Study provides the justification for the in-lieu fee rate for each Oak Resource.

As described previously, the 2008 in-lieu mitigation fee study applied a series of cost estimate assumptions to a hypothetical 125-acre parcel to develop a per-acre fee. In contrast, this 2015 Nexus Study considers actual recent and/or current acquisition and management and monitoring costs faced by LCOs actively conserving oak woodland resources or other tree-dominated habitat. **Section 3** of this Nexus Study provides a complete list of existing LCOs actively acquiring and managing land for the purpose of conserving trees that were studied for purposes of identifying a range of costs. Data was sought for three major conservation activity categories: Acquisition, Initial M&M, and Long-Term M&M. Once the cost ranges were established and reviewed, New Economics & Advisory, in consultation with County staff, determined that costs incurred

by Placer Land Trust (PLT), American River Conservancy (ARC), and planning efforts related to the Placer County Conservation Plan (PCCP) should be prioritized because these organizations/studies provided data specific to oak woodland areas *and* operate primarily within El Dorado County or Placer County; therefore, their data represent the most accurate information pertaining to acquisition as well as management and monitoring costs. Moreover, compared to other adjacent counties (Sacramento County and/or Amador County), the attributes of Placer County's Oak Resources and development patterns are more similar to those of El Dorado County.

Costs incurred by these select LCOs are then averaged. This approach differs from the 2008 in-lieu fee analysis in that this 2015 Nexus Study takes into consideration costs for a variety of locations (rural and urban), terrains (canyon, valley, foothills), and sizes (small, ranch). Based on the recent and/or current costs incurred by these select LCOs, New Economics & Advisory developed an OWA In-Lieu Fee that includes the following components:

- Acquisition (via direct acquisition or conservation easements)
- Initial M&M
- Long-Term M&M
- Fee Program Administration

This 2015 Nexus Study also includes proposed fees for IOTs. Dudek and its subsidiary company, Habitat Restoration Sciences, Inc. (HRS), developed costs for acquisition and planting, as well as seven (7) years of management and monitoring, on a per diameter inch basis. Dudek and HRS researched current purchase prices for 15-gallon oak trees, applied industry standard assumptions for planting costs, and developed a per-acre cost of seven years of management of monitoring for a one-acre re-planting project.

This Nexus Study assumes that the County will administer the Oak Resources In-Lieu Fee program and remit fee revenues to existing or new LCO(s) dedicated to conserving Oak Resources (Oak Resources LCO). The Oak Resources LCO(s) will utilize In-Lieu Fees established herein to acquire and conserve Oak Resources.

Proposed Fee Rate Amounts

Figure 1.3 summarizes the total proposed fee rates for OWAs and IOTs. **Section 3** of this Nexus Study contains the assumptions and analysis supporting each of the OWA rates, while **Section 5** contains the assumptions and analysis supporting each of the IOT rates.

1.3 ***Summary of Fee Rates (2015$)***
El Dorado County Oak Woodland Nexus Study

Item	Oak Woodland Areas (OWAs) 0.01 - 50.0% Impact	Oak Woodland Areas (OWAs) 50.01 - 75.0% Impact	Oak Woodland Areas (OWAs) 75.01 - 100.0% Impact	Individual Oak Trees (IOTs) Heritage Oak Trees	Individual Oak Trees (IOTs) Native Oak Trees
	per acre			*per diameter inch*	
Fee Rate	$7,954	$11,931	$15,908	$558	$186

Prepared by New Economics & Advisory, May 2015.

Oak Woodland Area In Lieu Fee (per acre)

The OWA In-Lieu Fee ranges from $7,954 to $15,908 per acre, depending on the mitigation ratio level. This rate funds the cost of land acquisition, Initial M&M (years 1-5), and Long-Term M&M (years 6-perpetuity).

Individual Oak Tree In Lieu Fee (per diameter inch)

The IOT In-Lieu Fee is $558 per diameter inch for Heritage Oak Trees and $186 per diameter inch for Native Oak Trees. This amount funds the cost of tree acquisition and planting as well as Initial M&M (years 1-7). This Nexus Study presumes that Long-Term M&M costs will be nominal and can be covered by the Oak Resources LCO(s) through maintenance of OWAs.

Administration and Implementation

As stated previously, it is anticipated that the County will collect in-lieu fees and transfer them to one or more Oak Resources LCOs, which will be in charge of acquiring, managing, and monitoring conservation areas and tree planting efforts funded by the in-lieu fees. The proposed fee rates identified above also include a 5 percent administration cost component for County staff to calculate fee obligations, collect fee revenues, transfer revenues to the entity managing conservation efforts, implement annual inflation updates, and periodically update the Nexus Study.

Documents Consulted for the Preparation of This Report

This 2015 Nexus Study references and/or relies upon a number of other documents and interviews with LCOs. **Appendix C** contains a complete list of sources and persons consulted.

Overview of Methodology

The approach utilized to develop the Oak Resources In-Lieu Fees includes the following general steps:

1. Identify the potential scale of new development that may impact existing Oak Resources.
2. For each Oak Resource, define the mitigation requirements and ratio(s).
3. Review the costs associated with mitigation for each Oak Resource. Convert costs to a per-acre basis for OWAs and per diameter inch for IOTs.
4. Establish a fee rate and nexus for each Oak Resource In-Lieu Fee.
5. Review administrative and implementation process for the Oak Resources In-Lieu Fee programs.

Organization of this Nexus Study

The remainder of this Nexus Study is organized in the following manner:

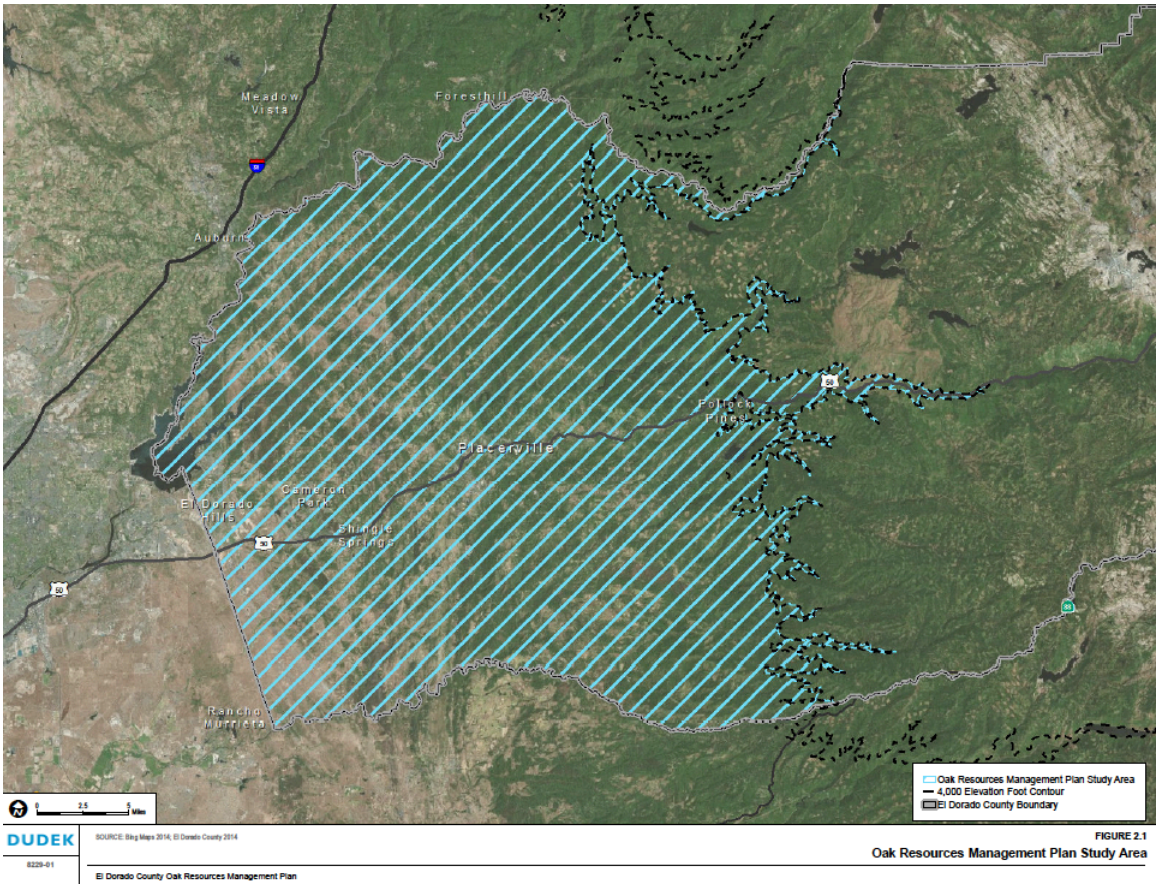
- **Section 2** provides an overview of potential housing unit and employment growth within El Dorado County.
- **Section 3** describes how oak woodland conservation costs were developed.
- **Section 4** establishes the nexus for the proposed OWA In-Lieu Fee.
- **Section 5** explains the development of individual oak tree replacement costs.
- **Section 6** establishes the nexus for the proposed IOT In-Lieu Fee.
- **Section 7** provides implementation procedures to administer the fee programs.
- **Appendix A** contains supporting calculations for OWA conservation costs.
- **Appendix B** contains supporting calculations for the endowment component of the OWA In-Lieu Fee.
- **Appendix C** contains a bibliography for this Nexus Study.

2. Fee Program Boundary, Eligibility, & Standards

This section provides an overview of the boundaries of the Oak Resources In-Lieu Fee program and reviews the type and potential scale of development that may elect to pay the fees.

Fee Program Boundaries

The boundaries for this Nexus Study are the same as those included in the draft ORMP, which include the area bordered by the County's administrative boundary to the north, west, and south and ending at the 4,000-foot elevation to the east as shown in **Figure 2.1.** This area contains the same categories of oak woodlands as described in the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (FRAP) and addressed in the County's 2004 General Plan.



New Development Eligible for In-Lieu Fee Option

Mitigation requirements for impacts to OWAs will apply to any land development project requiring a discretionary entitlement from the County that is subject to review under CEQA and which will have an impact on Oak Resources within the draft ORMP boundaries. Mitigation requirements for IOTs will apply to any activity requiring a building permit or grading permit issued by El Dorado County and/or any action requiring discretionary development entitlements or approvals from El Dorado County within the draft ORMP boundaries. **Section 7** of this Nexus Study contains a description of development activities that are exempt from mitigation requirements for Oak Resources. For non-exempt activities, the draft ORMP provides options for mitigation:

- on- or offsite tree planting[4];
- off-site conservation;
- payment of the In-Lieu Fee; or
- a combination of the above.

The Oak Resources In-Lieu Fees will apply to any eligible, non-exempt development project that chooses to mitigate quantified impacts to Oak Resources by selecting the In-Lieu fee payment option.

Anticipated Growth Through 2035

The projected growth throughout the County is anticipated to impact oak resources. **Figure 2.2** summarizes the scale of development anticipated between 2014 and 2035 within unincorporated areas of the County's Western Slope (the area outside of the Lake Tahoe Basin[5]). This area includes a larger territory than the draft ORMP boundary but is the closest approximation for purposes of this Nexus Study.

Oak Resources Mitigation Standards

LOS standards for Oak Resources mitigation, developed in the draft ORMP, are summarized in **Figure 1.2** in **Section 1** of this Nexus Study. For OWAs, the mitigation ratio depends on the percentage of OWAs impacted. For IOTs, mitigation is based on the total tree trunk diameter inches removed.

[4] As noted in Section 2.2.2 of the draft ORMP, replacement planting shall not account for more than 50 percent of the oak woodland mitigation requirement, consistent with California Public Resources Code Section 21083.4..

[5] SACOG tracks data for multiple Transportation Area Zones (TAZs) that comprise the Western Slope; TAZ 13 appears to include a large area between the boundary of the draft ORMP and the Lake Tahoe Basin.

2.2 *El Dorado County Development Projections 2010-2035*

Category	Units/Jobs 2010	2020	2035	Growth 2010-2035
Housing Units [1]	59,668	66,102	77,077	17,409
Jobs [2]	32,597	38,539	48,675	16,078

Prepared by New Economics & Advisory, May 2015.

[1] From BAE 2035 Growth Projections Memorandum, Table 2: Projected Residential Growth Rates, 2010 to 2035. (Full report citation below). Projection based on historical average annual rate of new units (2000-2011).

[2] From BAE 2035 Growth Projections Memorandum, BAE Memorandum, Table 5: Projected New Jobs by Market Area, 2010-2035. (Full report citation below).

Source: BAE Urban Economics, 2035 Growth Projections Memorandum, March 14, 2013.

3. Costs to Conserve OWAs

New development that impacts existing OWAs will have three options to mitigate impacts: plant replacement trees on- or offsite, conserve oak woodlands off-site, and/or pay an In-Lieu Fee. This section of the Nexus Study describes the costs associated with mitigation through an In-Lieu OWA Fee.

Oak Woodland Areas Overview

Figure 3.1 provides a summary of the different types of Oak Woodland and the number of acres that currently exist in the draft ORMP Study Area (including within the PCAs).

3.1 ***Oak Woodland Types***
El Dorado County, 2015

Oak Woodland Type	ORMP Boundary Total (acres)	Percent
Blue Oak Woodland	42,616	17%
Blue Oak-Foothill Pine	12,915	5%
Coastal Oak Woodland	13	<0.1%
Montane Hardwood	157,455	63%
Montane Hardwood-Conifer	34,322	14%
Valley Oak Woodland	3,434	1%
Total	**250,755**	**100%**

Source: Draft ORMP, Table 1, May 2015.

Impacts to OWAs

As discussed in **Section 5** of the draft ORMP, the number of OWA acres impacted by a project, if any, will be identified in an Oak Resources Technical Report (ORTP) prepared by a qualified professional hired by the project applicant. Should it be determined that OWAs will be impacted, the development project will be subject to the mitigation ratios shown in **Figure 1.2** in **Section 1** of this Nexus Study.

Approach to Estimating Costs

As explained in **Section 1**, this Nexus Study considers actual recent and/or current acquisition and M&M costs faced by LCOs actively conserving oak woodland resources or other tree-dominated habitat. **Figure 3.2** lists these organizations and provides an

3.2 *Select Land Conservation Organizations (LCOs)*
Key Characteristics

Organization	Geographical Areas Covered	Accredited [1]	Entity Structure	Description of Habitat Conserved	Organization's Responsibilities
American River Conservancy (ARC)	Central Sierra Nevada Foothills (El Dorado, Amador, & Placer Counties)	No	501(c)3	Various habitat, recreation access, riparian corridors, oak savannahs.	Promote healthy ecosystems within the Upper American and Upper Cosumnes River watersheds.
Placer Land Trust (PLT)	Placer County (West Placer County)	Yes	501(c)3	Open spaces, natural areas, wildlife habitat, family farms, and working ranches.	Monitor, restore & manage properties to enhance the public value of properties, restore wildlife habitat, etc.
Placer County Conservation Plan (PCCP)	Placer County	N/A	N/A	Natural areas and landscapes containing oak woodland, aquatic and wetland ecosystems, valley foothill riparian, and vernal pool grasslands.	Protect habitat, wildlife, agricultural land, and retain the functionality of ecosystems.
Sempervirens Funds (SF)	Santa Cruz Mountains between Silicon Valley and the Pacific Ocean	Yes	501(c)3	Redwood forests and forest lands.	Conserve land, protect old-growth redwoods, and create refuge and recreation.
Sacramento Tree Foundation (STF)	Sacramento Region Counties	No	501(c)3	Native trees in 6 counties.	Conserve trees for neighborhoods, schools, parks and open spaces. Provide full-service tree mitigation programs and services.
Sierra Foothill Conservancy (SFC)	Fresno, Madera, Mariposa, and Merced	Yes	501(c)3	Wildlife and nature preserves in Sierra Nevada foothills	Protect, manage, administer, and preserve land and wildlife in the Central California area.
Save the Redwoods League (SRL)	Coastal Redwood counties: Humboldt, San Mateo, Napa, Mendocino, Sonoma, Tulare, Monterey, Santa Cruz, and Del Norte	Yes	501(c)3	Redwood forests and surrounding lands	Protect and restore redwood forests.
Sacramento Valley Conservancy (SVC)	Sacramento, Yolo, Sutter, Yuba, Placer, Amador, San Joaquin, Solano Counties	Yes	501(c)3	Open space	Create dedicated open space, facilitation of acquisition, conservation easements and other cooperative efforts.

Prepared by New Economics & Advisory, May 2015.
Sources: New Economics internet research, interviews, and land conservation organization feedback, April-June 2015.
[1] Accreditation through Land Trust Alliance as of May 2015.

indication of the geographic territory they serve, their structure, the type of habitat conserved, and their primary conservation role(s).

These organizations were selected because of their focus on conserving woodland habitat or other tree-dominated habitat. **Figure 3.3** provides an overview of the scale of habitat protected by these LCOs, how this habitat has been protected (via direct acquisition or conservation easement), and the scale of habitat actively managed by each organization. Because some organizations protect a variety of habitat land, (e.g. vernal pools, riparian corridors), acreage shown in this figure includes *all* land protected by the organization, not merely land protected for purposes of conserving woodland habitat.

For each of these LCOs, New Economics & Advisory collected data regarding recent land acquisitions, (including the cost and method), as well as annual management and monitoring costs. These costs were then translated into a "per-acre" basis. Data was gathered from each LCO's website, publicly available financial statements, and/or consultation with LCO staff. **Appendix A** contains the detailed technical research supporting financial calculations for each of the LCOs.

Conservation Activities Overview

This 2015 Nexus Study identifies three stages of conservation:

1. **Acquisition**. This first stage includes due diligence, planning for management and monitoring, and the actual land acquisition transaction.
2. **Initial M&M.** According to interviews with LCO staff, this second stage of conservation typically lasts up to 5 years and includes baseline documentation, fuel management, clearing of debris, establishment of fencing, active monitoring to ensure that OWAs or IOTs are maintained, etc.
3. **Long-Term M&M**. This third stage of conservation is the least onerous and involves periodic fuels management, invasive species management, and repairs on an as-needed basis.

Figure 3.4 provides examples of conservation activities during each of these stages.

3.3 LCO Land Protection Trends
Distribution of Land Holdings and Management

Description	Habitat Protected (Acres) Owned in Fee Title	Held via CE	Other Ownership	Total Protected	Acres Actively Managed [1]
American River Conservancy (ARC)	13,661	1,740	9,583	24,984	15,401
% of Total	*55%*	*7%*	*38%*	*100%*	*62%*
Placer Land Trust (PLT)	3,737	4,029	-	7,766	4,825 [2]
% of Total	*48%*	*52%*	*0%*	*100%*	*62%*
Placer County Conservation Plan (PCCP)	N/A	N/A	N/A	48,250 [3]	N/A
% of Total	*N/A*	*N/A*	*N/A*	*100%*	*N/A*
Sempervirens Fund (SF)	5,180 [4]	354	5,179	10,713	10,713
% of Total	*48%*	*3%*	*48%*	*100%*	*100%*
Sacramento Tree Foundation (STF)	-	NA	NA	NA	30 [5]
% of Total	NA	NA	NA	NA	NA
Sierra Foothill Conservancy (SFC)	6,481	16,721	2,541	25,743	6,481
% of Total	*25%*	*65%*	*10%*	*100%*	*25%*
Save the Redwoods League (SRL)	2,950	22,986	33	200,000	14,454
% of Total	*1%*	*11%*	*0%*	*100%*	*7%*
Sacramento Valley Conservancy (SVC)	7,000	N/A	N/A	20,000	4,062 [6]
% of Total	*35%*	*N/A*	*N/A*	*100%*	*20%*

Prepared by New Economics & Advisory, May 2015.

[1] Each organization manages a combination of land owned in fee title and/or through contracts on land protected via conservation easements. Figures reflect a subset of total protected lands.

[2] Based on budgeted forecasts by acreage provided by Placer Land Trust staff for the 2016-2020 period.

[3] PCCP plans to acquire 48,250 acres of conservation land by 2065. This plan is still being prepared.

[4] Sempervirens Funds co-owns the land they manage. For purposes of this analysis New Economics includes only half of the land co-ownershiped with Peninsula Trust. Sempervirens places conservation easements on land it owns.

[5] In 2014, STF planted and cared for 4,450 trees. At about 150 trees per acre, STF estimates 30 acres of land under management.

[6] Acres managed under Deer Creek Hill Preserve.

Sources: New Economics internet research, interviews, and land conservation organization feedback, April-June 2015.

3.4 ***Typical Conservation Activities-- OWAs***
Acquisition, Management, and Monitoring

Acquisition	Initial M&M [1]	Long-Term M&M
Conservation Easement Acquisition	Biological Surveys/Baseline Documentation	License/Contract Agreement Mgmt.
Direct Property Acquisition	Fuel Load Mgmt.	Fuel Load Mgmt.
Legal Document Prep. & Review	Equipment & Materials Mgmt.	Volunteer Training/Coordination
Site Inspection	Database Mgmt./Reporting	Office Equipment/Computers Maint./Upgrades
Aerial Photos	Photo-Documentation	Endowment Mgmt.
Appraisals	Manage/Transition Cattle/Grazing Leases	Aerial Photos
Due Diligence Surveys/Analyses	Monitoring & Adaptive Management:	Administration/Overhead
Mitigation/CE Negotiations	Reforesting	Infrastructure/Property Maintenance:
	Exotic Species/Plant Removal	Debris/Trash Mgmt.
	Building Removal/Maint.	Weed Control
	Invasive Vegetation/Thatch Mgmt.	Cattle Grazing Monitoring & Mgmt.
	Invasive Species Mgmt.	Water Systems Maint.
		Fence Building & Repairs
		Trail Building & Maintenance
		Erosion/Road Repair & Improvements
		Recreation Use Enhancements

Prepared by New Economics & Advisory, May 2015.
[1] Some Initial M&M tasks are carried over to long-term management and monitoring with less intensity.
Sources: California Council of Land Trust website accessed May 2015; Land Trust Alliance website, accessed May 2015; New Economics internet research, interviews; and land conservation organization feedback, April-June 2015.

Acquisition (Year 0)

Acquisition of OWAs are expected to take one of two forms:

- **Direct Acquisition**. This Nexus Study presumes that the Oak Resources LCO(s) will hold fee title to property conserved through direct acquisition (instead of passing it along to another public agency or non-profit entity). This Nexus Study also assumes that properties conserved via direct acquisition will also be actively managed by the LCO. This assumption is consistent with current practices for many of the LCOs tracked in this analysis.
- **Acquisition of Conservation Easements (CEs)**. Properties protected through the purchase of CE's are expected to remain under the ownership of private landowners holding fee title to such properties. LCO interviews indicated that land protected through CEs is, in some cases, managed by the landowners but nearly always monitored (for compliance purposes) by the LCO. In other cases, the landowner and LCO enter into an M&M contract that specifies the range and cost of M&M services to be provided by the LCO. This 2015 Nexus Study presumes that OWAs protected through CE's will be subject to an active M&M contract between the land owner and Oak Resources LCO and that the LCO will provide the same level of M&M as land owned by the Oak Resources LCO.

In addition to the purchase price for acquisition of property or CE's, other costs included in this category include legal services, appraisals, due diligence, title insurance and escrow fees, and organizational staff time associated with acquisition efforts.

Direct Acquisition Costs

Figure 3.5 contains a summary of direct property acquisition cost trends for LCOs on a per-acre basis. These per-acre figures reflect acquisitions expressly made for purposes of conservation, predominantly within the last five years, and reflect nominal dollars.[6] **Appendix A** contains supporting acquisition information for each LCO, including the purchase price, other acquisition-related costs, and the size of the property. In some cases, LCO staff was able to articulate trends as well as specific transaction details. Recent conservation land costs among LCOs range from $1,000 to nearly $17,000 per acre, but most fall within a range of $2,800 to $12,000 per acre.

New Economics & Advisory then further reviewed per-acre costs incurred within El Dorado County and Placer County, given that these areas provide the most proximate approximations of cost likely to be incurred by one or more Oak Resources LCOs conserving OWAs with funds from Oak Resources In-Lieu Fees.[7] **Figure 3.5** lists data points from the following entities:

- **El Dorado County Assessor's Office.** The Assessor's Office provided a list of land transactions over the last five years for properties that contain OWAs. Of the information provided (see **Appendix A Table A1**), one transaction stood out as a viable comparable because a significant portion of the property contained OWA. This transaction, which dates back to 2012, is included in **Figure 3.5**. The other transactions contained relatively little OWA and their prices per acre reflect their "development" value, as opposed to their potential OWA value.
- **ARC.** ARC provided three direct acquisition transactions as well as a per-acre estimate that staff utilizes for planning purposes. These transactions varied in size from 1,000 to 10,000 acres. Because ARC is about to complete an unusually large land purchase, New Economics & Advisory applied a direct average approach when deriving a per-acre cost for this organization (shown- in **Appendix A Table A2.1**).
- **PLT.** PLT provided two direct acquisition transactions for land containing OWAs; these transactions varied in size from 80 acres to nearly 1,800 acres and costs include purchase price, legal fees, appraisal, title insurance and escrow fees, and staff and administrative time. **Appendix A Table A3.1** contains the detailed documentation of these transactions. Staff also provided their input on current per-acre market prices for oak woodland in different terrains within Placer County.

[6] Real estate transactions are not converted to a single year (i.e. 2015$) owing to varying market conditions over time and by market area. As a result, all transactions are shown in nominal dollars—or the cost incurred in the year they were incurred—and are not inflated to 2015$.

[7] For example, Save the Redwoods League (SRL) makes the bulk of its acquisitions along the California Coast for properties that contain redwood groves; coastal values tend to be significantly high compared to Central Valley values.

3.5 *Direct Acquisition Price Assumption*
LCOs (Nominal Dollars)

Organization	Recent Property Acquisitions: Acres Purchased [1]	Recent Property Acquisitions: Cost per Acre [2]
All LCO Data		
El Dorado County Assessor Comparable Transaction	71	$2,047
American River Conservancy (ARC)	12,139	$5,400 [3]
Planning Estimate Provided by Staff		$5,000
Placer Land Trust (PLT)	1,853	$5,500
Canyon Areas Estimate from Staff [4]	N/A	$3,000 - $4,000
Foothill Areas Estimate from Staff [4]	N/A	$5,000 - $6,000
Valley Areas Estimate from Staff [4]	N/A	$10,000 - $12,000
Oak Woodland Areas Overall Estimate from Staff [3]		$5,500
Sierra Foothill Conservancy (SFC)	2,291	$1,000
Sacramento Valley Conservancy (SVC)	4,062	$2,812
Placer County Conservation Plan (PCCP)	N/A	N/A
Sacramento Tree Foundation (STF)	N/A [5]	N/A
Save the Redwoods League (SRL)	158	$16,772
Sempervirens Fund (SF)	429	$8,886
LCO Data Applied in this Analysis		
El Dorado County Assessor Comparable Transaction	71	$2,047
American River Conservancy (ARC)	12,139	$5,400
Planning Estimate Provided by Staff	N/A	$5,000
Placer Land Trust (PLT)	1,853	$5,500
Canyon Areas Estimate from Staff [4]	N/A	$3,000 - $4,000
Foothill Areas Estimate from Staff [4]	N/A	$5,000 - $6,000
Valley Areas Estimate from Staff [4]	N/A	$10,000 - $12,000
Oak Woodland Areas Overall Estimate from Staff [3]		$5,500
Direct Acquisition Price Applied for this Analysis		**$5,000**

Prepared by New Economics & Advisory, May 2015.

[1] Reflects select recent purchases, based on information provided directly by organizations or taken from their published financial documents.

[2] Reflects weighted average cost of all recent acquisitions, unless otherwise noted.

[3] Reflects straight average of recent acquisitions because one large transaction would otherwise skew the result.

[4] As reported by PLT staff, May 2015.

[5] STF does not own or acquire property.

Source: See Technical Appendix A for supporting calculations.

Data points developed from these three sources provides a narrower range of $2,000 - $12,000, with most points falling between $3,000 and $6,000. New Economics & Advisory selected a direct acquisition price of $5,000 per acre for purposes of this 2015 Nexus Study; this amount falls within the range of prices experienced and/or anticipated by the organizations actively conserving OWAs within closest proximity to El Dorado County and is aligned with the expertise of organizational staff. The selected price is also higher than the mid-point of the range to allow for purchase of non-OWA land included in a parcel that contains the desired amount of OWA acreage.

Conservation Easement Acquisition Costs

CE's tend to provide a more cost effective means of conserving land. **Figure 3.6** provides a summary of recent acquisitions via CE's by LCOs. These per-acre figures reflect CEs entered into expressly for purposes of conservation, predominantly within the last five years. **Appendix A** contains supporting CE information for each LCO, including the purchase price, other acquisition-related costs, and the size of the property. Because CEs are used less often than direct acquisition, there were fewer CE data points; nonetheless, individual easement transactions varied from 26 acres (PLT) to 22,986 (Save the Redwoods League) acres in size. These data points provide a range of $700 - $3,500 per acre.

Interviews with LCO staff revealed the following important caveats regarding valuation of CEs:

- CE's are sometimes chosen over direct acquisition because the subject property has a development restriction already and cannot be developed. For example, a subject property within a larger master planned community may have a vernal pool on it. Other examples of development restrictions can include poor road access, lack of utility connections, steep slope, etc. In these cases, because the property is already prevented or hindered from being developed, the starting appraised value may well be lower than a nearby "comparable" property that can be developed.
- The value for a CE should, theoretically, reflect the value of "development potential," excluding other income potential for the property, primarily associated with grazing and/or timber. LCO staff experienced in appraisals have observed that CE values are often lower than expected by the landowner, which can act as a disincentive to landowners interested in placing a CE on their property. In practice, only properties located in urban areas or areas facing significant development pressures tend to generate enough value for a CE to make financial sense to most landowners.

3.6 *Conservation Easement Value Assumption*

LCO Case Studies (Nominal Dollars)

Organization	Recent Conservation Easement Purchases: Acres [1]	Recent Conservation Easement Purchases: Cost per Acre
All LCOs		
American River Conservancy (ARC)	1,178	$1,585
Placer Land Trust (PLT)	858	$1,600
Sierra Foothill Conservancy (SFC)	6,948	$700
Sempervirens Fund (SF)	151	$3,477
Save the Redwoods League (SRL)	23,364	$771
Placer County Conservation Plan (PCCP)	N/A	N/A
Sacramento Tree Foundation (STF)	N/A	N/A
Sacramento Valley Conservancy (SVC)	N/A	N/A
LCO Data Applied in this Analysis		
American River Conservancy (ARC)	1,178	$1,585
Placer Land Trust (PLT)	858	$1,600
CE Acquisition Price Applied for this Analysis [2]		**$1,600**

Prepared by New Economics & Advisory, May 2015.
[1] Reflects select recent Ces, based on information provided directly by organizations or taken from their published financial documents.
[2] Figure rounded to nearest hundred dollars.
Source: See Technical Appendix A for supporting calculations.

New Economics & Advisory further reviewed per-acre CE costs incurred within El Dorado County and Placer County, given that these areas provide the most proximate approximations of cost likely to be incurred by an Oak Resources LCO conserving OWAs with funds from Oak Resources In-Lieu Fees. **Figure 3.6** lists data points from the following entities:

- **ARC.** ARC provided one recent CE for a 1,200-acre easement. Costs included the purchase price as well as a contribution to an Endowment Fund; the endowment contribution was included in the cost because the purchase price could have been increased without this contribution.
- **PLT.** PLT provided five recent CEs transactions; these transactions varied in size from 26 to 350 acres and costs include purchase price, legal fees, mitigation contracts, and contributions to a Stewardship Fund. The Stewardship Fund contribution was included in the cost because the purchase price could have been increased without this contribution. **Appendix A Table A3.1** contains the

detailed documentation of these transactions. Staff also provided their input on current per-acre market prices for oak woodland in different terrains within Placer County.

Data points developed from these two sources provides an estimate of $1,600 per acre for CE costs. New Economics & Advisory selected this cost for purposes of this 2015 Nexus Study; this amount falls within the range of prices experienced and/or anticipated by the organizations actively conserving OWAs within closest proximity to El Dorado County.

Calculation of Overall Acquisition Cost Per Acre Assumption

The Acquisition Component of the OWA In-Lieu Fee should account for both direct acquisitions and acquisitions via CEs. **Figure 3.7** indicates a range of 7% to 65% of total land acquired through CEs (as opposed to direct acquisition), with a weighted average of 18%. When considering only ARC and PLT, the range is slightly smaller—7% to 52%-- but the weighted average remains 18%. This 2015 Nexus Study applies this same proportionality of direct acquisition versus acquisition via CE's. **Figure 3.7** calculates an Acquisition cost per acre for OWAs based on this proportionality.

3.7 *Weighted Average Acquisition Cost Per Acre*
Nominal Dollars

Organization	Total Acres Protected	CE's as a % of Total [1]
All LCOs		
American River Conservancy (ARC)	24,984	7%
Placer Land Trust (PLT)	7,766	52%
Placer County Conservation Plan (PCCP)	48,250	N/A
Sierra Foothill Conservancy (SFC)	25,743	65%
Save the Redwoods League (SRL)	200,000	11%
Weighted Average of Land Acquired via CE	[2]	**18%**
LCO Data Applied in this Analysis		
American River Conservancy (ARC)	24,984	7%
Placer Land Trust (PLT)	7,766	52%
Weighted Average of Land Acquired via CE		**18%**
Calculation of Average Acquisition Cost Per Acre		
Average Direct Acquisition Cost Per Acre	$5,000	82%
Average CE Cost Per Acre	$1,600	18%
Weighted Average Acquisition Cost Per Acre [3]	**$4,400**	

Prepared by New Economics & Advisory, May 2015.

[1] Based on total protected land shown in Figure 1.3.

[2] Excludes STF (which does not own or acquire property), SVC (for lack of information), and PCCP (for lack of information).

[3] Figure rounded to nearest hundred dollars.

Source: See Technical Appendix for supporting calculations.

Management & Monitoring (M&M)

The draft ORMP requires that OWAs be actively managed and maintained in perpetuity. An Initial M&M stage consists of one-time activities (certain one-time tasks that must be performed), as well as specific M&M efforts conducted over the first few years to ensure that the OWAs are brought up to a manageable condition. The Long-Term M&M stage begins when Initial M&M activities come to an end and less intensive M&M activities are needed. **Figure 3.4** provides examples of these activities.

Figure 3.8 summarizes estimated M&M on a per-acre basis for LCOs; costs range from $16 (from planning efforts associated with the Placer County Conservation Plan [PCCP])

to $9,800 (Sacramento Tree Foundation [STF])[8] per managed acre, but tended to fall mostly within a range of $35 to $42 per managed acre.

3.8 ***Annual M&M Costs -- Case Study LCOs***
2015$

Organization	Managed Acres	Annual M&M Costs per Acre
All LCOs		
Placer County Conservation Plan (PCCP)	N/A	$16.34
Sempervirens Fund (SF)	10,713	$35.76
Sacramento Valley Conservancy (SVC)	4,062	$37.32
American River Conservancy (ARC)	15,401	$40.00
Placer Land Trust (PLT)	4,825	$42.37
Sierra Foothill Conservancy (SFC)	6,481	$100.77
Save the Redwoods League (SRL)	14,454	$273.45
Sacramento Tree Foundation (STF)	30	$9,733.65
LCO Data Applied in this Analysis		
American River Conservancy (ARC)	15,401	$40.00
Placer Land Trust (PLT)	4,825	$42.37
Weighted Avg M&M Costs		$40.57
Monitoring & Management Applied in Nexus Study [1]		**$41.00**

Prepared by New Economics & Advisory, May 2015.
[1] Figures rounded to the nearest whole dollar.
Source: See Technical Appendix for supporting calculations.

New Economics & Advisory derived these estimates based on recent publicly available financial statements, consultation with organizational staff, and information gleaned from the organization's web site and/or annual reports. M&M costs generally include conservation activities for active M&M as well as a proportionate share of overhead and administrative costs. **Appendix A** contains detailed financial calculations supporting M&M costs for each LCO.

New Economics & Advisory further reviewed per-acre CE costs incurred by organizations actively managing OWAs in El Dorado County and/or Placer County, given that these areas provide the most proximate approximations of cost likely to be incurred by an Oak

[8] STF's primary mission is to plant trees as opposed to maintaining existing woodland.

Resources LCO conserving OWAs with funds from Oak Resources In-Lieu Fees. **Figure 3.8** lists data points from the following entities:

- **ARC.** ARC staff provided a verbal estimate of $35-40 per acre to manage oak woodland areas located on ranch-size properties (1,000 acres+); this amount includes 15-20% overhead. Staff also pointed out that annual M&M costs can be more expensive for smaller properties, properties located in urban areas, or properties that provide recreational access. New Economics & Advisory applied the high end of the range for purposes of this 2015 Nexus Study to provide buffer for properties that cost more to manage and monitor.
- **PLT.** PLT provided M&M costs for four conservation properties recent CEs transactions; these costs include active M&M, 15% overhead, and maintenance of field equipment. PLT also cited the need for periodic surveys and aerial photos, but has not yet performed any of these on oak woodland properties.

Appendix A contains the detailed documentation supporting these cost estimates.[9]

Initial M&M

Initial M&M includes one-time costs spread over the first few years of managing and monitoring a conservation property as well as five years of typical M&M annual costs. One-time costs typically include baseline documentation, fuel management, clearing of debris, establishment of fencing, active monitoring to ensure that OWAs are maintained, etc. LCO staff confirmed that Initial M&M costs are higher than Long-Term M&M costs; also, the Initial M&M stage lasts 2-5 years, to allow the LCOs to spread one-time costs over a number of years.

Existing LCOs were unable to parse out the cost of Initial M&M activities. In some cases, Initial M&M costs are factored into the Acquisition price (in the form of M&M contracts, as well as a portion of contributions to a Stewardship Fund and/or Endowment Fund). Also, Initial M&M costs can vary significantly depending on the nature and needs of the property; for example, to the extent that a property is located in an urban area and/or has public access, Initial M&M costs tend to be higher because of the need to address recreation access, trespassing, dumping, fencing, etc.

However, PCCP planning efforts have considered Initial M&M activities for oak woodlands and other habitat; based on the financial planning worksheets developed by the PCCP, **Figure 3.9** provides an indication of one-time costs that can be incurred during the Initial M&M period.

[9] Estimated M&M costs for the PCCP were excluded from the final M&M cost per acre calculation because, at the time of preparing this Nexus Study, Placer County staff knowledgeable about oak woodland management were unavailable to provide clarifications regarding why this planning effort appeared to have a much lower cost per acre compared to other organizations actively engaged in M&M efforts.

3.9 *M&M Costs - Potential One-Time Costs*

2015$

Expenditure	Amount	Metric	Cost Per Acre
One-Time Activities (Year 0) [1]			
County Field Facilities Contribution [2]	$500,000	Projected 48,250 acres within 50-yr permit period.	$10.36
Oak Woodland Fuel Load Mgmt.	$1,800	Initial One-Time Cost per acre.	$1,800.00
Subtotal One-Time Activities			$1,810.36
Inflated to 2015$			$2,104.22
One-Time Costs Applied in this Analysis [3]			**$2,104.00**

Prepared by New Economics & Advisory, May 2015.

Source: Woodland Restoration Potential: Placer County Conservation Plan, Richard R. Harris, Ph.D., February 2013; and PCCP Cost Model 2013 Working Draft 9/23/2013.

[1] Reflects cost of one-time activities conducted shortly after undertaking management and monitoring responsibilities.

[2] This estimated cost is currently incurred by Placer County as estimated for purposes of developing the Placer County Conservation Plan (PCCP). To ensure full funding, New Economics has integrated this cost into Initial M&M.

[3] Figure rounded to nearest dollar.

In addition to these one-time costs, this analysis assumes that the Oak Resources LCO(s) will incur typical annual M&M costs shown in **Figure 3.8**. As a result, the Initial M&M period will include both one-time costs and annual M&M costs. This 2015 Nexus Study includes an Initial M&M period of five (5) years based on recommendation of LCOs and standard practices.

Figure 3.10 provides the total cost per acre for Initial M&M.

3.10 ***M&M Costs -- OWAs***
2015$

Item	Cost per Acre
Initial M&M (Yrs. 1-5)	
One-Time Costs	$2,104
M&M Costs (Yrs. 1-5) [1]	$205
Total Initial M&M Costs	$2,309
Initial M&M Costs Applied in this Analysis [2]	**$2,300**

Prepared by New Economics & Advisory, May 2015.
[1] Reflects annual cost of $41 over five years.
[2] Figure rounded to nearest one hundred dollars.

Long-Term M&M

The draft ORMP requires M&M in perpetuity for OWAs. As a result, the OWA In-Lieu Fee is designed to fund annual M&M in perpetuity to ensure that conservation land can be adequately maintained over time. **Figure 3.8** establishes an annual M&M cost of $41 per acre; this figure forms the basis for Long- Term M&M costs on a per-acre basis.

Endowment Calculations

To ensure that Long-Term M&M can be provided in perpetuity, it is expected that Oak Resources LCOs will create an Endowment Fund whose annual interest accrual can be utilized to fund annual M&M. This 2015 Nexus Study establishes a Long-Term M&M Fee Component that reflects a contribution to an Endowment Fund.

New Economics & Advisory reviewed endowment rates utilized to establish other habitat-related fee programs, ten-year averages tracked by the National Association of College and University Business Officers (NACUBO), and goals established by select LCOs. These sources indicate that long-term interest rates range from 3 to 6 percent annually. **Technical Appendix B** contains documentation of this research.

Based on this range, New Economics & Advisory calculated an Endowment component for the OWA In-Lieu Fee that generates sufficient interest beginning in Year 8 to cover Long-Term Annual M&M costs. **Figure 3.11** calculates the lump-sum per-acre contribution needed to achieve 4% annual interest earnings that can fully fund annual M&M in perpetuity. **Figure 3.12** summarizes the resulting lump-sum contribution needed, on a per-acre basis, to create sufficient interest earnings to fully fund Long-Term M&M costs, at three different interest-earning rates, beginning in Year 8. **Technical Appendix B** provides the back-up technical documentation supporting the 3% and 6% interest rate. For purposes of establishing an Endowment component for this

3.11 *Endowment Cash Flow Projections (2015$ constant dollars)*

4.0% annually

Item	Assumption	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Habitat Acres Maintained		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Annual Maintenance Cost	$41 per acre	$41	$41	$41	$41	$41	$41	$41	$41	$41	$41
Portion Prepaid by Initial M&M Fee Component [1]		$41	$41	$41	$41	$41	$0	$0	$0	$0	$0
Remaining Annual Maintenance Cost		$0	$0	$0	$0	$0	$41	$41	$41	$41	$41
Endowment Fund											
Opening Balance		$0	$875	$910	$946	$984	$1,024	$1,024	$1,024	$1,025	$1,025
Interest Earnings [2]	4.0% annually	$0	$35	$36	$38	$39	$41	$41	$41	$41	$41
New Fee Revenue Available	$875 per acre	$875	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Balance		$875	$910	$946	$984	$1,024	$1,065	$1,065	$1,065	$1,066	$1,066
Amount Applied Toward O&M Cost		$0	$0	$0	$0	$0	$41	$41	$41	$41	$41
Closing Balance		$875	$910	$946	$984	$1,024	$1,024	$1,024	$1,025	$1,025	$1,026

Prepared by New Economics & Advisory, May 2015.

[1] This amount is to be provided by developers up-front to fund 5 years of maintenance.

[2] Interest earnings are applied to previous year's ending balance.

fee study, the OWA In-Lieu Fee assumes the middle interest rate (4%) earnings assumption.

3.12 ***Endowment Fee Component-- OWAs***
2015$

Item	Cost per Acre
Endowment Fee	
Assuming 6.0% annual interest	$550
Assuming 4.0% annual interest	$875
Assuming 3.0% annual interest	$1,250
Endowment Fee Applied in this Analysis	$875

Prepared by New Economics & Advisory, May 2015.
Source: See Technical Appendix for supporting calculations.

Administration

As described in more detail in **Section 7** of this Nexus Study, the County will be responsible for administration of the Oak Resources Fees. Administrative duties will include the calculation and collection of the fees, tracking of deposits, preparation of required reports, performance of annual inflation adjustments, and periodic updates to the Oak Resources In-Lieu Fees Nexus Study. The County also intends to track the location of OWAs purchased with In-Lieu Fee revenues; this effort is expected to require mapping services using Geographic Information Systems (GIS) or similar software. As such, the OWA In-Lieu Fee will include a 5% administrative cost for these administrative functions.

Total Costs

Figure 3.13 provides a summary of the total cost per acre to conserve OWAs through the In-Lieu fee program. This rate includes Acquisition, Initial M&M, Long-Term M&M, and Administration.

3.13 *OWA Conservation Cost Components Per Acre (2015$)*

Item	Amount Per Acre
Cost Components	
Acquisition (Direct or CE)	$4,400
Initial M&M (Years 1-5)	$2,300
Endowment (for Long Term M&M) [1]	$875
Subtotal Cost per Acre	**$7,575**
Administration (5%)	$379
Total Cost Per Acre	**$7,954**

Prepared by New Economics & Advisory, May 2015.

Source: See Technical Appendix for supporting calculations.

[1] Assumes that the Endowment Fund will generate interest earnings of 4%, enough to cover the cost of providing annual M&M monitoring in perpetuity.

4. Nexus, Fee Calculation, & Fee Act Findings – OWA In-Lieu Fee

This section documents the nexus for the study, calculates the proposed rates for the OWA In-Lieu Fee, and documents the findings of this Nexus Study consistent with the Mitigation Fee Act.

Nexus Requirements

In order to impose habitat conservation impact fees, this Nexus Study demonstrates that a reasonable relationship or "nexus" exists between new development that occurs within the County and the need to conserve OWA as a result of new development. More specifically, this Nexus Study presents the necessary findings in order to meet the procedural requirements of the Mitigation Fee Act, also known as AB 1600. The requirements are as follows:

1. Identify the purpose of the fee;
2. Identify the use to which the fee is to be put;
3. Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed;
4. Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed;
5. Determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed.

Step 1: Purpose of the Fee

The OWA In-Lieu Fee proposed by this Nexus Study is designed to fund mitigation of impacts to OWAs in the County through acquisition and conservation of similar types of OWAs elsewhere in the County.

The OWA In-Lieu Fee is intended to pay the full cost of acquiring, managing, and monitoring OWAs.

Step 2: Use of the Fee

The OWA In-Lieu Fee will be used to acquire OWA through direct property acquisition or acquisition of conservation easements; to conduct Initial M&M activities and Long-Term M&M activities designed to ensure conservation in perpetuity.

Step 3: Reasonable Relationship Between Fee Use & Development

The conservation of OWAs promotes the health, safety, and general welfare of El Dorado County by protecting significant historical heritage values, enhancing the beauty and complementing and strengthening zoning, subdivision and land use standards and

regulations, while at the same time recognizing individual rights to develop private property.

The General Plan identifies the following overarching objectives (County of El Dorado 2004) that relate to the relationship between the proposed fee and new development:

- To foster a rural quality of life;
- To sustain a quality environment;
- To conserve, protect, and manage the County's abundant natural resources for economic benefits now and for the future;
- To accomplish the retention of permanent open space/natural areas on a project-by-project bases through clustering;

The Conservation and Open Space Element further identifies the following Goals for biological resources (County of El Dorado 2004):

- Goal 7.4: Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

The conservation of OWAs enhances the County's natural scenic beauty, sustains the long-term potential increase in property values which encourages quality development, maintains the area's original ecology, retains the original tempering effect of extreme temperatures, increases the attractiveness of the County to visitors, helps to reduce soil erosion, and increases the oxygen output of the area which is needed to combat air pollution.

The development of new residential and non-residential land uses in the County may impact existing OWAs. The proposed OWA In-Lieu Fee, charged according to the impact on OWAs, will be used to acquire and conserve other OWAs in perpetuity.

A reasonable relationship exists between the need for the OWA In-Lieu Fee and new development that would pay the fee.

Step 4: Reasonable Relationship Between Conservation Need & Development

Each new development project that impacts OWAs must mitigate these impacts through replacement tree planting on- or off-site, offsite conservation, and/or payment of an OWA In-Lieu Fee. The fee is designed to mitigate the impacts of removing OWA. The costs associated with the Acquisition, Initial M&M, and Long-Term M&M of OWAs are accounted for in the OWA In-Lieu Fee.

Step 5: Reasonable Relationship[10] Between Fee Amount & Mitigation Cost

The amount of the OWA In-Lieu Fee is proportional to the cost of mitigating impacts to OWAs by new development; the in-lieu fee paid by new development is calculated based on the the mitigation requirements set forth in the draft ORMP and the cost to meet said requirements. Should new development choose the in-lieu fee option, the fee amount will be based on the scale of impacts and the mitigation ratio for that scale of impacts.

Fee Calculation

This Nexus Study provides the basis upon which a new OWA In-Lieu Fee is calculated. **Figure 4.1** summarizes the detailed cost components, shown on a per-acre basis, associated with acquisition, Initial M&M, and Long-Term M&M of OWAs actively managed by the LCO. To this total cost, an administrative component of 5% is added to cover the cost of administering and updating the fee program, calculating total fee obligations for each development opting to pay the OWA In-Lieu Fee, collecting fee revenues, and transferring these revenues to one or more Oak Resources LCO(s).

4.1 ***Detailed OWA Cost Composition per Acre (2015$)***

Item	Amount per Acre
OWA Cost Components	
Acquisition	$4,400
Initial M&M (Years 1-5)	$2,300
Endowment (for Long Term M&M)	$875
Subtotal Cost	**$7,575**
Administration (5%)	$379
Total Cost	**$7,954**

Prepared by New Economics & Advisory, May 2015.

Figure 4.2 shows the resulting fee, according to the level of OWA Impacts, made by new development. These rates would be set uniformly within the draft ORMP boundary (delineated in **Figure 2.1** in **Section 2**), and would be charged per OWA acre impacted.

[10] California State Code does not define "reasonable relationship" but it is certainly broader than the "proportionate benefit" requirement for assessments (California Government Code 36620-36630). Over time the phrase "reasonable relationship" has been interpreted by preparers of fee studies to mean that there is a logical connection between the purpose of the fee and the rate assigned to those paying the fee.

As described previously, impacted OWAs will be identified in an ORTR prepared by a qualified professional retained by the Project Applicant during the development review process.

4.2 ***Oak Woodland Area In-Lieu Fee Rates***
2015$

Item	Oak Woodland Areas		
	0.01 - 50.0% Impact	50.01 - 75.0% Impact	75.01 - 100.0% Impact
	per acre		
Cost Per Acre	$7,954	$7,954	$7,954
Mitigation Ratio	1.0 : 1	1.5 : 1	2.0 : 1
Total Fee Per Acre	**$7,954**	**$11,931**	**$15,908**

Prepared by New Economics & Advisory, May 2015.

Fee Calculation Example

For example, if a developer wanted to remove 60% of a 10-acre OWA by paying the OWA In-Lieu Fee, the fee would be calculated as follows:

1. Acres Impacted: 10 acres times 60% = 6 acres
2. Cost Per Acre = $7,954 per acre
3. Mitigation Ratio = 1.5 : 1.0
4. Mitigation Fee Per Acre (1.5 times $7,954) = $11,931
5. Fee = 6 acres times $11,931 per acre = $71,586 OWA In-Lieu Fee.

5. Costs to Replace IOTs

New development that impacts IOTs will have two options to mitigate impacts: plant replacement trees on- or offsite and/or pay an In-Lieu Fee.[11]. This section of the Nexus Study describes the costs associated with mitigation through an IOT In-Lieu Fee.

Conservation Overview

For individual IOTs, the in-lieu fee is based on a diameter inch-for-inch replacement approach. This approach accounts for costs associated with acquisition and planting, expressed on a "per 1 inch of trunk diameter" basis.

It is expected that the Oak Resources LCO(s) will incur one cost to acquire and plant replacement trees, and another cost to conduct management and monitoring during an Initial M&M period of seven (7) years. This time period is a requirement of the draft ORMP, consistent with state regulations (California Public Resources Code Section 20183.4). **Figure 5.1** provides examples of conservation activities during each of these stages.

5.1 ***Typical Conservation Activities-- IOTs***
Acquisition, Management, and Monitoring

Acquisition/Planting	Initial M&M
Planting	Irrigation
Tree Acquisition	Weed Control
Due Diligence Surveys/Analyses	Staking
Aerial Photos	Mulching
	Minor Canopy Pruning
	Monitoring
	Removal of Irrigation or Protection Materials at the end of the Maintenance Period
	Installation of Above/Below Ground Protection Devices (cages, tubes, etc.)
	Pest and Disease Control (application of herbicide, fungicide, etc.)

Prepared by New Economics & Advisory, May 2015.
Sources: California Council of Land Trust website accessed May 2015; Land Trust Alliance website, accessed May 2015; New Economics internet research, interviews; and land conservation organization feedback, April-June 2015.

[11] On- or off-site mitigation would require a conservation easement to ensure conservation in perpetuity.

This Nexus Study assumes that IOT In-Lieu Fees will be used to plant replacement trees on properties owned and managed by the Oak Resources LCO(s); this assumption was developed in consultation with LCOs, whose staff confirmed that they only plant new trees on property they own, and not on property for which they only hold a CE.

As such, Long Term M&M costs for these replacement trees will be absorbed into the costs of managing and monitoring land acquired primarily for purposes of conserving OWAs. Therefore, no incremental Long-Term M&M cost component is included in the IOT In-Lieu Fee.

Acquisition and Planting (Year 0)

Dudek developed costs for purchasing and planting IOTs. The estimated cost for the equivalent of one inch of trunk diameter is a 15-gallon size native oak tree; the median price of 15-gallon oak trees was calculated from a survey of eight nurseries in El Dorado County and the surrounding region. Consistent with standard landscape/habitat restoration industry practices, this median price ($60) was then doubled to account for costs associated with planting (inclusive of labor and materials), as described in the draft ORMP. The resulting per-inch individual native oak tree mitigation fee is $120.00, as shown in **Figure 5.2**

5.2 *IOT Tree Acquisition Price*
Local Nurseries (2015$)

Nursery	Location	Price
Nursery Purchase Price [1]		
Oracle Oak Nursery	Hopland	$60.00
Internal Nursery	Prather	$59.00
Front Yard Nursery	Placerville	$79.00
El Dorado Nursery	Shingle Springs	$89.00
Green Acres	Folsom	$70.00
Urban Tree Farm	Fulton	$58.00
High Ranch Nursery	Loomis	$58.25
Big Oak Nursery	Elk Grove	$60.00
Median Cost		$60.00
Estimated Acquisition Cost [2]		$120.00

Prepared by New Economics & Advisory, May 2015.
Source: Dudek, June 2015.
[1] 15-gallon oak trees at local nurseries.
[2] Doubling the tree acquisition price is a standard industry approach utilized to estimate total planting costs.

Initial M&M (Years 1-7)

Figure 5.3 shows the cost of conducting Initial M&M for IOTs on a per diameter-inch basis. Habitat Restoration Sciences, Inc. (HRS), a subsidiary of Dudek, provided this cost estimate, based on a hypothetical tree planting scenario. The estimated amount includes costs associated with ensuring that the replacement tree grows properly; irrigation, ground protection, pruning and disease control (as listed in **Figure 4.1**) are some of the active management efforts undertaken during this stage.

5.3 *IOT Initial M&M Cost Assumption*
2015$

Item	Per Acre Cost (1,000 15-gallon) [1],[2]	Avg. Annual M&M [3]
IOT Initial M&M		
Year 1	$6,000	$10,800
Year 2	$5,500	$9,900
Year 3	$5,000	$9,000
Year 4	$4,500	$8,100
Year 5	$4,000	$7,200
Year 6	$3,500	$6,300
Year 7	$3,000	$5,400
Subtotal Costs (Yr 1-7)		$56,700
Cost Per Tree/Diameter Inch (Yr 1-7) [4]		$56.70
Average Annual Cost Per Tree/Diameter Inch [4]		$8.10

Prepared by New Economics & Advisory, May 2015.
Source: Habitat Restoration Sciences, Inc., June 2015.

[1] Assumes a hypothetical planting of 1,000 15-gallon oak trees (each tree representing one diameter inch). Assumes a radius of 5 feet around each planting location. Therefore the total site area is 1.80 acres; this calculation was made by HRS.

[2] If total area is less than one acre, unit cost may need to increase to account for overhead costs.

[3] Unit price per acre per year typically will not drop below $2,500 per acre.

[4] The analysis assumes that one 15-gallon oak tree is representative of one diameter inch for a replacement tree.

Administration

As described in more detail in **Section 7** of this Nexus Study, the County will be responsible for administration of the Oak Resources Fees. Administrative duties will include the calculation and collection of the fees, tracking of deposits, preparation of

required reports, performance of annual inflation adjustments, and periodic updates to the Oak Resources In-Lieu Fees Nexus Study. The County may also desire to track the location of IOTs planted with In-Lieu Fee revenues; this effort is expected to require mapping services using Geographic Information Systems (GIS) or similar software. As such, the IOT In-Lieu Fee will include a 5% administrative cost for these administrative functions.

Total Costs

Figure 5.4 provides a summary of the total cost per acre to replace IOTs through an In-Lieu fee program. This rate includes Acquisition, Initial M&M, and Administration.

5.4 ***IOT Conservation Cost Components***
Per Diameter Inch (2015$)

Item	Amount per Diameter Inch
IOT Cost Components	
Acquisition	$120.00
Initial M&M (Years 1-7)	$56.70
Endowment (for Long Term M&M) [1]	N/A
Subtotal Cost	$176.70
Administration (5%)	$8.84
Cost per Diameter Inch	$185.54
Total Cost Per Diameter Inch (Rounded) [2]	**$186.00**

Prepared by New Economics & Advisory, May 2015.

Source: See Technical Appendix for supporting calculations.

[1] Replacement trees will be planted on land owned and managed by the land conservation organization also overseeing Oak Woodland Areas; Long-Term M&M costs are expected to be nominal and will be absorbed into the Oak Resource LCO's overall M&M costs.

[2] Total rounded to nearest whole dollar.

6. Nexus, Fee Calculation, and Fee Act Findings – In-Lieu Individual Oak Tree Fee

This section documents the nexus for the study, calculates the proposed rates for the IOT In-Lieu Fee, and documents the findings of this Nexus Study consistent with the Mitigation Fee Act.

Nexus Requirements

In order to impose habitat conservation impact fees, this Nexus Study demonstrates that a reasonable relationship or "nexus" exists between new development that occurs within the County and the need to conserve and replace IOTs as a result of new development. More specifically, this Nexus Study presents the necessary findings in order to meet the procedural requirements of the Mitigation Fee Act, also known as AB 1600. The requirements are as follows:

1. Identify the purpose of the fee;
2. Identify the use to which the fee is to be put;
3. Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed;
4. Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed;
5. Determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed.

Step 1: Purpose of the Fee

The IOT In-Lieu Fee proposed by this Nexus Study is designed to fund mitigation of impacts to IOTs in the draft ORMP boundaries through replacement planting elsewhere in the County.

The IOT In-Lieu Fee is intended to pay the full cost of tree acquisition, planting, and maintenance for a 7-year period.

Step 2: Use of the Fee

The IOT In-Lieu Fee will be used to acquire and plant individual replacement trees and perform M&M activities for a period of 7 years.

Step 3: Reasonable Relationship Between Fee Use & Development

The replacement of IOTs promotes the health, safety, and general welfare of El Dorado County by protecting significant historical heritage values, enhancing the beauty and

complementing and strengthening zoning, subdivision and land use standards and regulations, while at the same time recognizing individual rights to develop private property.

The replacement of IOTs enhances the County's natural scenic beauty, sustains the long-term potential increase in property values which encourages quality development, maintains the area's original ecology, retains the original tempering effect of extreme temperatures, increases the attractiveness of the County to visitors, helps to reduce soil erosion, and increases the oxygen output of the area which is needed to combat air pollution.

The General Plan identifies the following overarching objectives (County of El Dorado 2004) that relate to the relationship between the proposed fee and new development:

- To foster a rural quality of life;
- To sustain a quality environment;
- To conserve, protect, and manage the County's abundant natural resources for economic benefits now and for the future;
- To accomplish the retention of permanent open space/natural areas on a project-by-project bases through clustering;

The Conservation and Open Space Element further identifies the following Goal for biological resources (County of El Dorado 2004):

- Goal 7.4: Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

The development of new residential and non-residential land uses in the County may result in a loss of existing IOTs. The proposed IOT In-Lieu Fee, charged according to the impact on IOTs, will be used to acquire and plant replacement trees and maintain them for a period of 7 years.

A reasonable relationship exists between the need for the IOT In-Lieu Fee and new development that would pay the fee.

Step 4: Reasonable Relationship Between Conservation Need & Development

Each new development project that impacts IOTs must mitigate these impacts through replacement tree planting on- or off-site and/or payment of an IOT In-Lieu Fee. The fee is designed to mitigate the impacts of removing Heritage Oak Trees or Native Oak Trees outside of OWAs. The costs associated with the acquisition and planting and maintenance for a period of 7 years is accounted for in the respective In-Lieu Fee program.

Step 5: Reasonable Relationship[12] Between Fee Amount & Mitigation Cost

The amount of the IOT In-Lieu Fee for impacts to Individual Oak Trees is proportional to the cost of mitigating impacts to IOTs for non-exempt development activities; the in-lieu fee amount is calculated based on the the mitigation requirements set forth in the draft ORMP and the cost to meet said requirements. Should a project proponent for non-exempt activities choose the in-lieu fee option, the fee amount will be based on the size (total number of diameter inches) of the impacted tree(s).

For example, a removed Native Oak Tree with a 10-inch trunk diameter would require mitigation for 10 diameter inches, based on the inch-for-inch replacement requirement in the draft ORMP. The IOT In-Lieu Fee assumes that a 15-gallon size replacement tree equals 1 inch in trunk diameter; therefore, mitigation for removal of a 10-inch native oak tree requires planting and maintenance of 10 15-gallon trees.

Fee Calculation

This Nexus Study provides the basis upon which a new IOT In-Lieu Fee is calculated. **Figure 6.1** summarizes the detailed cost components, shown on a per-diameter inch basis, associated with acquisition/planting and maintenance for 7 years undertaken by the Oak Resources LCO(s). To this total cost, an administrative component of 5% is added to cover the cost of administering and updating the fee program, calculating total fee obligations for each development opting to pay the IOT In-Lieu Fee, collecting fee revenues, and transferring these fee revenues to the Oak Resources LCO(s).

[12] California State Code does not define "reasonable relationship" but it is certainly broader than the "proportionate benefit" requirement for assessments (California Government Code 36620-36630). Over time "reasonable relationship" has been interpreted by preparers of fee studies to mean that there is a logical connection between the purpose of the fee and the rate assigned to those paying the fee.

6.1 Detailed IOT Cost Composition
2015$

Item	Amount per Diameter Inch
Cost Components	
Acquisition	$120.00
Initial M&M (Years 1-7)	$56.70
Endowment (for Long Term M&M) [1]	N/A
Subtotal Cost	$176.70
Administration (5%)	$8.84
Cost per Diameter Inch	$185.54
Total Cost (Rounded) [2]	**$186.00**

Prepared by New Economics & Advisory, May 2015.

[1] Replacement trees will be planted on land owned and managed by the land conservation organization also overseeing Oak Woodland Areas; Long-Term M&M costs are expected to be nominal and will be absorbed into the Oak Resource LCO's overall M&M costs.

[2] Total rounded to nearest whole dollar.

Figure 6.2 shows the resulting fee, according to the cost and mitigation ratio, made by new development, for Heritage Oak Trees compared to Native Oak Trees. These rates would be set Countywide within the draft ORMP boundary, and would be charged on a per IOT tree diameter inch impacted.

6.2 IOT In-Lieu Fee Rates
2015$

Item	Heritage Oak Trees	Native Oak Trees
	per diameter inch	
Cost Per Acre	$186	$186
Mitigation Ratio	3 : 1	1 : 1
Total Fee Per Acre	**$558**	**$186**

Prepared by New Economics & Advisory, May 2015.

Fee Calculation Example

For example, if a developer wanted to remove one 50-inch diameter Heritage Oak Tree and one 10-inch Native Oak Tree, the IOT In-Lieu Fee would be calculated as follows:

Heritage Oak Tree In-Lieu Fee Calculation

1. Diameter Inches Impacted: 1 tree at 50 diameter inches = 50 diameter inches
2. Cost Per Diameter Inch = $186 per diameter inch
3. Mitigation Ratio: 3.0 to 1.0 diameter inch impacted
4. Fee = 50 diameter inches times $186 per acre times 3.0 per diameter inch ratio = $27,900 Heritage Oak Tree In-Lieu Fee

Native Oak Tree In-Lieu Fee Calculation

1. Diameter Inches Impacted: 1 tree at 10 diameter inches = 10 diameter inches
2. Cost Per Diameter Inch = $186 per diameter inch
3. Mitigation Ratio: 1.0 to 1.0 diameter inch impacted
4. Fee = 10 diameter inches times $186 per acre times 1.0 per diameter inch ratio = $1,860 Native Oak Tree In-Lieu Fee

Total IOT In-Lieu Fee: $27,900 Heritage Oak Tree In-Lieu Fee + $1,860 Native Oak Tree In-Lieu Fee = $29,760 Total IOT In-Lieu Fee.

7. Implementation & Administration

This concluding section of this Oak Resources Nexus Study provides an overview of implementation and administrative procedures. This section applies collectively to all Oak Resources In-Lieu Fees analyzed in this Nexus Study.

Resolution for Adoption and Authorization

After review and consideration and having conducted a public hearing herein, the El Dorado County Board of Supervisors will consider adopting this Oak Resources In-Lieu Fee Nexus Study establishing an OWA In-Lieu Fee and an IOT In-Lieu Fee (which addresses native oak trees, including heritage trees).

The Board of Supervisors of El Dorado County will also consider adopting an ordinance establishing the Oak Resources In-Lieu Fees sand authorizing collection of said fees. Once adopted, the Oak Resources In-Lieu Fees Nexus Study may be updated at any time by resolution of the El Dorado County Board of Supervisors. The fee will be effective 30 days following the El Dorado County Board of Supervisors final action of the adoption of the Nexus Study, and all ordinances and/or resolutions establishing or authorizing the fee(s).

Establishment of Fees

With respect to OWAs, this program applies to any land development project requiring a discretionary entitlement from the County that is subject to review under CEQA and which will have an impact on Oak Resources. With respect to IOTs, this program applies to any activity requiring a building permit or grading permit issued by El Dorado County and/or any action requiring discretionary development entitlements or approvals from El Dorado County, other than those activities identified in the Exemptions section. The Oak Resources In-Lieu Fees shall be charged on non-exempt development activities that impact Oak Resources; these impacts will be documented in an ORTR. Impacts occurring on either public or private property are subject to this program.

The Oak Resources Fees shall be calculated during the development review process or prior to grading permit issuance for projects not subject to development review. The fees shall be calculated based on impacts identified in an ORTR and will be consistent with the mitigation ratios described in **Section 1** of this Nexus Study.

Timing of Collection of Fees

Oak Resources In-Lieu Fees shall be collected prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the development project.

The Oak Resources Fees shall be collected by the County's Community Development Agency, Development Services Division. The County shall maintain the account.

Exemptions

Removal of OWAs and IOTs are exempt from mitigation requirements, including participation in the Oak Resources In-Lieu Fees, for certain activities. These activities, documented in the draft ORMP, include:

- Projects or actions occurring on single-family residential lots of 1 acre or less that cannot be further subdivided;
- Actions taken pursuant to an approved Fire Safe Plan for existing structures or in accordance with defensible space maintenance requirements for existing structures in state responsibility areas (SRA) as identified in California Public Resources Code (PRC) Section 4291 (actions associated with Fire Safe Plans or defensible space areas for new or proposed development are not exempt);
- Actions taken to maintain safe operation of existing utility facilities in compliance with state regulations (PRC 4292-4293 and California Public Utilities Commission (CPUC) General Order 95) (actions associated with development of new utility facilities, including transmission or utility lines, are not exempt);
- Road widening and realignment projects necessary to increase capacity, protect public health, and improve safe movement of people and goods in existing public rights-of-way (as well as acquired rights-of-way necessary to complete the project) where the new alignment is dependent on an existing alignment (new proposed roads within the County Circulation Element and internal circulation roads within new or proposed development are not exempt);
- Affordable housing projects for lower income households, as defined pursuant to Section 50079.5 of the California Health and Safety Code, that are located within an urbanized area, or within a sphere of influence as defined pursuant to California Government Code §56076;
- Agricultural activities conducted for the purposes of producing or processing plant and animal products or the preparation of land for this purpose;
- Agricultural cultivation/operations, whether for personal or commercial purposes (excluding commercial firewood operations);
- Activities occurring on lands in Williamson Act Contracts or under Farmland Security Zone Programs;
- Actions taken during emergency firefighting operations and associated post-fire activities;
- Native oak tree removal when a tree exhibits high failure potential with the potential to injure persons or damage property, as documented in writing by a Certified Arborist or Registered Professional Forester; or

- When a native oak tree, other than a Heritage Tree, is cut down on the owner's property for the owner's personal use.

Fee Rate Reductions for Affordable Housing Projects

The draft ORMP also provides for reductions to OWA mitigation for affordable housing projects that are not exempted as defined above. Specifically, development projects that propose a minimum of 10 percent of the dwelling units as income restricted affordable units, as defined by California Health and Safety Code §50052.5, 50053, and 50093, shall be granted a reduction in the amount of oak woodland that is required to be mitigated, as set forth below in **Figure 7.1**. This reduction for affordable housing project applies only to OWA impacts and does not apply to IOT impacts.

7.1 *Affordable Housing Mitigation Reduction*
ORMP

Affordable Housing Type (Household Income Level)	Percent Oak Woodland Mitigation Reduction (for portion of project that is income restricted)
Very Low	200%
Lower	100%
Moderate	50%

Source: Draft Oak Resource Management Plan, May 2015.

For example, a proposed project that contains 1,000 units will include 200 (or 20%) *moderate-income* units. The project's ORTR indicates an impact on 70% of existing OWAs. The developer chooses to pay the OWA In-Lieu Fee to meet the mitigation obligation. The rate reduction for affordable housing would be calculated as follows:

- **Step 1: Establish the Original Mitigation Ratio.** The Original Mitigation Ratio would be 1.50 to 1 for a 70% impact on OWAs.
- **Step 2: Identify the Portion of the Affordable Units.** Affordable housing constitutes 20% of the residential units.
- **Step 3: Identify the Affordable Housing Reduction Rate.** Moderate-income units qualify for a 50% reduction.
- **Step 4: Calculate the Mitigation Reduction Amount.** The Mitigation Reduction is calculated by multiplying the 50% moderate-income reduction times the 20% affordable housing share. 50% times 20% = 10% Mitigation Reduction Amount.
- **Step 5: Calculate the Adjusted Mitigation Rate**. The Adjusted Mitigation Obligation is: 1.50 minus 10% (0.15) = 1.35 Adjusted Mitigation Ratio.

Administration and Administrative Fee

The County Community Development Agency shall be responsible for administration of the Oak Resources Fees, including the calculation and collection of the fees, tracking of deposits, preparation of required reports, annual inflation adjustments, and periodic updates to the Oak Resources In-Lieu Fees Nexus Study. The County also intends to track the location of OWAs purchased with In-Lieu Fee revenues; this effort is expected to require mapping services using Geographic Information Systems (GIS) or similar software. As such, the County will retain the 5% administrative cost portion of the Fee described in this Nexus Study for these purposes.

It is the County's intent to work with one or more Oak Resources LCOs to acquire as well as manage and monitor OWAs, and acquire/plant as well as manage and monitor replacement Heritage Oak Trees, and Native Oak Trees. The County will transfer fee revenues (excluding the 5% administrative cost) to said LCO on a quarterly basis subject to County approval of acquisition, maintenance and monitoring actions.

Annual Inflation Adjustment

An annual adjustment for cost escalations influenced by changes in land values affecting acquisition, conservation easement values, as well as property tax obligations and organizational overhead costs (e.g. rent, wages, benefits, equipment, etc.) shall be applied to the Oak Resources Fees. The Oak Resources Fees shall be subject to an annual inflation fee that accounts for changes in acquisition/planting, Initial M&M, and Long-Term M&M costs.

OWA Fee Adjustment

OWA Acquisition Cost Component

The Acquisition Cost Component of the OWA fee is driven largely by land values within El Dorado County. Over time, land purchased for the express purpose of mitigation may develop a value that is different from land purchased for its development potential. This trend should be monitored over time. This Nexus Study initially recommends that the Acquisition Component of the OWA Fee be consistent with increases in assessed value for the County overall; future updates to the Nexus Study should revisit this measure to determine whether mitigation land purchases are changing at a different rate than assessed value countywide.

Consistent with the 2008 OWMP Fee Study, this Nexus Study recommends that the Acquisition Portion of the OWA In-Lieu Fee be adjusted annually by a three-year average change in assessed valuation countywide for all land uses or for vacant land containing OWAs. The County Assessor's Office can calculate this value each year.

OWA Initial M&M Cost Component

Initial M&M is influenced most heavily by salaries/wages, including staff and consultant costs. Because these costs are driven primarily by staff time, this fee component should

be adjusted based on labor costs. Consistent with the 2008 OWMP Fee Study, this Nexus Study recommends that the Initial M&M Portion of the OWA In-Lieu Fee be adjusted annually based on changes in wages for Forest and Conservation workers (occupation code 45-4011) in California. These wage rates currently track the pay period including the 12th day of May or November, and are published in May of each year (containing data from the previous year). The data can be found here: http://www.bls.gov/oes/tables.htm.

OWA Endowment Cost Component (OWA Long-Term M&M)

Long-Term M&M is influenced by two variables: the annual cost of M&M and the interest earnings rate on the Endowment Fund. Both of these variables should be tracked and updated. On an annual basis, the Endowment Component should be adjusted based on any changes in annual M&M costs. Because these costs are driven primarily by staff time, this fee should be adjusted based on labor costs, similar to Initial M&M.

However, changes in annual M&M do not have a 1:1 impact on the Endowment; if, for example, annual M&M costs increase by 10%, the Endowment Fee would need to increase about 12% in order for the Endowment to remain self-sustaining.

As a result, this Nexus Study recommends that the Endowment Cost component be increased annually based on labor wage changes and include an additional 2 percent adjustment for every 10 percent change in wages. **Figure 7.2** provides an example of how this adjustment calculation would work.

7.2 ***Endowment Component Fee Adjustment***
OWA In-Lieu Fee

Item	Formula	Oak Woodland Areas 0.01 - 50.0% Impact	75.0% Impact	100.0% Impact
Existing Endowment Fee Component	A	$875	$875	$875
Change In Labor Costs (example)	B	4.0%	4.0%	4.0%
Additional Adjustment per 10%	C = 2% * (B/10%)	0.8%	0.8%	0.8%
Total Adjustment (%)	D = B + C	4.8%	4.8%	4.8%
Total Adjustment (amount)	E = A* D	$42	$42	$42
Total Adjustment Cost Per Acre [1]	**F = A + E**	**$917**	**$917**	**$917**

Prepared by New Economics & Advisory, May 2015.
[1] Total rounded to nearest whole dollar.

OWA Inflation Adjustment Summary

The OWA In-Lieu Fee would be adjusted annually as follows:

1. Adjust Acquisition Cost Component
2. Adjust Initial M&M Cost Component
3. Adjust Long-Term M&M Cost Component

4. Recalculate Total Cost per Acre (including 5% Administrative Fee component)
5. Recalculate Fees based on Mitigation Ratios

IOT Fee Adjustment

IOT Acquisition/Planting Cost Component

This component of the fee was developed by doubling the identified cost of purchasing a new 15-gallon oak tree; as described in the draft ORMP, this approach reflects a standard industry approach to account for labor costs associated with tree planting. Because acquisition is the primary driver, County staff could check on the price from existing nurseries and recalculate the average cost each year.

IOT Initial M&M Cost Component

This component of the IOT In-Lieu Fee appears to be largely driven by labor costs. This Nexus Study recommends that the Initial M&M Portion of the IOT In-Lieu Fee be adjusted annually based on changes in wages for Forest and Conservation workers (occupation code 45-4011) in California. These wage rates currently track the pay period including the 12th day of May or November, and are published in May of each year (containing data from the previous year). The data can be found here: http://www.bls.gov/oes/tables.htm.

IOT Inflation Adjustment Summary

The IOT In-Lieu Fee would be adjusted annually as follows:

1. Adjust Acquisition/Planting Cost Component based on changes in the cost for one 15-gallon oak tree at local nurseries.
2. Adjust Initial M&M Cost Component based on changes in labor wages.
3. Recalculate Total Cost per Acre (including 5% Administrative Fee component)
4. Recalculate Fees based on Mitigation Ratios

Annual Findings/Accounting

The Community Development Agency shall prepare, once each fiscal year for the Board of Supervisors, a report of any portion of Oak Woodland Resources Fees remaining unexpended or uncommitted five or more years after deposit of the Fees, identifying the purpose to which the Fees are to be put, and demonstrating a reasonable relationship between the Fees and the purpose for which they were charged.

Refund of Unexpended Revenues

Except as provided by County Code, the County shall refund to the then current record owner or owners of each unit of development on a prorated basis the unexpended or uncommitted portion of the Oak Resources Fees, and any interest accrued thereon, for which need cannot be demonstrated.

Such refund of unexpended or uncommitted revenues may be made by direct payment from the applicable trust fund, by providing a temporary suspension of fees, or by any other means consistent with the intent of Government Code Section 66001.

Reallocation of Remaining Revenues

If the administrative costs of refunding unexpended or uncommitted revenues exceed the amount to be refunded, the County, after a public hearing, notice of which has been published under Government Code Section 6061 and posted in three prominent places within the area of the development project, may determine that the revenues shall be allocated for some other purpose for which fees are collected subject to Section 66000 of the Government Code.

Other Periodic Reviews and 5-Year Updates

As El Dorado County's Oak Resources In-Lieu Fees are implemented, the County will be able to track actual costs related to direct acquisition, conservation easements, overhead, wages, and management and monitoring costs. As such, this Nexus Study should be considered a living document that will need to be updated as new information becomes available and key assumptions can be appropriately refined. Periodically, the real estate market and broader economy undergoes more dramatic changes in land, and/or construction labor costs. The County may conduct additional periodic review at any time to determine if costs and/or fees require further adjustments. These periodic and/or 5-year update reviews could include changes to the following assumptions:

- Land acquisition values for mitigation land
- Conservation Easement values for mitigation land
- The proportion of Conservation Easements versus direct acquisition of conservation land
- Initial Annual M&M costs
- Long-Term Annual M&M costs
- Endowment interest earnings rate
- Annual adjustment procedures and assumptions
- IOT acquisition and planting costs

Beginning with the fifth fiscal year following the first deposit into the fee account or fund, and every five years thereafter, El Dorado County is required to make certain findings pertaining to unexpended balances. The required findings include:

1. Identifying the purpose for which the fee is to be used.
2. Demonstrating a reasonable relationship between the fee and its purported purpose.
3. All sources and amounts of funding anticipated to complete financing in incomplete plan area improvements.
4. Recalculate/recalculate annual adjustment factor.

5. For any unexpended or uncommitted revenues El Dorado County cannot demonstrate a need based on the four findings described above, El Dorado County must refund such revenues, unless the administrative costs exceed the amount of the refund.

Appendix A: Supporting Calculations for OWA Conservation

A1 *Individual Vacant Land Comparables*

El Dorado County, 2004-2014

APN		Subdivision/Tract	Oak Woodland ID [1]	Zoning	Total Acres [1]	Oak Woodland Areas OWA Acres	Oak Woodland Areas % of Total Acres	Sale Date	Sale Price	Sales Price Per Acre
RE-10 Zoning										
046-720-06-100	[2]	River Pines Est. #4	7	RE-10	22.24	0.223720	1.01%	8/18/04	$249,950	$11,239
046-720-11-100		**River Pines Est. #4**	**7**	**RE-10**	**70.85**	**60.022561**	**84.72%**	**6/29/12**	**$145,000**	**$2,047**
046-720-06-100	[2]	River Pines Est. #4	7	RE-10	22.24	0.223720	1.01%	1/8/14	$165,000	$7,419
104-481-07-100		Pilot Hill Crossing	19	RE-10	12.55	0.000012	0.00%	7/12/12	$50,000	$3,984
046-710-19-100		River Pines Est. #3	6	RE-10	13.59	0.000115	0.00%	5/21/13	$125,000	$9,198
046-720-04-100		River Pines Est. #4	6	RE-10	32.96	0.000148	0.00%	8/14/07	$385,000	$11,681
Weighted Average										**$6,421**
RE-2 Zoning										
092-301-06-100	[2]	Golden West Par #5	9	R2A	2.88	0.000001	0.00%	4/30/04	$185,000	$64,256
092-301-06-100	[2]	Golden West Par #5	9	R2A	2.88	0.000001	0.00%	5/25/05	$265,000	$92,042
092-301-06-100	[2]	Golden West Par #5	9	R2A	2.88	0.000001	0.00%	2/6/08	$226,200	$78,565
092-293-11-100		Golden West Par #5	9	R2A	2.51	0.000024	0.00%	7/23/14	$90,000	$35,796
Weighted Average										**$68,708**

Prepared by New Economics & Advisory, May 2015.

[1] Oak Woodland ID identifies woodland areas that cross a parcel to identify all parcels within the same cluster area.

[1] Acres are calculated from GIS basemap polygons or property data collected from recorded maps or other means.

[2] Parcel has been bought and sold multiple times.

Source: El Dorado County staff, March 2015.

A2.1 *American River Conservancy Recent Direct Land Acquisitions 2013-2015*

Item	El Dorado Ranch Amount	El Dorado Ranch Per Acre	El Dorado Ranch Amount	El Dorado Ranch Per Acre	Pending (Sierra Crest) Property Amount	Pending (Sierra Crest) Property Per Acre	Cronan Ranch Amount	Cronan Ranch Per Acre	Current Estimate: Sierra Hills Area Per Acre
Acres	1,059		1,080		10,000		NA		
Land Acquisitions	2013$		2014$		2015$			2001$	
Purchase Price	$4,800,000		$4,995,000		$10,230,000		NA		
Other Costs	N/A		$205,000	[1]					
Subtotal Land Acquisitions	**$4,800,000**	**$4,533**	**$5,200,000**	**$4,815**	**$10,230,000**	**$1,023**	NA	**$6,107**	**$5,000**
Average Applied in This Analysis [2]									**$5,400**

Prepared by New Economics & Advisory, June 2015.

Source: ARC Staff, June 2015.

[1] Amount represents a donation made by the seller.

[2] A weighted average calculation would not be appropriate for ARC because a large recent purchase was made that would skew the result. Therefore, New Economics applied a straight average calculation to derive an average for this organization. Figure rounded to nearest hundred dollars.

A2.2 *American River Conservancy Recent Conservation Easements*
2001

Item	Garibaldi Ranch Amount	Garibaldi Ranch Per Acre	Current Estimate of CE as a % of Acq. Price
Acres	1,178		
Conservation Easements	2001$		
Purchase Price	$1,767,123		
Other Costs (Cont. to Endowment)	$100,000	*CE*	
Subtotal Conservation Easements	**$1,867,123**	**$1,585**	50% [1]
Value Used in This Analysis			

Prepared by New Economics & Advisory, June 2015.

Source: ARC staff, June 2015.

[1] ARC staff reports that CEs typically cost about half as much as direct acquisition. The CE value should be associated with the value of grazing and/or tree harvesting, which is much lower than 50% and would result in a CE that is around 75-80% of gross land value. However, many CE parcels are less desirable to begin with or

A2.3 ARC M&M Costs
2015$

Expenditure	Cost per Acre [1]
Management & Monitoring	$40.00

Prepared by New Economics & Advisory, May 2015.

[1] Range of $35-40 per acre provided by ARC staff. Reflects average cost for undeveloped oak woodland of a ranch size (1,000 acres+). Includes 15-20% overhead costs. Actual M&M costs vary and can be more expensive for smaller properties and/or properties that are in urban areas and/or have recreational access.

Source: ARC staff, June 2015.

A3.1 *Placer Land Trust Recent Property Acquisitions 2010-2012*

Expenditure	Outman Big Hill Amount	Outman Big Hill Per Acre	Bruin Ranch/Harvego Amount	Bruin Ranch/Harvego Per Acre
Recent Land Acquisitions	**2012$**		**2010$**	
Acres	80		1,773	1,853
Purchase Price	$475,000	$5,938	$9,500,000	$5,358
Legal Fees	$1,100	$14	N/A	N/A
Appraisal	$5,303	$66	N/A	N/A
Title Insurance & Escrow Fees	$684	$9	$1,482	$1
Staff & Admin	$10,363	$130	$250,482	$141
Subtotal Recent Land Acquisitions	$492,450	$6,156	$9,751,964	$5,500
Rounded Weighted Average Recent Land Acquisitions				**$5,500**
Stewardship Fund Contribution			**2010$**	
Acres			1,773	
Stewardship Contribution			$500,000	
Subtotal Stewardship			**$500,000**	**$282**
Endowment Contribution			**2010$**	
Acres			1,773	
Endowment Contribution			$25,000	
Legal Funds			N/A	
Subtotal Endowment			**$25,000**	**$14**

Prepared by New Economics & Advisory, May 2015.
Source: Placer Land Trust staff, April-May 2015.

A3.2 *Placer Land Trust Recent Conservation Easements & Contributions*
2008-2015

Expenditure	Miner's Ravine Preserve Amount	Miner's Ravine Preserve Per Acre	Oest Ranch Lake Clementine Preserve Amount	Oest Ranch Lake Clementine Preserve Per Acre	Oest Ranch Cold Springs Preserve Amount	Oest Ranch Cold Springs Preserve Per Acre	Big Gun Preserve [1] Amount	Big Gun Preserve [1] Per Acre	Wakamatsu Tea & Silk Colony Amount	Wakamatsu Tea & Silk Colony Per Acre	Rounded Weighted Avg
Acres	26		350		158		52		272		
Conservation Easements											
Purchase Price	$0 [2]		$894,542		$405,458		$0 [2]		$0 [2]		
Other Costs	$0		N/A		N/A		$30,000 [3]		$15,000	$55	
Subtotal Conservation Easements	$0	$0	$894,542	$2,556	$405,458	$2,566	$30,000	$577	$15,000	$55	**$1,600** [4]
Stewardship Fund Contribution [5]											
Stewardship Contribution	$200,000		$194,542		$105,458		$5,000 [6]				
Subtotal Stewardship	$200,000	$7,692	$194,542	$556	$105,458	$667	$5,000	$96			
Rounded Weighted Average								$4,200			
Total Cost	**$200,000**	**$7,692**	**$1,089,084**	**$3,112**	**$510,916**	**$3,234**	**$663,308**	**$12,756**	**$15,000**	**$55**	
Endowment Contribution											
Endowment Contribution							$598,308 [7]				
Legal Funds							$30,000 [8]				
Subtotal Endowment							**$628,308**	**$12,083**			
Average Conservation Easement as a % of Average Acquisition										**29%**	

Prepared by New Economics & Advisory, May 2015.

Source: Placer Land Trust staff, April-May 2015.

[1] Westervelt Ecological Services (WES) is the land owner of this preserve and PLT is the conservation easement holder and fiscal agent.

[2] Donated.

[3] Includes $15,000 for legal expenses and $15,000 for mitigation contract.

[4] Weighted average includes donated properties.

[5] The Stewardship fund is utilized similarly as an Endowment Fund (to fund long-term M&M) but is not technically restricted in the same manner as an Endowment Fund. However, this price is included in the total "cost" of acquisition because the purchase price was, in most cases, reduced to allow for the contribution to the Stewardship Fund.

[6] PLT receives $5,000 per year until the endowment is fully funded. Total expected amount is unknown at this time.

[7] PLT will receive this endowment when fully funded once credits are sold. This is expected to take several years because this contribution is a factor of income associated with the sale of credits. It is excluded from the total acquisition cost figure.

[8] PLT received $15,000 for legal defense and $15,000 to enter into mitigation contract with WES.

A3.3 *Placer Land Trust Estimated M&M costs*
2015$

Expenditure	Total Cost	Metric	Acres	Cost Per Acre
Annual Management & Monitoring Examples				
Outman Preserve	$2,375	For entire property.	80	$29.69
Harvego Reserve/Bruin Ranch	$60,000	Annual M&M estimate.	1,773	$33.84
Wakamatsu Tea & Silk Colony	$10,000	Annual M&M estimate.	272	$36.76
Big Gun Preserve	$2,500	$2,000 -$3,000 annually.	52	$48.08
Weighted Average Cost				**$34.39**
Other Annual Costs				
Overhead	15%	Typically applied to M&M contract costs. Applied to M&M Weighted Average Cost.		$5.16
Field Equipment	$5,000	Per year for Harvego Reserve.	1,773	$2.82
Periodic Surveys, Aerial Photos	N/A	Not specifically performed yet on Oak Woodland properties.		N/A
Subtotal Other Annual Costs				**$7.98**
Subtotal Annual Management & Monitoring				**$42.37**

Prepared by New Economics & Advisory, May 2015.
Source: PLT Staff, April - June 2015.

A4 *Placer County Conservation Plan (PCCP) Projected Costs*
2015$

Expenditure	Amount	Metric	Cost Per Acre
One-Time Activities (Year 0) [1]			
County Field Facilities Contribution [2]	$500,000	Spread over 48,250 acres at end of 50-years.	$10.36
Oak Woodland Fuels Treatment	$1,800	Initial One-Time Cost per acre.	$1,800.00
Maintaining New Plantings [3]	$20,000	per 100-acre project over a 3-yr. period	$200.00
Subtotal One-Time Activities			**$2,010.36**
Inflated to 2015$			**$2,104.22**
Annual Management & Monitoring			
Mgmt. Equip. & Materials	$3,000	Cost per 1,000 acres.	$3.00
On-going Site Maintenance	$10,000	Cost per 1,000 acres.	$10.00
Wildlife Management	$1,000	Cost per 1,000 acres.	$1.00
Oak Woodland Fuels Treatment	$1,000	Interval treatment every 5 years ($1,000 every 5 years per 1,000 acres).	$0.20
Field Facilities Maint. & Utilities	$10,000	Annual cost spread over 48,250 acres.	$0.21
Staffing Cost	$50,000	(1/3-1/2 time position)	$1.04
Reserve Mgmt. Plan Updates	$40,000	Every 5 years (2 total plans)	$0.17
Subtotal Annual Management & Monitoring			**$15.61**
Inflated to 2015$			**$16.34**
Other Data Points			
Case Study Restoration Costs [3]	$43,000	per 100-acre project	$430.00
Total Estimated Cost over 50-yr permit period		Cost estimate ranges from $3,000 to $30,000 per acre	$13,500

Prepared by New Economics & Advisory, May 2015.

Source: Woodland Restoration Potential: Placer County Conservation Plan, Richard R. Harris, Ph.D., February 2013.

[1] Reflects cost of one-time activities conducted shortly after undertaking management and monitoring responsibilities.

[2] This estimated cost is currently anticipated by Placer County for purposes of developing the Placer County Conservation Plan (PCCP). New Economics has integrated this cost into Initial M&M.

[3] From Attachment A of PPCP Woodland Restoration Report. Estimated Oak Woodland Restoration Notes by Riley Swift.

A5.1 *Sempervirens Fund Recent Acquisitions*
Nominal Dollars, 2012-2014

Expenditure	Amount	Acres	Cost per Acre
Recent Land Acquisitions	2012		
Gallaway	$378,000	89	$4,247
	2013		
Butano & Waterman Creek	$870,000	80	$10,875
Lachnbrauch	$500,000	76	$6,579
Redwood Meadows	$525,000	151	$3,477
	2014		
Van Kempen	$650,000	33	$19,697
Weighted Average Acquisitions			**$6,814**
Related Acquisition Costs [1]	$838,885	429	$2,073
Subtotal Recent Land Acquisitions			**$8,886**
Recent Conservation Easements	**2013$**		
Redwood Meadows	$525,000	151	$3,477
Average Conservation Easement as a % of Average Acquisition [2]			**56%**

Prepared by New Economics & Advisory, May 2015.

Source: Sempervirens Fund Audited Financial Statements, June 30, 2014, and staff.

[1] Reflects 70% of General and Administration Costs from Financial Statement spread across 398 acres acquired in the same year to determine per-acre amount.

[2] Reflects 2013$ land acquisitions and conservation easements.

A5.2 *Sempervirens Fund M&M Trends*
2015$

Expenditure	Financial Statement Ending 06/30/2014 Stewardship	Total General & Admin	General & Admin Portion [1]	Total Cost	Metric	Cost per Acre [2]
Annual Management & Monitoring						
Salaries	$99,223	$219,309	$65,793	$165,016	Lump Sum	$15.40
Payroll Taxes & Benefits	$20,552	$43,097	$12,929	$33,481	Lump Sum	$3.13
Other Outside Services	$86,039	$21,957	$6,587	$92,626	Lump Sum	$8.65
IT Services	$4,509	$11,070	$3,321	$7,830	Lump Sum	$0.73
Office Expenses	$5,622	$16,823	$5,047	$10,669	Lump Sum	$1.00
Occupancy Expenses	$16,037	$35,763	$10,729	$26,766	Lump Sum	$2.50
Printing, Postage & Direct Mail	$2,323	$12,418	$3,725	$6,048	Lump Sum	$0.56
Legal and Accounting	$1,273	$36,121	$10,836	$12,109	Lump Sum	$1.13
Insurance	$808	$26,381	$7,914	$8,722	Lump Sum	$0.81
Travel, Training, Meetings & Ent.	$5,788	$16,771	$5,031	$10,819	Lump Sum	$1.01
Government Fees	$183	$549	$165	$348	Lump Sum	$0.03
Subtotal Annual Management & Monitoring						**$34.95**
Inflated to 2015$						**$35.76**

Prepared by New Economics & Advisory, May 2015.

[1] Stewardship Costs account for approximately 30% of Total Annual Costs (net of Admin). This analysis applies 30% of General and Administrative costs as a preliminary estimate of proportionate administrative costs. Subject to further refinement.

[2] Costs are spread over 10,713 acres of redwood forests and forest land actively managed by Sempervirens.

Source: Sempervirens Fund Audited Financial Statements, June 30, 2014, and staff.

A6 *Sacramento Tree Foundation M&M Trends*
2015$

Expenditure	Financial Statement Ending 06/30/2013: Mitigation Amount	Total Gen. & Admin.	Adj. Gen. & Admin. [1]	Total Cost	Metric	Cost per Acre [2]
Annual Management & Monitoring						
Trees, Materials & Land Use Fees	$6,140	$2,116	$275	$6,415	Lump Sum	$214
Salaries, Benefits & Taxes	$193,847	$141,376	$18,379	$212,226	Lump Sum	$7,074
Professional Services	$3,132	$21,427	$2,786	$5,918	Lump Sum	$197
Marketing	$220	$2,550	$332	$552	Lump Sum	$18
Rent & Utilities	$11,513	$25,602	$3,328	$14,841	Lump Sum	$495
Vehicles	$15,787	$159	$21	$15,808	Lump Sum	$527
Depreciation	$7,087	$5,169	$672	$7,759	Lump Sum	$259
Computer Services	$1,433	$2,577	$335	$1,768	Lump Sum	$59
Equipment Costs	$6,061	$5,179	$673	$6,734	Lump Sum	$224
Postage, Freight & Printing	$923	$2,408	$313	$1,236	Lump Sum	$41
Meeting & Conferences	$570	$10,970	$1,426	$1,996	Lump Sum	$67
Insurance	$856	$640	$83	$939	Lump Sum	$31
Office Supplies	$638	$930	$121	$759	Lump Sum	$25
Staff Development	$840	$3,028	$394	$1,234	Lump Sum	$41
Miscellaneous	$551	$1,920	$250	$801	Lump Sum	$27
Subtotal Annual Management & Monitoring				**$226,051**		**$9,299**
Inflated to 2015$						**$9,734**

Prepared by New Economics & Advisory, May 2015.

[1] Amount includes Mitigation Program Costs and 13% of Administrative Costs as a preliminary estimate of proportionate administrative costs. Subject to further refinement.

[2] In 2014, STF planted and cared for 4,450 trees. At about 150 trees per acre, STF estimates 30 acres of land under management.

Source: Sacramento Tree Foundation Financial Statements, June 30, 2013.

A7.1 *Sierra Foothill Conservancy Recent Direct Land Acquisitions*
Nominal Dollars (2012)

Item	Martin Preserve		Miller Preserve	
	Amount [1]	Amount per Acre	Amount	Amount per Acre
Recent Land Acquisitions	**2012$**		**2012$**	
Acres	280		2,011	**2,291**
Purchase Price	$1,021,100	$3,647	$1,230,000	$612
Subtotal Recent Land Acquisitions		**$3,647**		**$612**
Weighted Average Recent Land Acquisitions				**$1,000**

Prepared by New Economics & Advisory, May 2015.

Sources: Consolidated Financial Statements and Additional Information for FY 2012/13 and 2011/12, and Sierra Foothill Conservancy staff.

[1] This transaction also include $280,507 in Stewardship Fund contribution; however, this amount is excluded because it is intended to fund M&M.

A7.2 *SFC - Recent Easements & Contributions*
2008-2014 (nominal dollars)

Item	2008-2014 Amount	Acres	Per Acre
Conservation Easements (CE)		*2008*	
Bohna	$1,000,000	840	$1,190
Trabucco	$300,000	524	$573
		2012	
San Joaquin River Corridor	$820,000	1,390	$590
Wild Life Conservation Board	$280,000	680	$412
		2010	
Millar Ranch	$1,850,000	2,990	$619
		2011	
Pt. Millerton Ranch	$125,000	200	$625
		2014	
Hendrick	$440,000	324	$1,358
		2012$	
Martin Preserve-- Stewardship Fund Contribution Only	$280,507	280	$1,002
Rounded Weighted Average Recent CE Cost			**$700**
Average Conservation Easement as a % of Average Acquisition [1]			**70%**

Prepared by New Economics & Advisory, May 2015.
[1] Based on 2013$ land acquisitions and rounded weighted average of conservation easements (2008-2014).
Sources: Consolidated Financial Statements and Additional Information for FY 2012/13; and Sierra Foothill Conservancy staff, May 2015.

A7.3 *Sierra Foothill Conservancy M&M Trends*

2015$

Expenditure	Financial Statement Ending 06/30/2013 Program Services	General & Admin.	Total Cost [1]	Metric	Cost per Acre [2]
Management & Maintenance					
Management Fee	N/A	$27,635	$27,635	Lump Sum	$4.26
Outside Services	$62,699	N/A	$62,699	Lump Sum	$9.67
Repairs & Maintenance	N/A	$19,842	$19,842	Lump Sum	$3.06
Salaries & Wages	$228,654	$55,619	$284,273	Lump Sum	$43.86
Payroll Taxes	$22,177	$5,394	$27,571	Lump Sum	$4.25
Employee Benefits	$5,304	$1,290	$6,594	Lump Sum	$1.02
Advertising & Promotions	N/A	$942	$942	Lump Sum	$0.15
Auto Expenses	$12,325	$8,084	$20,409	Lump Sum	$3.15
Bank & Finance Charges	N/A	$1,936	$1,936	Lump Sum	$0.30
Conference Expenses	$422	$3,603	$4,025	Lump Sum	$0.62
Dues & Subscriptions	N/A	$6,373	$6,373	Lump Sum	$0.98
Insurance	$3,775	$24,198	$27,973	Lump Sum	$4.32
Interest	N/A	$20,179	$20,179	Lump Sum	$3.11
Loss on Disposition of Assets	N/A	$4,979	$4,979	Lump Sum	$0.77
Member Events	$1,242	N/A	$1,242	Lump Sum	$0.19
Miscellaneous	$260	$3,517	$3,777	Lump Sum	$0.58
Office Expenses	$4,004	$6,369	$10,373	Lump Sum	$1.60
Postage & Delivery	$282	$1,314	$1,596	Lump Sum	$0.25
Printing & Copying	$3,315	$863	$4,178	Lump Sum	$0.64
Professional Fees	$30,634	$8,459	$39,093	Lump Sum	$6.03
Property Taxes	$9,282	N/A	$9,282	Lump Sum	$1.43
Rent & Related	$15,226	$3,704	$18,930	Lump Sum	$2.92
Taxes & Licenses	N/A	$232	$232	Lump Sum	$0.04
Travel	$964	$2,322	$3,286	Lump Sum	$0.51
Utilities	$13,288	$3,232	$16,520	Lump Sum	$2.55
Subtotal Management & Monitoring			**$623,939**		**$96.27**
Inflated to 2015$					**$100.77**

Prepared by New Economics & Advisory, May 2015.

[1] Figures include costs associated with Program Services and General & Administration.

[2] SFC actively manages only the land owned in fee title. Costs are spread over 6,481 acres of nature preserves actively managed by SFC.

Source: Consolidated Financial Statements and Additional Information for FY 2012/13 and 2011/12, and SFC staff.

A8.1 *Save the Redwoods League Recent Acquisitions*
2012-2014

Expenditure	Amount	Cost per Acre	Amount	Cost per Acre
Recent Land Acquisitions	**2013$**		**2014$**	
Acres	125		33	**158**
Purchase Price	$2,000,000	$16,000	$650,000	$19,697
Weighted Average Cost				**$16,772**
Recent Conservation Easements (CE)	**2014$**		**2012$**	
Acres	22,986		378	
Purchase Price	$16,900,000	$735	$300,000 [1]	$794
Appraisals & Environmental [2]	$364,362	$16	$310,745	$822
Legal Fees [2]	$16,435	$1	$113,511	$300
Subtotal CE Acquisition		**$752**		**$1,916**
Weighted Average Cost				**$771**
Average Conservation Easement as a % of Average Acquisition Cost				**5%**

Prepared by New Economics & Advisory, May 2015.

[1] Donation.

[2] New Economics assumed that these costs, included in both Program Services and General and Administrative Cost categories were predominantly associated with acquisition activities. Subject to further refinement pending additional feedback from SRL staff.

Sources: Save the Redwoods League Financial Statements, March 31, 2014 and 2013; Save the Redwoods League 2014 Annual Report, and Save the Redwoods League staff.

A8.2 *Save the Redwoods League M&M Trends*
2015$

Expenditure	Financial Statements 03/14/2014 Program Services	Total General & Admin	Adjusted General & Admin [1]	Total Cost [1]	Metric	Cost per Acre [2]
Management & Monitoring						
Other Project Costs	$353,504		N/A	$353,504	Lump Sum	$24.46
Equip. Rental & Maint.	$7,094	$6,743	$4,720	$11,814	Lump Sum	$0.82
Salaries & Benefits	$1,658,517	$837,483	$586,238	$2,244,755	Lump Sum	$155.30
Payroll taxes	$103,922	$52,476	$36,733	$140,655	Lump Sum	$9.73
Printing & Publications	$121,945	$11,909	$8,336	$130,281	Lump Sum	$9.01
Services & Fees	$110,183	$299,548	$209,684	$319,867	Lump Sum	$22.13
Occupancy	$168,770	$92,539	$64,777	$233,547	Lump Sum	$16.16
Consultants	$240,281	N/A	N/A	$240,281	Lump Sum	$16.62
Conferences and Meetin	$53,657	$43,430	$30,401	$84,058	Lump Sum	$5.82
Travel	$62,009	$25,189	$17,632	$79,641	Lump Sum	$5.51
Investment Fees	N/A	$137,153	$96,007	$0	Lump Sum	$0.00
Miscellaneous Expenses	$29,746	$30,665	$21,466	$51,212	Lump Sum	$3.54
Accounting Fees	N/A	$49,715	$34,801	$34,801	Lump Sum	$2.41
Postage & Shipping	$9,616	$21,297	$14,908	$24,524	Lump Sum	$1.70
Furniture & Equipment	$18,669	$10,980	$7,686	$26,355	Lump Sum	$1.82
Insurance	$18,867	$10,345	$7,242	$26,109	Lump Sum	$1.81
Supplies	$15,822	$6,206	$4,344	$20,166	Lump Sum	$1.40
Telephone	$12,482	$7,627	$5,339	$17,821	Lump Sum	$1.23
Subtotal Management & Monitoring						**$279.47**
Inflated to 2015$						**$273.45**

Prepared by New Economics & Advisory, May 2015.
[1] Amount includes Program Services Costs and 70% of General and Administrative Costs as a preliminary estimate of proportionate administrative costs. Subject to further refinement.
[2] Cost are spread over 14,454 acres of forests and surrounding land actively managed by SRL.
Source: Save the Redwoods League Financial Statements, March 31, 2014; Save the Redwoods League 2014 Annual Report; and SRL staff.

A9.1 *Sacramento Valley Conservancy Recent Acquisitions*
Deer Creek Hills (2003$)

Expenditure	Amount	Cost per Acre
Recent Land Acquisition	2003$	
Acres [1]	4,062	
Acquisition Costs	$11,422,400	$2,812
Subtotal Recent Land Acquisition	$11,422,400	$2,812

Prepared by New Economics & Advisory, May 2015.
[1] Owned and managed acres per Deer Creek Hills Preserves Master Plan, July 2008.
Source: Deer Creek Hills Preserve Master Plan, 2008; SVC website; and SVC staff.

A9.2 *Sacramento Valley Conservancy M&M Trends*
Deer Creek Hills, 2015$

Expenditure	Amount	Metric	Cost per Acre [1]
Annual Management & Monitoring			
Property Tax & Management Costs [2]	$55,844	Lump Sum	$13.75
Payroll	$50,986	Lump Sum	$12.55
Payroll Taxes	$3,890	Lump Sum	$0.96
Employee Benefits	$71	Lump Sum	$0.02
Travel & Meetings	$735	Lump Sum	$0.18
Occupancy	$1,012	Lump Sum	$0.25
Postage & Delivery	$31	Lump Sum	$0.01
Phone & Internet	$3,118	Lump Sum	$0.77
Office Expense	$195	Lump Sum	$0.05
Payroll Services	$838	Lump Sum	$0.21
Insurance	$7,552	Lump Sum	$1.86
Taxes & Licenses	$1,213	Lump Sum	$0.30
General Admin Overhead [3]	$29,435	Lump Sum	$7.25
Subtotal Administrative Expenses	**$154,922**		**$38.14**
Inflated to 2015$			**$37.32**

Prepared by New Economics & Advisory, May 2015.

[1] Costs are spread over 4,062 acres of Deer Creek Hills Preserve actively managed by SVC.

[2] Includes weed management, trash management, grazing management, property repairs, management licensing agreements, and training.

[3] General overhead and administrative cost estimated at 19% of overall budget per SVC staff.

Source: Deer Creek Hills Preserve Master Plan, 2008; and Sacramento Valley Conservancy staff, May 2015.

Appendix B: Supporting Calculations for Endowment Fee Component

B1 *Endowment Fund Annual Rate of Return Research*
Nominal Rates

Item	Year	Source	Rate of Return
National Association of College and University Business Officers (NACUBO) (Net Return) [1]			
Endowments Under $25 Million	2009		3.90%
Endowments Under $25 Million	2010		2.80%
Endowments Under $25 Million	2011		4.90%
Endowments Under $25 Million	2012		5.70%
	Average		**4.33%**
Other Habitat Fee Studies (Nominal Rates)			
Natomas Basin Conservancy	2013	EPS/ NBC	3.00%
Santa Clara Valley Habitat Plan Development Fee Nexus Study	2012	Willdan	3.25%
El Dorado Oak Woodland	2008	El Dorado County	6.00%
El Dorado County Ecological Preserve Fee Estimate	1998	EPS	6.00%
	Average		**4.56%**

Prepared by New Economics & Advisory, May 2015.
[1] NACUBO 10-year total net return for US Higher Education endowments and Affiliated Foundations, for Endowments under $25 million.
Sources: Individual Habitat Management Organizations, Fee Nexus Studies, and NACUBO Common Fund Study of Endowments 2009-2012.

B2 *Endowment Cash Flow Projections (2015$ constant dollars)*

6.0% annually

Item	Assumption	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Habitat Acres Maintained		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Annual Maintenance Cost	$41 per acre	$41	$41	$41	$41	$41	$41	$41	$41	$41	$41
Portion Prepaid by Initial M&M Fee Component [1]		$41	$41	$41	$41	$41	$0	$0	$0	$0	$0
Remaining Annual Maintenance Cost	$41 per acre	$0	$0	$0	$0	$0	$41	$41	$41	$41	$41
Endowment Fund											
Opening Balance		$0	$550	$583	$618	$655	$694	$695	$697	$698	$699
Interest Earnings [2]	6.0% annually	$0	$33	$35	$37	$39	$42	$42	$42	$42	$42
New Fee Revenue Available	$550 per acre	$550	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Balance		$550	$583	$618	$655	$694	$736	$737	$738	$740	$741
Amount Applied Toward O&M Cost		$0	$0	$0	$0	$0	$41	$41	$41	$41	$41
Closing Balance		$550	$583	$618	$655	$694	$695	$697	$698	$699	$701

Prepared by New Economics & Advisory, May 2015.

[1] This amount is to be provided by developers up-front to fund 5 years of maintenance.

[2] Interest earnings are applied to previous year's ending balance.

B3 *Endowment Cash Flow Projections (2015$ constant dollars)*

3.0% annually

Item	Assumption	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Habitat Acres Maintained		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Annual Maintenance Cost	$41 per acre	$41	$41	$41	$41	$41	$41	$41	$41	$41	$41
Portion Prepaid by Initial M&M Fee Component [1]		$41	$41	$41	$41	$41	$0	$0	$0	$0	$0
Remaining Annual Maintenance Cost	$41 per acre	$0	$0	$0	$0	$0	$41	$41	$41	$41	$41
Endowment Fund											
Opening Balance		$0	$1,250	$1,288	$1,326	$1,366	$1,407	$1,409	$1,410	$1,412	$1,414
Interest Earnings [2]	3.0% annually	$0	$38	$39	$40	$41	$42	$42	$42	$42	$42
New Fee Revenue Available	$1,250 per acre	$1,250	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Balance		$1,250	$1,288	$1,326	$1,366	$1,407	$1,449	$1,451	$1,453	$1,454	$1,456
Amount Applied Toward O&M Cost		$0	$0	$0	$0	$0	$41	$41	$41	$41	$41
Closing Balance		$1,250	$1,288	$1,326	$1,366	$1,407	$1,409	$1,410	$1,412	$1,414	$1,416

Prepared by New Economics & Advisory, May 2015.

[1] This amount is to be provided by developers up-front to fund 5 years of maintenance.

[2] Interest earnings are applied to previous year's ending balance.

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Attachment B:

Revised Draft General Plan Biological Resources Policies, clean

PRINCIPLE

Consistent with the objectives, goals, and policies set forth in the Land Use Element, the Plan must conserve and improve the County's existing natural resources and open space, including agricultural and forest soils, mineral deposits, water and native plants, fish, wildlife species and habitat, and federally classified wilderness areas; and preserve resources of significant biological, ecological, historical or cultural importance.

INTRODUCTION

The purpose of the Conservation and Open Space Element of the General Plan is to address the management, preservation, and conservation of natural resources and open space of El Dorado County. Management of the County's resources will assure the availability of those resources to future generations and the realization of their full economic potential.

Pursuant to Government Code Section 65302, both a conservation and an open space element must be included in a general plan. The General Plan combines these two elements into the Conservation and Open Space Element and as such satisfies the legal requirements for the Conservation and Open Space Elements defined in the Government Code, Sections 65302(d) and 65560, respectively.

RELATIONSHIP TO OTHER ELEMENTS

This element contains provisions for the conservation and protection of soils, minerals, water, wildlife and fisheries, vegetation, cultural resources, and open space. The issues of this element are closely linked to those of almost all other elements of this General Plan. The intensity of development and issues of land use compatibility relating to resource protection and/or production are discussed in the Land Use, Agriculture and Forestry, and Parks and Recreation Elements.

Natural resources and soil preservation are also discussed in the Agriculture and Forestry Element. The Agriculture and Forestry Element focuses primarily on conservation of

agricultural lands and timber forest lands and identifies the types of uses which are compatible with resource utilization.

Measures necessary for the protection of life and property, as well as ecological values, are also discussed in the Public Health, Safety, and Noise Element.

The Parks and Recreation Element discusses the provision and maintenance of parks, recreation facilities, and trails to serve El Dorado County while the Conservation and Open Space Element deals with the conservation of open space for outdoor recreation.

The Public Services and Utilities Element discusses the conservation of reusable resources and land by recycling and waste management techniques.

ORGANIZATION OF THE ELEMENT

The Conservation and Open Space Element discusses significant natural resources including geology and soils, extractive minerals, water, biological resources, cultural resources, and open space resources. Goals, objectives, and policies are included in this element for each of the topics listed.

POLICY SECTION

SOIL CONSERVATION

GOAL 7.1: SOIL CONSERVATION

Conserve and protect the County's soil resources.

OBJECTIVE 7.1.1: SOILS

Long-term soil productivity.

Policy 7.1.1.1 Conserve and maintain important agricultural soils for existing and potential agricultural and forest uses by limiting non-agricultural/non-forestry development on those soils.

OBJECTIVE 7.1.2: EROSION/SEDIMENTATION

Minimize soil erosion and sedimentation.

Policy 7.1.2.1 Development or disturbance shall be prohibited on slopes exceeding 30 percent unless necessary for access. The County may consider and allow development or disturbance on slopes 30 percent and greater when:

- Reasonable use of the property would otherwise be denied.

- The project is necessary for the repair of existing infrastructure to avoid and mitigate hazards to the public, as determined by a California registered civil engineer or a registered engineering geologist.
- Replacement or repair of existing structures would occur in substantially the same footprint.
- The use is a horticultural or grazing use that utilizes "best management practices (BMPs)" recommended by the County Agricultural Commission and adopted by the Board of Supervisors.

Access corridors on slopes 30 percent and greater shall have a site specific review of soil type, vegetation, drainage contour, and site placement to encourage proper site selection and mitigation. Septic systems may only be located on slopes under 30 percent. Roads needed to complete circulation/access and for emergency access may be constructed on such cross slopes if all other standards are met.

Policy 7.1.2.2 Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance.

Policy 7.1.2.3 Enforce Grading Ordinance provisions for erosion control on all development projects and adopt provisions for ongoing, applicant-funded monitoring of project grading.

Policy 7.1.2.4 Cooperate with and encourage the activities of the three Resource Conservation Districts in identifying critical soil erosion problems and pursuing funding sources to resolve such problems.

Policy 7.1.2.5 The Department of Transportation, in conjunction with the Resource Conservation Districts and Soil Conservation District, shall develop a road-side maintenance program to manage roads in a manner that maintains drainage and protects surface waters while reducing road-side weed problems.

Policy 7.1.2.6 The County shall encourage the Soil Conservation Service to update the 1974 Soil Survey and to digitize all soils mapping units on the Geographic Information System (GIS).

Policy 7.1.2.7 The County shall require agricultural grading activities that convert one acre or more of undisturbed vegetation to agricultural cropland to obtain an agricultural permit through the Agricultural Commissioner's office which may require approval of the Agricultural Commission. All erosion control measures included in the agricultural permit would be

implemented. All agricultural practices, including fuel reduction and fire protection, that do not change the natural contour of the land and that use "best management practices" as recommended by the County Agricultural Commission and adopted by the Board of Supervisors shall be exempt from this policy.

CONSERVATION OF MINERAL RESOURCES

GOAL 7.2: MINERAL RESOURCES

Conservation of the County's significant mineral deposits.

OBJECTIVE 7.2.1: IDENTIFY MINERAL RESOURCES

Identification of the County's important mineral resources.

Policy 7.2.1.1 In accordance with California Code of Regulations, Sections 3675-3676, the County shall maintain all Mineral Land Classification reports produced by the State Department of Conservation, California Geological Survey, which pertain to El Dorado County. El Dorado County hereby recognizes, accepts, and adopts by reference those State Classification Reports as they currently exist and as may be amended, or supplemented, in the future. These reports are as follows:

1. Kohler, S.L. 1983. Mineral Land Classification of the Georgetown 15' Quadrangle, El Dorado, and Placer Counties, California. Open File Report 83-35. Prepared for the California Department of Conservation.
2. Kohler, S.L. 1984. Mineral Land Classification of the Auburn 15' Quadrangle, El Dorado and Placer Counties, California. Open File Report 83-37. Prepared for the California Department of Conservation.
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Policy 7.2.1.2 Areas designated as Mineral Resource (-MR) overlay on the General Plan Land Use Map shall be identified by the Mineral Resource (-MR) combining zone district on the zoning maps when the likely extraction of the resource through surface mining methods will be compatible with adjacent land uses as determined by Policy 7.2.2.2.

Policy 7.2.1.3 The County shall request the State Department of Conservation to conduct a County-wide study to assess the location and value of non-metallic mineral materials. Once completed, the County may recognize them in the General Plan and zone them and the surroundings to allow for mineral resource management.

OBJECTIVE 7.2.2: PROTECTION FROM DEVELOPMENT

Protection of important mineral resources from incompatible development.

Policy 7.2.2.1 The minimum parcel size within, or adjacent to, areas subject to the -MR overlay shall be twenty (20) acres unless the applicant can demonstrate to the approving authority that there are no economically significant mineral deposits on or adjacent to the project site and that the proposed project will have no adverse effect on existing or potential mining operations. The minimum parcel size adjacent to active mining operations which are outside of the -MR overlay shall also be twenty (20) acres.

Policy 7.2.2.2 The General Plan designations, as shown on the General Plan land use maps, which are considered potentially compatible with surface mining shall include:

- Natural Resource (NR)
- Agricultural Land (AL)
- Open Space (OS)
- Industrial (I)
- Public Facilities (PF)
- Rural Residential (RR)
- Commercial (C)
- Low-Density Residential (LDR)

All other General Plan designations are determined to be incompatible for surface mining. Industrial uses shall be limited to those compatible with mineral exploration.

Policy 7.2.2.3 The County shall require that new nonmining land uses adjacent to existing mining operations be designed to provide a buffer sufficient to protect the mining operation between the new development and the mining operation(s).

OBJECTIVE 7.2.3: ENVIRONMENTAL/LAND USE COMPATIBILITY

Regulation of extraction of mineral resources to ensure that environmental and land use compatibility issues are considered.

Policy 7.2.3.1 The extraction of mineral resources within the County shall only be allowed following the approval of a special use permit and a reclamation plan conforming to the California Surface Mining and Reclamation Act (SMARA).

Policy 7.2.3.2 In analyzing the environmental effects of mining operations, the County shall consider, at a minimum, the following issues in granting a new permit:

A. Natural vegetation and topography for buffering;

B. Central location of processing equipment and equipment storage;

C. Dust control;

D. Circulation and construction standards for access roads;

E. Erosion control;

F. Revegetation and re-establishment of natural appearing features on the site following mining activities;

G. Ultimate land use;

H. Hours of operation;

I. Night lighting;

J. Security fencing;

K. Noise impacts;

L. Protection of water quality, sensitive wildlife habitat and/or sensitive plant communities; and

M. Phased reclamation that proceeds concurrently with surface mining.

Policy 7.2.3.3 Existing development (commercial, residential, and public facilities), as well as undeveloped private lands, shall be protected from significant

adverse environmental effects caused by mining through use permit conditions, mitigation measures, and the Noise Element standards.

Policy 7.2.3.4 Surface access to subsurface mining is conditionally permitted only in compatible General Plan designations as defined in these policies. However, vent and escape shafts are permitted in incompatible General Plan designations where surface disturbance is minimal.

Policy 7.2.3.5 The County shall require satisfactory forms of accessible security including irrevocable letters of credit, cash deposits, escrowed negotiable securities, or performance bonds for all mining projects to cover all damages which may stem from the projects and to make sure that all reclamation is carried out. These securities shall be reviewed annually to ensure that there are sufficient funds available to repair potential damage at current costs.

Policy 7.2.3.6 Time limits for special use permits for each project shall be established on a case-by-case basis. Time limits shall be based on the reasonably expected life of the mining operation and potential conflicts with future neighboring land uses. Each project shall have a periodic review for compliance with the use permit. In no case shall such review time period exceed five years. Said review shall be funded by the applicant.

Policy 7.2.3.7 Exploration for economic mineral or ore deposits is permitted in compatible General Plan designations as defined in these policies. A special use permit shall be required if:

A. Overburden or mineral deposits in excess of 1,000 cubic yards are disturbed; or

B. The operation in any one location disturbs one acre or more in size; or

C. De-watering will occur or water will be discharged from the site as a result of the operation.

Policy 7.2.3.8 Exploration for economic mineral or ore deposits is permitted in incompatible General Plan designations, provided that:

A. Methods of geological survey, geophysical, or geochemical prospecting are used; or

B. Bore holes and trial pits not exceeding 100 cubic yards of overburden or other mineral disturbance may be created; and

C. No explosives may be used; there may be no drifting or tunnelling; and de-watering or water discharge is not allowed.

Policy 7.2.3.9 All exploratory operations shall require a reclamation plan and a bond to ensure its completion if:

A. Overburden or mineral deposits in excess of 1,000 cubic yards are disturbed; or

B. The operation in any one location disturbs one acre or more in size.

Policy 7.2.3.10 In those instances where a reclamation plan is not required, an erosion control plan shall be required for those operations in which over 50 cubic yards or more of overburden are disturbed.

Policy 7.2.3.11 Recreational mining, which is the extraction of minerals for recreation on a seasonal basis and the use of such devices as pans, rockers, and dredges with intakes eight inches in diameter or less, shall not require a special use permit. However, certain Federal or State regulations and local building and sanitation regulations may apply.

Policy 7.2.3.12 Except as provided for in Policy 2.2.2.7, zone changes removing the -MR Combining Zone District from the base zone district shall be considered by the County only when specific studies similar in nature to State Classification Reports prove that a significant mineral deposit no longer exists.

Policy 7.2.3.13 Regardless of the General Plan designation, subsurface mining shall be conditionally permitted throughout the County. Said mining shall be allowed only after impacts to the environment and affected surface land uses have been adequately reviewed and found to be in compliance with CEQA. Of particular importance shall be the impact of the operation on surface land uses, water quantity and quality, and noise and vibration impacts associated with surface access. All other related impacts shall also be addressed.

CONSERVATION AND PROTECTION OF WATER RESOURCES

GOAL 7.3: WATER QUALITY AND QUANTITY

Conserve, enhance, and manage water resources and protect their quality from degradation.

OBJECTIVE 7.3.1: WATER RESOURCE PROTECTION

Preserve and protect the supply and quality of the County's water resources including the protection of critical watersheds, riparian zones, and aquifers.

Policy 7.3.1.1 Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.

Policy 7.3.1.2 Establish water conservation programs that include both drought tolerant landscaping and efficient building design requirements as well as incentives for the conservation and wise use of water.

Policy 7.3.1.3 The County shall develop the criteria and draft an ordinance to allow and encourage the use of domestic gray water for landscape irrigation purposes. (See Title 22 of the State Water Code and the Graywater Regulations of the Uniform Plumbing Code).

OBJECTIVE 7.3.2: WATER QUALITY

Maintenance of and, where possible, improvement of the quality of underground and surface water.

Policy 7.3.2.1 Stream and lake embankments shall be protected from erosion, and streams and lakes shall be protected from excessive turbidity.

Policy 7.3.2.2 Projects requiring a grading permit shall have an erosion control program approved, where necessary.

Policy 7.3.2.3 Where practical and when warranted by the size of the project, parking lot storm drainage shall include facilities to separate oils and salts from storm water in accordance with the recommendations of the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbooks (1993).

Policy 7.3.2.4 The County should evaluate feasible alternatives to the use of salt for ice control on County roads.

Policy 7.3.2.5 As a means to improve the water quality affecting the County's recreational waters, enhanced and increased detailed analytical water quality studies and monitoring should be implemented to identify and reduce point and non-point pollutants and contaminants. Where such studies or monitoring reports have identified sources of pollution, the County shall propose means to prevent, control, or treat identified pollutants and contaminants.

OBJECTIVE 7.3.3: WETLANDS

Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Policy 7.3.3.1 For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features.

For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual

Policy 7.3.3.2 *intentionally blank*

Policy 7.3.3.3 The County shall develop a database of important surface water features, including lake, river, stream, pond, and wetland resources.

Policy 7.3.3.4 The Zoning Ordinance shall be amended to provide buffers and special setbacks for the protection of riparian areas and wetlands. The County shall encourage the incorporation of protected areas into conservation easements or natural resource protection areas.

Exceptions to riparian and wetland buffer and setback requirements shall be provided to permit necessary road and bridge repair and construction, trail construction, and other recreational access structures such as docks and piers, or where such buffers deny reasonable use of the property, but only when appropriate mitigation measures and Best Management Practices are incorporated into the project. Exceptions shall also be provided for horticultural and grazing activities on agriculturally zoned lands that utilize "best management practices (BMPs)" as recommended by the County Agricultural Commission and adopted by the Board of Supervisors.

Until standards for buffers and special setbacks are established in the Zoning Ordinance, the County shall apply a minimum setback of 100 feet from all perennial streams, rivers, lakes, and 50 feet from intermittent streams and wetlands. These interim standards may be modified in a particular instance if more detailed information relating to slope, soil stability, vegetation, habitat, or other site- or project-specific conditions supplied as part of the review for a specific project demonstrates that a different setback is necessary or would be sufficient to protect the particular riparian area at issue.

For projects where the County allows an exception to wetland and riparian buffers, development in or immediately adjacent to such features shall be planned so that impacts on the resources are minimized. If avoidance and minimization are not feasible, the County shall make findings, based on documentation provided by the project proponent, that avoidance and minimization are infeasible.

Policy 7.3.3.5 Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.

OBJECTIVE 7.3.4: DRAINAGE

Protection and utilization of natural drainage patterns.

Policy 7.3.4.1 Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.

Policy 7.3.4.2 Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

OBJECTIVE 7.3.5: WATER CONSERVATION

Conservation of water resources, encouragement of water conservation, and construction of wastewater disposal systems designed to reclaim and re-use treated wastewater on agricultural crops and for other irrigation and wildlife enhancement projects.

Policy 7.3.5.1 Drought-tolerant plant species, where feasible, shall be used for landscaping of commercial development. Where the use of drought-tolerant native plant species is feasible, they should be used instead of non-native plant species.

Policy 7.3.5.2 A list of appropriate local indigenous drought tolerant plant materials shall be maintained by the County Planning Department and made available to the public.

Policy 7.3.5.3 The County Parks and Recreation Division shall use drought tolerant landscaping for all new parks and park improvement projects.

Policy 7.3.5.4 Require efficient water conveyance systems in new construction. Establish a program of ongoing conversion of open ditch systems shall be considered for conversion to closed conduits, reclaimed water supplies, or both, as circumstances permit.

Policy 7.3.5.5 Encourage water reuse programs to conserve raw or potable water supplies consistent with State Law.

CONSERVATION OF BIOLOGICAL RESOURCES

GOAL 7.4: WILDLIFE AND VEGETATION RESOURCES

Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

OBJECTIVE 7.4.1: PINE HILL RARE PLANT SPECIES

The County shall protect Pine Hill rare plant species and their habitats consistent with Federal and State laws.

Policy 7.4.1.1 The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment and management of ecological preserves consistent with County Code Chapter 130.71 and where feasible the USFWS's *Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan* (USFWS 2002).

Policy 7.4.1.2 Private land for Pine Hill rare plant preserve sites will be purchased only from willing sellers.

Policy 7.4.1.3 Limit land uses within established Pine Hill rare plant preserve areas to activities deemed compatible. Such uses may include passive recreation, research and scientific study, and education. In conjunction with use as passive recreational areas, develop a rare plant educational and interpretive program.

Policy 7.4.1.4 The Pine Hill Preserves, as approved by the County Board of Supervisors, shall be designated Ecological Preserve (-EP) overlay on the General Plan land use map.

Policy 7.4.1.5 *Intentionally blank.*

Policy 7.4.1.6 *Intentionally blank.*

Policy 7.4.1.7 *Intentionally blank.*

OBJECTIVE 7.4.2: IDENTIFY AND PROTECT RESOURCES

Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.

Policy 7.4.2.1 The County will coordinate wildlife and vegetation protection programs with appropriate Federal and State agencies.

Policy 7.4.2.2 The County shall continue to support the Noxious Weed Management Group in its efforts to reduce and eliminate noxious weed infestations to protect native habitats and to reduce fire hazards.

Policy 7.4.2.3 Consistent with Policy 9.1.3.1 of the Parks and Recreation Element, low impact uses such as trails and linear parks may be provided within river and stream buffers if all applicable mitigation measures are incorporated into the design.

Policy 7.4.2.4 Protect and preserve wildlife habitat corridors within public parks and natural resource protection areas to allow for wildlife use. Recreational uses within these areas shall be limited to those activities that do not require grading or vegetation removal.

Policy 7.4.2.5 Setbacks from all rivers, streams, and lakes shall be included in the Zoning Ordinance for all ministerial and discretionary development projects.

Policy 7.4.2.6 *Intentionally blank*.

Policy 7.4.2.7 *Intentionally blank*.

Policy 7.4.2.8 Conserve contiguous blocks of important habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the County through a Biological Resource Mitigation Program (Program). The Program will result in the conservation of:

1. Habitats that support special status species;
2. Aquatic environments including streams, rivers, and lakes;
3. Wetland and riparian habitat;
4. Important habitat for migratory deer herds; and
5. Large expanses of native vegetation.

A. Habitat Protection Strategy. The Program establishes mitigation ratios to offset impacts to special-status species habitat and special-status vegetation communities within the County.

Special-status species include plants and animals in the following categories:

- Species listed or proposed for listing as Threatened or Endangered under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA);
- Species considered as candidates for listing as Threatened or Endangered under ESA or CESA;
- Wildlife species identified by California Department of Fish and Wildlife (CDFW) as Species of Special Concern;

- Wildlife species identified by US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) as Species of Concern;
- Plants listed as Endangered or Rare under the California Native Plant Protection Act;
- Animals fully protected under the California Fish and Game Code;
- Plants that have a California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) of 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (plants rare, threatened, or endangered in California and elsewhere), 2A (plants presumed extirpated in California, but more common elsewhere), or 2B (plants rare, threatened, or endangered in California, but more common elsewhere). The CNPS CRPRs are used by both CDFW and USFWS in their consideration of formal species protection under ESA or CESA.

With the exception of oak woodlands, which would be mitigated in accordance with the ORMP (see General Plan Policy 7.4.4.4), and Pine Hill rare plant species and their habitat, which would be mitigated in accordance with County Code Chapter 130.71 (see General Plan Policy 7.4.1.1), mitigation of impacts to vegetation communities will be implemented in accordance with the table below. Preservation and creation of the following vegetation communities will ensure that the current range and distribution of special-status species within the County are maintained.

Habitat Mitigation Summary Table			
Vegetation Type	Preservation	Creation	Total
Water	NA	1:1	1:1
Herbaceous Wetland	1:1	1:1	2:1
Shrub and Tree Wetlands	2:1	1:1	3:1
Upland (non-oak and non-Pine Hill rare plant species habitat)	1:1	NA	1:1

B. Wildlife Movement for future 4- and 6- and 8-lane roadway construction projects. Consideration of wildlife movement will be given by the County on all future 4-, 6-, and 8-lane roadway

construction and widening projects. Impacts on public safety and wildlife movement for projects that include new roads of 4 or more lanes or the widening of roads to 4 or more lanes will be evaluated during the development review process (see Section C below). The analysis of wildlife movement impacts will take into account the conditions of the project site and surrounding property to determine whether wildlife undercrossings are warranted and, if so, the type, size, and locations that would best mitigate a project's impacts on wildlife movement and associated public safety.

C. Biological Resources Assessment. A site-specific biological resources technical report will be required to determine the presence of special-status biological resources that may be affected by a proposed discretionary project. Vegetation communities and special-status plants shall be mapped and assessed in accordance with the CDFG 2009 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* and subsequent updates, and the *List of Vegetation Alliances and Associations* (CDFG 2010) and subsequent updates. The report will include an assessment of direct, indirect and cumulative impacts to biological resources, including vegetation communities, plant and wildlife species and wildlife movement. The results of the biological resources technical report shall be used as the basis for establishing mitigation requirements in conformance with this policy and the Oak Resources Management Plan (ORMP, see General Plan Policy 7.4.4.4).

D. Habitat Protection. Mitigation for impacts to vegetation communities defined above in Section A will occur within the County on a minimum contiguous habitat block of 5 acres. Wetlands mitigation may occur within mitigation banks and/or outside the County if within the watershed of impact. Mitigation sites will be prioritized based on the following criteria:

- Location within PCAs and IBCs
- Location within other important ecological areas, as defined in the Updated INRMP Initial Inventory and Mapping (June 2010);
- Woodland, forest and shrub communities with diverse age structure;
- Woodland and forest communities with large trees and dense canopies;
- Opportunities for active land management to be used to enhance or restore natural ecosystem processes;
- Presence of or potential to support special-status species;

- Connectivity with adjacent protected lands;
- Parcels that achieve multiple agency and community benefits;
- Parcels that are located generally to the west of the Eldorado National Forest; and
- Parcels that would preserve natural wildlife movement corridors such as crossings under major roadways (e.g., U.S. Highway 50 and across canyons).

E. Mitigation Assistance. The County will establish and maintain a database of willing sellers of land for mitigation of biological resource impacts within the County. The County will manage the database as a voluntary program wherein landowners must opt-in to be included in the database by contacting the County. The database will include the following information:

- Property owner name
- Assessor's Parcel Number
- Parcel acreage
- General vegetation communities as mapped in the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) database
- Location within Priority Conservation Area (PCA), Important Biological Corridor (IBC), or important ecological area, as defined in the Updated INRMP Initial Inventory and Mapping (June 2010).

Policy 7.4.2.9 The Important Biological Corridor (-IBC) overlay shall apply to lands identified as having high wildlife habitat values because of extent, habitat function, connectivity, and other factors. Lands located within the overlay district shall be subject to the following provisions except that where the overlay is applied to lands that are also subject to the Agricultural District (-A) overlay or that are within the Agricultural Lands (AL) designation, the land use restrictions associated with the IBC policies will not apply to the extent that the agricultural practices do not interfere with the purposes of the -IBC overlay:

- In order to evaluate project-specific compatibility with the -IBC overlay, applicants for discretionary projects (and applicants for ministerial projects within the Weber Creek canyon IBC) shall be required to provide to the County a biological resources technical report (meeting the requirements identified in Section A of Policy 7.4.2.8 above). The site-specific biological resources technical report will determine the presence of special-status species or habitat for such species (as defined in Section B of Policy 7.4.2.8

above) that may be affected by a proposed project as well as the presence of wildlife corridors particularly those used by large mammals such as mountain lion, bobcat, mule deer, American black bear, and coyote. Properties within the -IBC overlay that are found to support wildlife movement shall provide mitigation to ensure there is no net loss of wildlife movement function and value for special-status species, as well as large mammals such as mountain lion, bobcat, mule deer, American black bear, and coyote. Mitigation measures may include land use siting and design tools.

Wildland Fire Safe measures (actions conducted in accordance with an approved Fire Safe Plan for existing structures or defensible space maintenance for existing structures consistent with California Public Resources Code Section 4291) are exempt from this policy, except that Fire Safe measures will be designed insofar as possible to be consistent with the objectives of the Important Biological Corridor. Wildland Fire Safe measures for proposed projects are not exempt from this policy.

OBJECTIVE 7.4.3: INTENTIONALLY BLANK

OBJECTIVE 7.4.4: FOREST, OAK WOODLAND, AND TREE RESOURCES

Protect and conserve forest, oak woodland, and tree resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

Policy 7.4.4.1 The Natural Resource land use designation shall be used to protect important forest resources from uses incompatible with timber harvesting.

Policy 7.4.4.2 Through the review of discretionary projects, the County, consistent with any limitations imposed by State law, shall encourage the conservation, protection, planting, restoration, and regeneration of native trees in new developments and within existing communities.

Policy 7.4.4.3 Encourage the clustering of development to retain the largest contiguous areas of forests and oak woodlands possible.

Policy 7.4.4.4 For all new development projects or actions that result in impacts to oak woodlands and/or individual native oak trees, including Heritage Trees, the County shall require mitigation as outlined in the El Dorado County Oak Resources Management Plan (ORMP). The ORMP functions as the oak resources component of the County's biological resources mitigation program, identified in Policy 7.4.2.8.

The ORMP identifies standards for oak woodland and native oak tree impact determination, mechanisms to mitigate oak woodland and native oak tree impacts, technical report submittal requirements, minimum qualifications for technical report preparation, mitigation monitoring and reporting requirements, and projects or actions that are exempt from this policy. The ORMP also establishes an in-lieu fee payment option for impacts to oak woodlands and native oak trees, identifies Priority Conservation Areas (PCAs) where oak woodland conservation efforts may be focused, and outlines minimum standards for identification of oak woodland conservation areas outside the PCAs. Requirements for monitoring and maintenance of conserved oak woodland areas and identification of allowable uses within conserved oak woodland areas are also included in the ORMP.

PRESERVATION OF CULTURAL RESOURCES

GOAL 7.5: CULTURAL RESOURCES

Ensure the preservation of the County's important cultural resources.

OBJECTIVE 7.5.1: PROTECTION OF CULTURAL HERITAGE

Creation of an identification and preservation program for the County's cultural resources.

Policy 7.5.1.1 The County shall establish a Cultural Resources Ordinance. This ordinance shall provide a broad regulatory framework for the mitigation of impacts on cultural resources (including historic, prehistoric and paleontological resources) by discretionary projects. This Ordinance should include (but not be limited to) and provide for the following:

A. Appropriate (as per guidance from the Native American Heritage Commission) Native American monitors to be notified regarding projects involving significant ground-disturbing activities that could affect significant resources.

B. A 100-foot development setback in sensitive areas as a study threshold when deemed appropriate.

C. Identification of appropriate buffers, given the nature of the resources within which ground-disturbing activities should be limited.

D. A definition of cultural resources that are significant to the County. This definition shall conform to (but not necessarily be limited to) the significance criteria used for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) and Society of Vertebrate Paleontology.

E. Formulation of project review guidelines for all development projects.

F. Development of a cultural resources sensitivity map of the County.

Policy 7.5.1.2 Reports and/or maps identifying specific locations of archaeological or historical sites shall be kept confidential in the Planning Department but shall be disclosed where applicable.

Policy 7.5.1.3 Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged.

Policy 7.5.1.4 Promote the registration of historic districts, sites, buildings, structures, and objects in the National Register of Historic Places and inclusion in the California State Office of Historic Preservation's California Points of Historic Interest and California Inventory of Historic Resources.

Policy 7.5.1.5 A Cultural Resources Preservation Commission shall be formed to aid in the protection and preservation of the County's important cultural resources. The Commission's duties shall include, but are not limited to:

A. Assisting in the formulation of policies for the identification, treatment, and protection of cultural resources (including historic cemeteries) and the curation of any artifacts collected during field collection/excavation;

B. Assisting in preparation of a cultural resources inventory (to include prehistoric sites and historic sites and structures of local importance);

C. Reviewing all projects with identified cultural resources and making recommendations on appropriate forms of protection and mitigation; and

D. Reviewing sites for possible inclusion in the National Register of Historic Places, California Register, and other State and local lists of cultural properties.

The County shall request to become a Certified Local Government (CLG) through the State Office of Historic Preservation. Certification would qualify the County for grants to aid in historic preservation projects. The Cultural Resources Preservation Commission could serve as the Commission required for the CLG program.

Policy 7.5.1.6 The County shall treat any significant cultural resources (i.e., those determined California Register of Historical Resources/National Register

of Historic Places eligible and unique paleontological resources), documented as a result of a conformity review for ministerial development, in accordance with CEQA standards.

OBJECTIVE 7.5.2: VISUAL INTEGRITY

Maintenance of the visual integrity of historic resources.

Policy 7.5.2.1 Create Historic Design Control Districts for areas, places, sites, structures, or uses which have special historic significance.

Policy 7.5.2.2 The County shall define Historic Design Control Districts (HDCDs). HDCD inclusions and boundaries shall be determined in a manner consistent with National Historic Preservation Act (NHPA) Historic District standards.

A. The County shall develop design guidelines for each HDCD. These guidelines shall be compatible with NHPA standards.

B. New buildings and structures and reconstruction/restoration of historic (historic as per National Register of Historic Places [NRHP] and California Register of Historical Resources [CRHR] criteria) buildings and structures shall generally conform to styles of architecture prevalent during the latter half of the 19th century into the first decade of the 20th century.

C. Any historic building or structure located within a designated HDCD, or any building or structure located elsewhere in the county that is listed on the NRHP or CRHR, is designated a California Building of Historic Interest, or a California State Historic Landmark, or is designated as significant as per NRHP/CRHR criteria, shall not be destroyed, significantly altered, removed, or otherwise changed in exterior appearance without a design review.

D. In cases where the County permits the significant alteration of a historic building or structure exterior, such alteration shall be required to maintain the historic integrity and appearance of the building or structure and shall be subject to a design review.

E. In cases where new building construction is placed next to a historic building or structure in a designated HDCD or listed on the CRHR/NRHP, the architectural design of the new construction shall generally conform to the historic period of significance of the HDCD or listed property.

F. In cases where the County permits the destruction of a historic building or tearing down a structure, the building or structure shall first be recorded in a manner consistent with the standards of the NHPA

Historic American Building Survey (HABS) by a qualified professional architectural historian.

G. The County shall mandate building and structure design controls within the viewshed of the Marshall Gold Discovery State Historic Park. These design controls shall be consistent with those mandated for designated Historic Design Control Districts.

Policy 7.5.2.3 New buildings and reconstruction in historic communities shall generally conform to the types of architecture prevalent in the gold mining areas of California during the period 1850 to 1910.

Policy 7.5.2.4 The County shall prohibit the modification of all National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) listed properties that would alter their integrity, historic setting, and appearance to a degree that would preclude their continued listing on these registers. If avoidance of such modifications on privately owned listed properties is deemed infeasible, mitigation measures commensurate with NRHP/CRHR standards shall be formulated in cooperation with the property owner.

Policy 7.5.2.5 In cases where the County permits the demolition or alteration of an historic building, such alteration or new construction (subsequent to demolition) shall be required to maintain the character of the historic building or replicate its historic features.

Policy 7.5.2.6 The County, in cooperation with the State, shall identify the viewshed of Coloma State Park and establish guidelines to be used for development within the viewshed. In addition, the County shall continue to support the relocation of State Route 49 to bypass the Park in order to protect its visual and physical integrity.

OBJECTIVE 7.5.3: RECOGNITION OF PREHISTORIC/HISTORIC RESOURCES

Recognition of the value of the County's prehistoric and historic resources to residents, tourists, and the economy of the County, and promotion of public access and enjoyment of prehistoric and historic resources where appropriate.

OBJECTIVE 7.5.4: PROTECTION OF CEMETERIES

Preservation and protection of existing cemeteries including access and parking.

Policy 7.5.4.1 Protect access routes and parking at existing cemeteries. Development proposals will be evaluated to ensure that they do not interfere with cemeteries or their access and parking.

PRESERVATION OF OPEN SPACE

GOAL 7.6: OPEN SPACE CONSERVATION

Conserve open space land for the continuation of the County's rural character, commercial agriculture, forestry and other productive uses, the enjoyment of scenic beauty and recreation, the protection of natural resources, for protection from natural hazards, and for wildlife habitat.

OBJECTIVE 7.6.1: IMPORTANCE OF OPEN SPACE

Consideration of open space as an important factor in the County's quality of life.

Policy 7.6.1.1 The General Plan land use map shall include an Open Space land use designation. The purpose of this designation is to implement the goals and objectives of the Land Use and the Conservation and Open Space Elements by serving one or more of the purposes stated below. In addition, the designations on the land use map for Rural Residential and Natural Resource areas are also intended to implement said goals and objectives. Primary purposes of open space include:

A. Conserving natural resource areas required for the conservation of plant and animal life including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, banks of rivers and streams and watershed lands;

B. Conserving natural resource lands for the managed production of resources including forest products, rangeland, agricultural lands important to the production of food and fiber; and areas containing important mineral deposits;

C. Maintaining areas of importance for outdoor recreation including areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes including those providing access to lake shores, beaches and rivers and streams; and areas which serve as links between major recreation and open space reservations including utility easements, banks of rivers and streams, trails and scenic highway corridors;

D. Delineating open space for public health and safety including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs, and areas required for the protection and enhancement of air quality; and

E. Providing for open spaces to create buffers which may be landscaped to minimize the adverse impact of one land use on another.

Policy 7.6.1.2 The County will provide for Open Space lands through:

A. The designation of land as Open Space;

B. The designation of land for low-intensity land uses as provided in the Rural Residential and Natural Resource land use designations;

C. Local implementation of the Federal Emergency Management Agency's National Flood Insurance Program;

D. Local implementation of the State Land Conservation Act Program; and

E. Open space land set aside through Planned Developments (PDs).

Policy 7.6.1.3 The County shall implement Policy 7.6.1.1 through zoning regulations and the administration thereof. It is intended that certain districts and certain requirements in zoning regulations carry out the purposes set forth in Policy 7.6.1.1 as follows:

A. The Open Space (OS) Zoning District is consistent with and shall implement the Open Space designation of the General Plan land use map and all other land use designations.

B. The Agricultural (A), Exclusive Agricultural (AE), Planned Agricultural (PA), Select Agricultural (SA-10), and Timberland Production Zone (TPZ) zoning districts are consistent with Policy 7.6.1.1 and serve one or more of the purposes set forth therein.

C. Zoning regulations shall provide for setbacks from all flood plains, streams, lakes, rivers and canals to maintain Purposes A, B, C, and D set forth in Policy 7.6.1.1.

D. Zoning regulations shall provide for maintenance of permanent open space in residential, commercial, industrial, agricultural, and residential agricultural zone districts based on standards established in those provisions of the County Code. The regulations shall minimize impacts on wetlands, flood plains, streams, lakes, rivers, canals, and slopes in excess of 30 percent and shall maintain Purposes A, B, C, and D in Policy 7.6.1.1.

E. Landscaping requirements in zoning regulations shall provide for vegetative buffers between incompatible land uses in order to maintain Purpose E in Policy 7.6.1.1.

F. Zoning regulations shall provide for Mineral Resource Combining Zone Districts and/or other appropriate mineral zoning categories which shall be applied to lands found to contain important mineral deposits if development of the resource can occur in compliance with all other policies of the General Plan. Those regulations shall maintain Purposes A, B, C, D, and E of Policy 7.6.1.1.

Policy 7.6.1.4 The creation of new open space areas, including Ecological Preserves, common areas of new subdivisions, and recreational areas, shall include wildfire safety planning.

IMPLEMENTATION PROGRAM

MEASURE CO-A

Review the Zoning Ordinance (Title 17 of the El Dorado County Code) to identify revisions that accomplish the following:

A. Incorporate tree canopy coverage standards outlined in Policy 7.4.4.4;

B. Develop standards for use of native plants in landscaping [Policy 7.4.5.2];

C. Establish Historic Design Control Combining Zone District and design guidelines for reconstruction and construction of new buildings and the demolition of existing buildings in such districts. Adopt an ordinance amendment implementing historic design review requirements and recordation procedures. [Policies 7.5.2.1, 7.5.2.2, and 7.5.2.4];

D. Develop buffer standards for new nonmining land uses next to existing mining operations [Policy 7.2.2.3];

E. Develop standards for minimizing erosion and sedimentation associated with earthwork and grading [Policy 7.1.2.2].

Responsibility:	Planning Department
Time Frame:	Update Zoning Ordinance within one year of General Plan adoption.

MEASURE CO-B

Coordinate with the Resource Conservation Districts to address erosion control issues. [Policy 7.1.2.4]

Responsibility:	Planning Department and Department of Transportation
Time Frame:	Ongoing

MEASURE CO-C

In coordination with the Resource Conservation Districts, develop a roadside maintenance program that addresses roadside drainage, the protection of adjacent surface waters, and vegetation control. [Policy 7.1.2.5]

Also refer to Measure CO-G.

Responsibility:	Department of Transportation
Time Frame:	Develop and implement program within three years of General Plan adoption.

MEASURE CO-D

Develop and agricultural permit program that includes standards for agricultural operations comparable to those in the Grading Ordinance and considers other issues important to the protection of agricultural lands.

Responsibility:	Department of Transportation, Department of Agriculture, and Planning Department
Time Frame:	Within three years of General Plan adoption

MEASURE CO-E

Request that the California Geological Survey conduct a non-metallic mineral survey for the County and manage resources appropriately. [Policy 7.2.1.3]

Responsibility:	Planning Department
Time Frame:	Request survey by state within two years of General Plan adoption. Amend General Plan upon completion of survey by state.

MEASURE CO-F

Intentionally blank

MEASURE CO-G

Create guidelines for development projects that may affect surface water resources. The guidelines should include:

- Definition(s) of surface water resources;
- Criteria for determining the presence of surface water resources;

- Buffer standards;
- Mitigation standards; and
- Use of Best Management Practices.

[Policies 7.3.1.1, 7.3.2.1, 7.3.2.3, 7.3.3.1, 7.3.3.2, and 7.3.4.2]

Also refer to Measure CO-C.

Responsibility:	Environmental Management, Department of Transportation, and Planning Department
Time Frame:	Within five years of General Plan adoption.

MEASURE CO-H

Prepare and adopt an ordinance revision to permit the use of domestic gray water for irrigation purposes. [Policy 7.3.1.3]

Responsibility:	Environmental Management and Building Department
Time Frame:	Develop ordinance within five years of General Plan adoption.

MEASURE CO-I

Evaluate alternatives to the use of salt for snow removal on County roads. [Policy 7.3.2.4]

Responsibility:	Department of Transportation
Time Frame:	Complete evaluation within two years of General Plan adoption.

MEASURE CO-J

Develop and implement a program to perform water quality analysis and monitoring of the County's recreational waters. [Policy 7.3.2.5]

Responsibility:	Environmental Management and Department of Transportation
Time Frame:	Develop and implement program within eight years of General Plan adoption.

MEASURE CO-K

Work cooperatively with the State Department of Fish and Game, U.S. Fish and Wildlife Service, and Bureau of Land Management to implement the gabbro soils rare plant ecological

preserve and recovery program and to develop a long-term preserve strategy. Develop implementation measures to incorporate in County development standards for ministerial and discretionary projects, which may include:

- Identification of compatible land uses within preserve sites, which may include passive recreation, research and scientific study, and interpretive education; and
- Fuels management and fire protection plans to reduce fire hazards at the interface between rare plant preserve sites and residential land uses; and

[Policies 7.4.1.1, 7.4.1.2, and 7.4.1.3 and Objective 7.4.3]

Responsibility:	Planning Department
Time Frame:	Ongoing implementation to continue immediately upon General Plan adoption. Development standards to be incorporated into updated Zoning Ordinance and design standards programs.

MEASURE CO-L

Develop guidelines for the preparation of biological resources technical reports. [Policy 7.4.2.8]

Responsibility:	Planning Department and Department of Transportation
Time Frame:	Develop guidelines within five years of General Plan adoption.

MEASURE CO-M

Intentionally blank.

MEASURE CO-N

Intentionally blank.

MEASURE CO-O

Prepare and adopt a riparian setback ordinance. The ordinance, which shall be incorporated into the Zoning Code, should address mitigation standards, including permanent protection

mechanisms for protected areas, and exceptions to the setback requirements. The ordinance shall be applied to riparian areas associated with any surface water feature (i.e., rivers, streams, lakes, ponds, and wetlands) and should be prepared in coordination with Measure CO-B. [Policy 7.4.2.5]

Responsibility:	Planning Department
Time Frame:	Within three years of General Plan adoption.

MEASURE CO-P

Develop and adopt an Oak Resources Management Plan. The plan shall address the following:

- Mitigation standards for oak resources impacts;
- Definitions of exempt projects and actions;
- Technical report requirements;
- Oak resources mitigation options and standards;
- Heritage Tree mitigation standards; and
- Oak resources mitigation monitoring and reporting requirements.

- [Policy 7.4.4.4]

Responsibility:	Planning Department
Time Frame:	Concurrent with biological resources policy update.

MEASURE CO-Q

Develop and adopt a Cultural Resources Preservation Ordinance, consistent with Policy 7.5.1.1.

Responsibility:	Planning Department and Department of Transportation
Time Frame:	Adopt ordinance within two years of General Plan adoption.

MEASURE CO-R

Maintain a confidential cultural resources database of prehistoric and historic resources, including the location and condition of pioneer cemetery sites. Information may be made available consistent with state and federal law. [Policy 7.5.1.2]

Responsibility:	Planning Department

Time Frame:	Ongoing

MEASURE CO-S

Investigate becoming a Certified Local Government through the State Office of Historic Preservation. [Policy 7.5.1.5]

Responsibility:	Planning Department
Time Frame:	Report to the Board of Supervisors within five years of General Plan adoption.

MEASURE CO-T

Work with the State of California Department of Parks and Recreation to identify the viewshed of Marshall Gold Discovery State Historic Park (Coloma) and establish guidelines for development within that viewshed. [Policy 7.5.2.6]

Responsibility:	Planning Department
Time Frame:	Identify viewshed within four years of General Plan adoption. Adopt standards within six years.

MEASURE CO-U

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Attachment C:

Revised Draft General Plan Biological Resources Policies, changes tracked

PRINCIPLE

Consistent with the objectives, goals, and policies set forth in the Land Use Element, the Plan must conserve and improve the County's existing natural resources and open space, including agricultural and forest soils, mineral deposits, water and native plants, fish, wildlife species and habitat, and federally classified wilderness areas; and preserve resources of significant biological, ecological, historical or cultural importance.

INTRODUCTION

The purpose of the Conservation and Open Space Element of the General Plan is to address the management, preservation, and conservation of natural resources and open space of El Dorado County. Management of the County's resources will assure the availability of those resources to future generations and the realization of their full economic potential.

Pursuant to Government Code Section 65302, both a conservation and an open space element must be included in a general plan. The General Plan combines these two elements into the Conservation and Open Space Element and as such satisfies the legal requirements for the Conservation and Open Space Elements defined in the Government Code, Sections 65302(d) and 65560, respectively.

RELATIONSHIP TO OTHER ELEMENTS

This element contains provisions for the conservation and protection of soils, minerals, water, wildlife and fisheries, vegetation, cultural resources, and open space. The issues of this element are closely linked to those of almost all other elements of this General Plan. The intensity of development and issues of land use compatibility relating to resource protection and/or production are discussed in the Land Use, Agriculture and Forestry, and Parks and Recreation Elements.

Natural resources and soil preservation are also discussed in the Agriculture and Forestry Element. The Agriculture and Forestry Element focuses primarily on conservation of

agricultural lands and timber forest lands and identifies the types of uses which are compatible with resource utilization.

Measures necessary for the protection of life and property, as well as ecological values, are also discussed in the Public Health, Safety, and Noise Element.

The Parks and Recreation Element discusses the provision and maintenance of parks, recreation facilities, and trails to serve El Dorado County while the Conservation and Open Space Element deals with the conservation of open space for outdoor recreation.

The Public Services and Utilities Element discusses the conservation of reusable resources and land by recycling and waste management techniques.

ORGANIZATION OF THE ELEMENT

The Conservation and Open Space Element discusses significant natural resources including geology and soils, extractive minerals, water, biological resources, cultural resources, and open space resources. Goals, objectives, and policies are included in this element for each of the topics listed.

POLICY SECTION

SOIL CONSERVATION

GOAL 7.1: SOIL CONSERVATION

Conserve and protect the County's soil resources.

OBJECTIVE 7.1.1: SOILS

Long-term soil productivity.

Policy 7.1.1.1 Conserve and maintain important agricultural soils for existing and potential agricultural and forest uses by limiting non-agricultural/non-forestry development on those soils.

OBJECTIVE 7.1.2: EROSION/SEDIMENTATION

Minimize soil erosion and sedimentation.

Policy 7.1.2.1 Development or disturbance shall be prohibited on slopes exceeding 30 percent unless necessary for access. The County may consider and allow development or disturbance on slopes 30 percent and greater when:

- Reasonable use of the property would otherwise be denied.

- The project is necessary for the repair of existing infrastructure to avoid and mitigate hazards to the public, as determined by a California registered civil engineer or a registered engineering geologist.
- Replacement or repair of existing structures would occur in substantially the same footprint.
- The use is a horticultural or grazing use that utilizes "best management practices (BMPs)" recommended by the County Agricultural Commission and adopted by the Board of Supervisors.

Access corridors on slopes 30 percent and greater shall have a site specific review of soil type, vegetation, drainage contour, and site placement to encourage proper site selection and mitigation. Septic systems may only be located on slopes under 30 percent. Roads needed to complete circulation/access and for emergency access may be constructed on such cross slopes if all other standards are met.

Policy 7.1.2.2 Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance.

Policy 7.1.2.3 Enforce Grading Ordinance provisions for erosion control on all development projects and adopt provisions for ongoing, applicant-funded monitoring of project grading.

Policy 7.1.2.4 Cooperate with and encourage the activities of the three Resource Conservation Districts in identifying critical soil erosion problems and pursuing funding sources to resolve such problems.

Policy 7.1.2.5 The Department of Transportation, in conjunction with the Resource Conservation Districts and Soil Conservation District, shall develop a road-side maintenance program to manage roads in a manner that maintains drainage and protects surface waters while reducing road-side weed problems.

Policy 7.1.2.6 The County shall encourage the Soil Conservation Service to update the 1974 Soil Survey and to digitize all soils mapping units on the Geographic Information System (GIS).

Policy 7.1.2.7 The County shall require agricultural grading activities that convert one acre or more of undisturbed vegetation to agricultural cropland to obtain an agricultural permit through the Agricultural Commissioner's office which may require approval of the Agricultural Commission. All erosion control measures included in the agricultural permit would be

implemented. All agricultural practices, including fuel reduction and fire protection, that do not change the natural contour of the land and that use "best management practices" as recommended by the County Agricultural Commission and adopted by the Board of Supervisors shall be exempt from this policy.

CONSERVATION OF MINERAL RESOURCES

GOAL 7.2: MINERAL RESOURCES

Conservation of the County's significant mineral deposits.

OBJECTIVE 7.2.1: IDENTIFY MINERAL RESOURCES

Identification of the County's important mineral resources.

Policy 7.2.1.1 In accordance with California Code of Regulations, Sections 3675-3676, the County shall maintain all Mineral Land Classification reports produced by the State Department of Conservation, California Geological Survey, which pertain to El Dorado County. El Dorado County hereby recognizes, accepts, and adopts by reference those State Classification Reports as they currently exist and as may be amended, or supplemented, in the future. These reports are as follows:

1. Kohler, S.L. 1983. Mineral Land Classification of the Georgetown 15' Quadrangle, El Dorado, and Placer Counties, California. Open File Report 83-35. Prepared for the California Department of Conservation.
2. Kohler, S.L. 1984. Mineral Land Classification of the Auburn 15' Quadrangle, El Dorado and Placer Counties, California. Open File Report 83-37. Prepared for the California Department of Conservation.
3. Loyd, R.C., T.P Anderson, and M.M Bushnell.1983. Mineral Land Classification of the Placerville 15' Quadrangle, El Dorado, and Amador Counties, California. Open File Report 83-29. Prepared for the California Department of Conservation.
4. Loyd, R.C. 1984. Mineral Land Classification of the Folsom 15' Quadrangle, Sacramento, El Dorado, Placer, and Amador Counties, California. Open File Report 84-50. Prepared for the California Department of Conservation.
5. Loyd, R.C., and S.L. Kohler. 1987. Mineral Land Classification of the Camino and Mokelumne Hill 15' Quadrangles, El Dorado, Amador, and Calaveras Counties, California. Open File Report 87-02. Prepared for the California Department of Conservation.

6. Busch, Lawrence L. 2001. Mineral Land Classification of El Dorado County, California. Open File Report 2000-03. Prepared for the California Department of Conservation.

Policy 7.2.1.2 Areas designated as Mineral Resource (-MR) overlay on the General Plan Land Use Map shall be identified by the Mineral Resource (-MR) combining zone district on the zoning maps when the likely extraction of the resource through surface mining methods will be compatible with adjacent land uses as determined by Policy 7.2.2.2.

Policy 7.2.1.3 The County shall request the State Department of Conservation to conduct a County-wide study to assess the location and value of non-metallic mineral materials. Once completed, the County may recognize them in the General Plan and zone them and the surroundings to allow for mineral resource management.

OBJECTIVE 7.2.2: PROTECTION FROM DEVELOPMENT

Protection of important mineral resources from incompatible development.

Policy 7.2.2.1 The minimum parcel size within, or adjacent to, areas subject to the -MR overlay shall be twenty (20) acres unless the applicant can demonstrate to the approving authority that there are no economically significant mineral deposits on or adjacent to the project site and that the proposed project will have no adverse effect on existing or potential mining operations. The minimum parcel size adjacent to active mining operations which are outside of the -MR overlay shall also be twenty (20) acres.

Policy 7.2.2.2 The General Plan designations, as shown on the General Plan land use maps, which are considered potentially compatible with surface mining shall include:

- Natural Resource (NR)
- Agricultural Land (AL)
- Open Space (OS)
- Industrial (I)
- Public Facilities (PF)
- Rural Residential (RR)
- Commercial (C)
- Low-Density Residential (LDR)

All other General Plan designations are determined to be incompatible for surface mining. Industrial uses shall be limited to those compatible with mineral exploration.

Policy 7.2.2.3 The County shall require that new nonmining land uses adjacent to existing mining operations be designed to provide a buffer sufficient to protect the mining operation between the new development and the mining operation(s).

OBJECTIVE 7.2.3: ENVIRONMENTAL/LAND USE COMPATIBILITY

Regulation of extraction of mineral resources to ensure that environmental and land use compatibility issues are considered.

Policy 7.2.3.1 The extraction of mineral resources within the County shall only be allowed following the approval of a special use permit and a reclamation plan conforming to the California Surface Mining and Reclamation Act (SMARA).

Policy 7.2.3.2 In analyzing the environmental effects of mining operations, the County shall consider, at a minimum, the following issues in granting a new permit:

A. Natural vegetation and topography for buffering;

B. Central location of processing equipment and equipment storage;

C. Dust control;

D. Circulation and construction standards for access roads;

E. Erosion control;

F. Revegetation and re-establishment of natural appearing features on the site following mining activities;

G. Ultimate land use;

H. Hours of operation;

I. Night lighting;

J. Security fencing;

K. Noise impacts;

L. Protection of water quality, sensitive wildlife habitat and/or sensitive plant communities; and

M. Phased reclamation that proceeds concurrently with surface mining.

Policy 7.2.3.3 Existing development (commercial, residential, and public facilities), as well as undeveloped private lands, shall be protected from significant

adverse environmental effects caused by mining through use permit conditions, mitigation measures, and the Noise Element standards.

Policy 7.2.3.4 Surface access to subsurface mining is conditionally permitted only in compatible General Plan designations as defined in these policies. However, vent and escape shafts are permitted in incompatible General Plan designations where surface disturbance is minimal.

Policy 7.2.3.5 The County shall require satisfactory forms of accessible security including irrevocable letters of credit, cash deposits, escrowed negotiable securities, or performance bonds for all mining projects to cover all damages which may stem from the projects and to make sure that all reclamation is carried out. These securities shall be reviewed annually to ensure that there are sufficient funds available to repair potential damage at current costs.

Policy 7.2.3.6 Time limits for special use permits for each project shall be established on a case-by-case basis. Time limits shall be based on the reasonably expected life of the mining operation and potential conflicts with future neighboring land uses. Each project shall have a periodic review for compliance with the use permit. In no case shall such review time period exceed five years. Said review shall be funded by the applicant.

Policy 7.2.3.7 Exploration for economic mineral or ore deposits is permitted in compatible General Plan designations as defined in these policies. A special use permit shall be required if:

A. Overburden or mineral deposits in excess of 1,000 cubic yards are disturbed; or

B. The operation in any one location disturbs one acre or more in size; or

C. De-watering will occur or water will be discharged from the site as a result of the operation.

Policy 7.2.3.8 Exploration for economic mineral or ore deposits is permitted in incompatible General Plan designations, provided that:

A. Methods of geological survey, geophysical, or geochemical prospecting are used; or

B. Bore holes and trial pits not exceeding 100 cubic yards of overburden or other mineral disturbance may be created; and

C. No explosives may be used; there may be no drifting or tunnelling; and de-watering or water discharge is not allowed.

Policy 7.2.3.9 All exploratory operations shall require a reclamation plan and a bond to ensure its completion if:

A. Overburden or mineral deposits in excess of 1,000 cubic yards are disturbed; or

B. The operation in any one location disturbs one acre or more in size.

Policy 7.2.3.10 In those instances where a reclamation plan is not required, an erosion control plan shall be required for those operations in which over 50 cubic yards or more of overburden are disturbed.

Policy 7.2.3.11 Recreational mining, which is the extraction of minerals for recreation on a seasonal basis and the use of such devices as pans, rockers, and dredges with intakes eight inches in diameter or less, shall not require a special use permit. However, certain Federal or State regulations and local building and sanitation regulations may apply.

Policy 7.2.3.12 Except as provided for in Policy 2.2.2.7, zone changes removing the -MR Combining Zone District from the base zone district shall be considered by the County only when specific studies similar in nature to State Classification Reports prove that a significant mineral deposit no longer exists.

Policy 7.2.3.13 Regardless of the General Plan designation, subsurface mining shall be conditionally permitted throughout the County. Said mining shall be allowed only after impacts to the environment and affected surface land uses have been adequately reviewed and found to be in compliance with CEQA. Of particular importance shall be the impact of the operation on surface land uses, water quantity and quality, and noise and vibration impacts associated with surface access. All other related impacts shall also be addressed.

CONSERVATION AND PROTECTION OF WATER RESOURCES

GOAL 7.3: WATER QUALITY AND QUANTITY

Conserve, enhance, and manage water resources and protect their quality from degradation.

OBJECTIVE 7.3.1: WATER RESOURCE PROTECTION

Preserve and protect the supply and quality of the County's water resources including the protection of critical watersheds, riparian zones, and aquifers.

Policy 7.3.1.1 Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.

Policy 7.3.1.2 Establish water conservation programs that include both drought tolerant landscaping and efficient building design requirements as well as incentives for the conservation and wise use of water.

Policy 7.3.1.3 The County shall develop the criteria and draft an ordinance to allow and encourage the use of domestic gray water for landscape irrigation purposes. (See Title 22 of the State Water Code and the Graywater Regulations of the Uniform Plumbing Code).

OBJECTIVE 7.3.2: WATER QUALITY

Maintenance of and, where possible, improvement of the quality of underground and surface water.

Policy 7.3.2.1 Stream and lake embankments shall be protected from erosion, and streams and lakes shall be protected from excessive turbidity.

Policy 7.3.2.2 Projects requiring a grading permit shall have an erosion control program approved, where necessary.

Policy 7.3.2.3 Where practical and when warranted by the size of the project, parking lot storm drainage shall include facilities to separate oils and salts from storm water in accordance with the recommendations of the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbooks (1993).

Policy 7.3.2.4 The County should evaluate feasible alternatives to the use of salt for ice control on County roads.

Policy 7.3.2.5 As a means to improve the water quality affecting the County's recreational waters, enhanced and increased detailed analytical water quality studies and monitoring should be implemented to identify and reduce point and non-point pollutants and contaminants. Where such studies or monitoring reports have identified sources of pollution, the County shall propose means to prevent, control, or treat identified pollutants and contaminants.

OBJECTIVE 7.3.3: WETLANDS

Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Policy 7.3.3.1 For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features.

For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual

Policy 7.3.3.2 *intentionally blank*

Policy 7.3.3.3 The County shall develop a database of important surface water features, including lake, river, stream, pond, and wetland resources.

Policy 7.3.3.4 The Zoning Ordinance shall be amended to provide buffers and special setbacks for the protection of riparian areas and wetlands. The County shall encourage the incorporation of protected areas into conservation easements or natural resource protection areas.

Exceptions to riparian and wetland buffer and setback requirements shall be provided to permit necessary road and bridge repair and construction, trail construction, and other recreational access structures such as docks and piers, or where such buffers deny reasonable use of the property, but only when appropriate mitigation measures and Best Management Practices are incorporated into the project. Exceptions shall also be provided for horticultural and grazing activities on agriculturally zoned lands that utilize "best management practices (BMPs)" as recommended by the County Agricultural Commission and adopted by the Board of Supervisors.

Until standards for buffers and special setbacks are established in the Zoning Ordinance, the County shall apply a minimum setback of 100 feet from all perennial streams, rivers, lakes, and 50 feet from intermittent streams and wetlands. These interim standards may be modified in a particular instance if more detailed information relating to slope, soil stability, vegetation, habitat, or other site- or project-specific conditions supplied as part of the review for a specific project demonstrates that a different setback is necessary or would be sufficient to protect the particular riparian area at issue.

For projects where the County allows an exception to wetland and riparian buffers, development in or immediately adjacent to such features shall be planned so that impacts on the resources are minimized. If avoidance and minimization are not feasible, the County shall make findings, based on documentation provided by the project proponent, that avoidance and minimization are infeasible.

Policy 7.3.3.5 Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.

OBJECTIVE 7.3.4: DRAINAGE

Protection and utilization of natural drainage patterns.

Policy 7.3.4.1 Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.

Policy 7.3.4.2 Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

OBJECTIVE 7.3.5: WATER CONSERVATION

Conservation of water resources, encouragement of water conservation, and construction of wastewater disposal systems designed to reclaim and re-use treated wastewater on agricultural crops and for other irrigation and wildlife enhancement projects.

Policy 7.3.5.1 Drought-tolerant plant species, where feasible, shall be used for landscaping of commercial development. Where the use of drought-tolerant native plant species is feasible, they should be used instead of non-native plant species.

Policy 7.3.5.2 A list of appropriate local indigenous drought tolerant plant materials shall be maintained by the County Planning Department and made available to the public.

Policy 7.3.5.3 The County Parks and Recreation Division shall use drought tolerant landscaping for all new parks and park improvement projects.

Policy 7.3.5.4 Require efficient water conveyance systems in new construction. Establish a program of ongoing conversion of open ditch systems shall be considered for conversion to closed conduits, reclaimed water supplies, or both, as circumstances permit.

Policy 7.3.5.5 Encourage water reuse programs to conserve raw or potable water supplies consistent with State Law.

CONSERVATION OF BIOLOGICAL RESOURCES

GOAL 7.4: WILDLIFE AND VEGETATION RESOURCES

Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

OBJECTIVE 7.4.1: ~~RARE, THREATENED, AND ENDANGERED~~PINE HILL RARE PLANT SPECIES

The County shall protect ~~State and Federally recognized rare, threatened, or endangered species~~Pine Hill rare plant species and their habitats consistent with Federal and State laws.

Policy 7.4.1.1 The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment and management of ecological preserves consistent with County Code Chapter 130~~17~~.71 and where feasible the USFWS's *Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan* (USFWS 2002).

Policy 7.4.1.2 Private land for Pine Hill rare plant preserve sites will be purchased only from willing sellers.

Policy 7.4.1.3 Limit land uses within established Pine Hill rare plant preserve areas to activities deemed compatible. Such uses may include passive recreation, research and scientific study, and education. In conjunction with use as passive recreational areas, develop a rare plant educational and interpretive program.

Policy 7.4.1.4 ~~Proposed rare, threatened, or endangered species preserves~~The Pine Hill Preserves, as approved by the County Board of Supervisors, shall be designated Ecological Preserve (-EP) overlay on the General Plan land use map.

~~Policy 7.4.1.5 Species, habitat, and natural community preservation/conservation strategies shall be prepared to protect special status plant and animal species and natural communities and habitats when discretionary development is proposed on lands with such resources unless it is determined that those resources exist, and either are or can be protected, on public lands or private Natural Resource lands.~~

~~Policy 7.4.1.6 All development projects involving discretionary review shall be designed to avoid disturbance or fragmentation of important habitats to the extent reasonably feasible. Where avoidance is not possible, the development shall be required to fully mitigate the effects of important habitat loss and fragmentation. Mitigation shall be defined in the Integrated Natural Resources Management Plan (INRMP) (see Policy 7.4.2.8 and Implementation Measure CO-M).~~

~~The County Agricultural Commission, Plant and Wildlife Technical Advisory Committee, representatives of the agricultural community, academia, and other stakeholders shall be involved and consulted in defining the important habitats of the County and in the creation and~~

~~implementation of the INRMP.~~Policy 7.4.1.5 *Intentionally blank.*~~The County will coordinate wildlife and vegetation protection programs with appropriate Federal and State agencies.~~

Policy 7.4.1.6 *Intentionally blank.*

Policy 7.4.1.7 *Intentionally blank.*~~The County shall continue to support the Noxious Weed Management Group in its efforts to reduce and eliminate noxious weed infestations to protect native habitats and to reduce fire hazards.~~

OBJECTIVE 7.4.2: IDENTIFY AND PROTECT RESOURCES

Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.

~~Policy 7.4.2.1 To the extent feasible in light of other General Plan policies and to the extent permitted by State law, the County of El Dorado will protect identified critical fish and wildlife habitat, as identified on the Important Biological Resources Map maintained at the Planning Department, through any of the following techniques: utilization of open space, Natural Resource land use designation, clustering, large lot design, setbacks, etc.~~

~~Policy 7.4.2.2 Where critical wildlife areas and migration corridors are identified during review of projects, the County shall protect the resources from degradation by requiring all portions of the project site that contain or influence said areas to be retained as non-disturbed natural areas through mandatory clustered development on suitable portions of the project site or other means such as density transfers if clustering cannot be achieved. The setback distance for designated or protected migration corridors shall be determined as part of the project's environmental analysis. The intent and emphasis of the Open Space land use designation and of the non-disturbance policy is to ensure continued viability of contiguous or interdependent habitat areas and the preservation of all movement corridors between related habitats. The intent of mandatory clustering is to provide a mechanism for natural resource protection while allowing appropriate development of private property. Horticultural and grazing projects on agriculturally designated lands are exempt from the restrictions placed on disturbance of natural areas when utilizing "Best Management Practices" (BMPs) recommended by the County Agricultural Commission and adopted by the Board of Supervisors when not subject to Policy 7.1.2.7.~~

Policy 7.4.2.1 The County will coordinate wildlife and vegetation protection programs with appropriate Federal and State agencies. ~~*Intentionally blank.*~~

Policy 7.4.2.2 The County shall continue to support the Noxious Weed Management Group in its efforts to reduce and eliminate noxious weed infestations to protect native habitats and to reduce fire hazards~~*Intentionally blank*~~.

Policy 7.4.2.3 Consistent with Policy 9.1.3.1 of the Parks and Recreation Element, low impact uses such as trails and linear parks may be provided within river and stream buffers if all applicable mitigation measures are incorporated into the design.

Policy 7.4.2.4 ~~Establish~~Protect and ~~manage~~preserve wildlife habitat corridors within public parks and natural resource protection areas to allow for wildlife use. Recreational uses within these areas shall be limited to those activities that do not require grading or vegetation removal.

Policy 7.4.2.5 Setbacks from all rivers, streams, and lakes shall be included in the Zoning Ordinance for all ministerial and discretionary development projects.

~~Policy 7.4.2.6 El Dorado County Biological Community Conservation Plans shall be required to protect, to the extent feasible, rare, threatened, and endangered plant species only when existing Federal or State plans for non-jurisdictional areas do not provide adequate protection.~~

~~Policy 7.4.2.7 The County shall form a Plant and Wildlife Technical Advisory Committee to advise the Planning Commission and Board of Supervisors on plant and wildlife issues, and the committee should be formed of local experts, including agricultural, fire protection, and forestry representatives, who will consult with other experts with special expertise on various plant and wildlife issues, including representatives of regulatory agencies. The Committee shall formulate objectives which will be reviewed by the Planning Commission and Board of Supervisors.~~

Policy 7.4.2.6 *Intentionally blank.*

Policy 7.4.2.7 *Intentionally blank.*

Policy 7.4.2.8 ~~Develop within five years and implement an Integrated Natural Resources Management Plan (INRMP) that identifies~~ Conserve contiguous blocks of important habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the County ~~and establishes a program for effective habitat preservation and management. The INRMP shall include the following components:~~

~~Habitat Inventory. This part of the INRMP shall inventory and map the following important habitats~~through a Biological Resource Mitigation Program (Program). The Program will result in ~~El Dorado County:~~the conservation of:

1. Habitats that support special status species;
2. Aquatic environments including streams, rivers, and lakes;
3. Wetland and riparian habitat;
4. Important habitat for migratory deer herds; and
5. Large expanses of native vegetation.

~~The County should update the inventory every three years to identify the amount of important habitat protected, by habitat type, through County programs and the amount of important habitat removed because of new development during that period. The inventory and mapping effort shall be developed with the assistance of the Plant and Wildlife Technical Advisory Committee, CDFG, and USFWS. The inventory shall be maintained and updated by the County Planning Department and shall be publicly accessible.~~

~~A. Habitat Protection Strategy. This component shall describe a strategy for protecting important habitats based on coordinated land acquisitions (see item D below) and management of acquired land. The goal of the strategy shall be to conserve and restore contiguous blocks of important habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the county. The Habitat Protection Strategy should be updated at least once every five years based on the results of the habitat monitoring program (item F below). Consideration of wildlife movement will be given by the County on all future 4- and 6-lane roadway construction projects. When feasible, natural undercrossings along proposed roadway alignments that could be utilized by terrestrial wildlife for movement will be preserved and enhanced.~~

~~B. Mitigation Assistance. This part of the INRMP shall establish a program to facilitate mitigation of impacts to biological resources resulting from projects approved by the County that are unable to avoid impacts on important habitats. The program may include development of mitigation banks, maintenance of lists of potential mitigation options, and incentives for developers and landowner participation in the habitat acquisition and management components of the INRMP.~~

~~C. Habitat Acquisition. Based on the Habitat Protection Strategy and in coordination with the Mitigation Assistance program, the INRMP shall include a program for identifying habitat acquisition opportunities involving willing sellers. Acquisition may be by state or federal land~~

management agencies, private land trusts or mitigation banks, the County, or other public or private organizations. Lands may be acquired in fee or protected through acquisition of a conservation easement designed to protect the core habitat values of the land while allowing other uses by the fee owner. The program should identify opportunities for partnerships between the County and other organizations for habitat acquisition and management. In evaluating proposed acquisitions, consideration will be given to site specific features (e.g., condition and threats to habitat, presence of special status species), transaction related features (e.g., level of protection gained, time frame for purchase completion, relative costs), and regional considerations (e.g., connectivity with adjacent protected lands and important habitat, achieves multiple agency and community benefits). Parcels that include important habitat and are located generally to the west of the Eldorado National Forest should be given priority for acquisition. Priority will also be given to parcels that would preserve natural wildlife movement corridors such as crossing under major roadways (e.g., U.S. Highway 50 and across canyons). All land acquired shall be added to the Ecological Preserve overlay area.

D. Habitat Management. Each property or easement acquired through the INRMP should be evaluated to determine whether the biological resources would benefit from restoration or management actions. Examples of the many types of restoration or management actions that could be undertaken to improve current habitat conditions include: removal of non native plant species, planting native species, repair and rehabilitation of severely grazed riparian and upland habitats, removal of culverts and other structures that impede movement by native fishes, construction of roadway under and overcrossing that would facilitate movement by terrestrial wildlife, and installation of erosion control measures on land adjacent to sensitive wetland and riparian habitat.

E. Monitoring. The INRMP shall include a habitat monitoring program that covers all areas under the Ecological Preserve overlay together with all lands acquired as part of the INRMP. Monitoring results shall be incorporated into future County planning efforts so as to more effectively conserve and restore important habitats. The results of all special status species monitoring shall be reported to the CNDDB. Monitoring results shall be compiled into an annual report to be presented to the Board of Supervisors.

F. Public Participation. The INRMP shall be developed with and include provisions for public participation and informal consultation with local, state, and federal agencies having jurisdiction over natural resources within the county.

G. Funding. The County shall develop a conservation fund to ensure adequate funding of the INRMP, including habitat maintenance and

~~restoration. Funding may be provided from grants, mitigation fees, and the County general fund. The INRMP annual report described under item F above shall include information on current funding levels and shall project anticipated funding needs and anticipated and potential funding sources for the following five years.~~

A. Habitat Protection Strategy. The Program establishes mitigation ratios ~~for~~ to offset impacts to special-status species habitat and special-status ~~biological resources, including~~ vegetation communities~~, plants, and wildlife~~ within the County.

Special-status species include plants and animals in the following categories:

- Species listed or proposed for listing as Threatened or Endangered under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA);
- Species considered as candidates for listing as Threatened or Endangered under ESA or CESA;
- Wildlife species identified by California Department of Fish and Wildlife (CDFW) as Species of Special Concern;
- Wildlife species identified by US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) as Species of Concern;
- Plants listed as Endangered or Rare under the California Native Plant Protection Act;
- Animals fully protected under the California Fish and Game Code;
- Plants that have a California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) of 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (plants rare, threatened, or endangered in California and elsewhere), 2A (plants presumed extirpated in California, but more common elsewhere), or 2B (plants rare, threatened, or endangered in California, but more common elsewhere). The CNPS CRPRs are used by both CDFW and USFWS in their consideration of formal species protection under ESA or CESA.

With the exception of oak woodlands, which would be mitigated in accordance with the ORMP (see General Plan Policy 7.4.4.4), and Pine Hill rare plant species and their habitat, which would be mitigated in accordance with County Code Chapter 130.71 (see General Plan Policy 7.4.1.1), mitigation of impacts to vegetation communities will be implemented in accordance with the table below. Preservation and creation of the following vegetation communities will ensure that the current range and distribution of special-status species within the County are maintained.~~:~~

Habitat Mitigation Summary Table			
Vegetation Type	Preservation	Creation	Total
Water	NA	1:1	1:1
Herbaceous Wetland	1:1	1:1	2:1
Shrub and Tree Wetlands	2:1	1:1	3:1
Upland (non-oak and non-Pine Hill rare plant species habitat)	1:1	NA	1:1

B. Wildlife Movement for future 4- and 6- and 8-lane roadway construction projects. Consideration of wildlife movement will be given by the County on all future 4-, 6-, and 8-lane roadway construction and widening projects. Impacts on public safety and wildlife movement for projects that include new roads of 4 or more lanes or the widening of roads to 4 or more lanes will be evaluated during the development review process (see Section C below). The analysis of wildlife movement impacts will take into account the conditions of the project site and surrounding property to determine whether wildlife undercrossings are warranted and, if so, the type, size, and locations that would best mitigate a project's impacts on wildlife movement and associated public safety.

C. Biological Resources Assessment. A site-specific biological resources technical report will be required to determine the presence of special-status biological resources that may be affected by a proposed discretionary project. Vegetation communities and special-status plants shall be mapped and assessed in accordance with the CDFG 2009 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* and subsequent updates, and the *List of Vegetation Alliances and Associations* (CDFG 2010) and subsequent updates. The report will include an assessment of direct, indirect and cumulative impacts to biological resources, including vegetation communities, plant and wildlife species and wildlife movement. The results of the biological resources technical report shall be used as the basis for establishing mitigation requirements in conformance with this policy and the Oak Resources Management Plan (ORMP, see General Plan Policy 7.4.4.4).

D. Habitat Protection. Mitigation for impacts to vegetation communities defined above in Section A will occur within the County on a minimum contiguous habitat block of 5 acres. Wetlands mitigation may occur within mitigation banks and/or outside the County if within the watershed of impact. Mitigation sites will be prioritized based on the following criteria:

- Location within PCAs and IBCs
- Location within other important ecological areas, as defined in the Updated INRMP Initial Inventory and Mapping (June 2010);
- Woodland, forest and shrub communities with diverse age structure;
- Woodland and forest communities with large trees and dense canopies;
- Opportunities for active land management to be used to enhance or restore natural ecosystem processes;
- Presence of or potential to support special-status species;
- Connectivity with adjacent protected lands;
- Parcels that achieve multiple agency and community benefits;
- Parcels that are located generally to the west of the Eldorado National Forest; and
- Parcels that would preserve natural wildlife movement corridors such as crossings under major roadways (e.g., U.S. Highway 50 and across canyons).

E. Mitigation Assistance. The County will establish and maintain a database of willing sellers of land for mitigation of biological resource impacts within the County. The County will manage the database as a voluntary program wherein landowners must opt-in to be included in the database by contacting the County. The database will include the following information:

- Property owner name
- Assessor's Parcel Number
- Parcel acreage
- General vegetation communities as mapped in the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) database

- Location within Priority Conservation Area (PCA), Important Biological Corridor (IBC), or important ecological area, as defined in the Updated INRMP Initial Inventory and Mapping (June 2010).

Policy 7.4.2.9 The Important Biological Corridor (-IBC) overlay shall apply to lands identified as having high wildlife habitat values because of extent, habitat function, connectivity, and other factors. Lands located within the overlay district shall be subject to the following provisions except that where the overlay is applied to lands that are also subject to the Agricultural District (-A) overlay or that are within the Agricultural Lands (AL) designation, the land use restrictions associated with the -IBC policies will not apply to the extent that the agricultural practices do not interfere with the purposes of the -IBC overlay~~.~~:

- ~~Increased minimum parcel size;~~
- ~~Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands;~~
- ~~Lower thresholds for grading permits;~~
- ~~Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetland/riparian habitat loss;~~
- ~~Increased riparian corridor and wetland setbacks;~~
- ~~Greater protection for rare plants (e.g., no disturbance at all or disturbance only as recommended by U.S. Fish and Wildlife Service/California Department of Fish and Game);~~
- ~~Standards for retention of contiguous areas/large expanses of other (non-oak or non-sensitive) plant communities;~~
- ~~Building permits discretionary or some other type of "site review" to ensure that canopy is retained;~~
- ~~More stringent standards for lot coverage, floor area ratio (FAR), and building height; and~~
- ~~No hindrances to wildlife movement (e.g., no fences that would restrict wildlife movement).~~

~~The standards listed above shall be included in the Zoning Ordinance.~~

- ~~Wildland Fire Safe measures~~In order to evaluate project-specific compatibility with the -IBC overlay, applicants for discretionary projects (and applicants for ministerial projects within the Weber Creek canyon IBC) shall be required to provide to the County a biological resources technical report (meeting the requirements identified in Section A of Policy 7.4.2.8 above). The

site-specific biological resources technical report will determine the presence of special-status species or habitat for such species (as defined in Section B of Policy 7.4.2.8 above) that may be affected by a proposed project as well as the presence of wildlife corridors particularly those used by large mammals such as mountain lion, bobcat, mule deer, American black bear, and coyote. Properties within the -IBC overlay that are found to support wildlife movement shall provide mitigation to ensure there is no net loss of wildlife movement function and value for special-status species, as well as large mammals such as mountain lion, bobcat, mule deer, American black bear, and coyote. Mitigation measures may include land use siting and design tools.

Wildland Fire Safe measures (actions conducted in accordance with an approved Fire Safe Plan for existing structures or defensible space maintenance for existing structures consistent with California Public Resources Code Section 4291) are exempt from this policy, except that Fire Safe measures will be designed insofar as possible to be consistent with the objectives of the Important Biological Corridor. Wildland Fire Safe measures for proposed projects are not exempt from this policy.

OBJECTIVE 7.4.3: ~~COORDINATION WITH APPROPRIATE AGENCIES~~INTENTIONALLY BLANK

~~**Coordination of wildlife and vegetation protection programs with appropriate Federal and State agencies.**~~

OBJECTIVE 7.4.4: FOREST ~~AND~~, OAK WOODLAND, AND TREE RESOURCES

Protect and conserve forest ~~and~~, oak woodland, and tree resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

Policy 7.4.4.1 The Natural Resource land use designation shall be used to protect important forest resources from uses incompatible with timber harvesting.

Policy 7.4.4.2 Through the review of discretionary projects, the County, consistent with any limitations imposed by State law, shall encourage the conservation, protection, planting, restoration, and regeneration of native trees in new developments and within existing communities.

Policy 7.4.4.3 ~~Utilize~~Encourage the clustering of development to retain the largest contiguous areas of forests and oak woodlands possible ~~in wildland (undeveloped) status~~.

Policy 7.4.4.4 For all new development projects ~~(not including agricultural cultivation and~~ or actions ~~pursuant to an approved Fire Safe Plan necessary to protect existing structures, both of which are exempt from this policy)~~ that ~~would~~ result in ~~soil disturbance on parcels that (1) are over an acre~~impacts to oak woodlands and ~~have at least 1 percent total canopy cover or (2) are less than an acre and have at least 10 percent total canopy cover by woodlands habitats as defined in this General Plan and determined from base line aerial photography~~ /or ~~by site survey performed by a qualified biologist or licensed arborist~~individual native oak trees, including Heritage Trees, the County shall require ~~one of two~~ mitigation ~~options: (1)~~ as outlined in the ~~project applicant shall adhere to the tree canopy retention and replacement standards described below; or (2) the project applicant shall contribute to the County's Integrated Natural~~ El Dorado County Oak Resources Management Plan (~~INRMP) conservation fund described~~ORMP). The ORMP functions as the oak resources component of the County's biological resources mitigation program, identified in Policy 7.4.2.8.

~~**Option A**~~

~~The County shall apply the following tree canopy retention standards:~~

~~**Percent Existing Canopy Cover**~~	~~**Canopy Cover to be Retained**~~
~~80–100~~	~~60% of existing canopy~~
~~60–79~~	~~70% of existing canopy~~
~~40–59~~	~~80% of existing canopy~~
~~20–39~~	~~85% of existing canopy~~
~~10–19~~	~~90% of existing canopy~~
~~1–9 for parcels > 1 acre~~	~~90% of existing canopy~~

~~Under Option A, the project applicant shall also replace woodland habitat removed at 1:1 ratio. Impacts on woodland habitat and mitigation requirements shall be addressed in a Biological Resources Study and Important Habitat Mitigation Plan as described in Policy 7.4.2.8. Woodland replacement shall be based on a formula, developed by the County, that accounts for the number of trees and acreage affected.~~

~~**Option B**~~

~~The project applicant shall provide sufficient funding to the County's INRMP conservation fund, described in Policy 7.4.2.8, to fully compensate for the impact to oak woodland habitat. To compensate for fragmentation as well as habitat loss, the preservation mitigation ratio shall be 2:1 and based on the total woodland acreage onsite directly impacted by habitat loss and indirectly impacted by habitat fragmentation.~~

The costs associated with acquisition, restoration, and management of the habitat protected shall be included in the mitigation fee. Impacts on woodland habitat and mitigation requirements shall be addressed in a Biological Resources Study and Important Habitat Mitigation Plan as described in Policy 7.4.2.8.

Policy 7.4.4.5 Where existing individual or a group of oak trees are lost within a stand, a corridor of oak trees shall be retained that maintains continuity between all portions of the stand. The retained corridor shall have a tree density that is equal to the density of the stand.

OBJECTIVE 7.4.5: NATIVE VEGETATION AND LANDMARK TREES

Protect and maintain native trees including oaks and landmark and heritage trees.

Policy 7.4.5.1 A tree survey, preservation, and replacement plan shall be required to be filed with the County prior to issuance of a grading permit for discretionary permits on all high-density residential, multifamily residential, commercial, and industrial projects. To ensure that proposed replacement trees survive, a mitigation monitoring plan should be incorporated into discretionary projects when applicable and shall include provisions for necessary replacement of trees.

Policy 7.4.5.2 It shall be the policy of the County to preserve native oaks wherever feasible, through the review of all proposed development activities where such trees are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner. To ensure that oak tree loss is reduced to reasonable acceptable levels, the County shall develop and implement an Oak Tree Preservation Ordinance that includes the following components:

H. Oak Tree Removal Permit Process. Except under special exemptions, a tree removal permit shall be required by the County for removal of any native oak tree with a single main trunk of at least 6 inches diameter at breast height (dbh), or a multiple trunk with an aggregate of at least 10 inches dbh. Special exemptions when a tree removal permit is not needed shall include removal of trees less than 36 inches dbh on 1) lands in Williamson Act Contracts, Farmland Security Zone Programs, Timber Production Zones, Agricultural Districts, designated Agricultural Land (AL), and actions pursuant to a Fire Safe plan; 2) all single family residential lots of one acre or less that cannot be further subdivided; 3) when a native oak tree is cut down on the owner's property for the owner's personal use; and 4) when written approval has been received from the County Planning Department. In passing judgment upon tree removal permit applications, the County may impose such reasonable conditions of approval as are necessary to

protect the health of existing oak trees, the public and the surrounding property, or sensitive habitats. The County Planning Department may condition any removal of native oaks upon the replacement of trees in kind. The replacement requirement shall be calculated based upon an inch for inch replacement of removed oaks. The total of replacement trees shall have a combined diameter of the tree(s) removed. Replacement trees may be planted onsite or in other areas to the satisfaction of the County Planning Department. The County may also condition any tree removal permit that would affect sensitive habitat (e.g., valley oak woodland), on preparation of a Biological Resources Study and an Important Habitat Mitigation Program as described in Policy 7.4.1.6. If an application is denied, the County shall provide written notification, including the reasons for denial, to the applicant.

I. Tree Removal Associated with Discretionary Project. Any person desiring to remove a native oak shall provide the County with the following as part of the project application:

- A written statement by the applicant or an arborist stating the justification for the development activity, identifying how trees in the vicinity of the project or construction site will be protected and stating that all construction activity will follow approved preservation methods;
- A site map plan that identifies all native oaks on the project site; and
- A report by a certified arborist that provides specific information for all native oak trees on the project site.

J. Commercial Firewood Cutting. Fuel wood production is considered commercial when a party cuts firewood for sale or profit. An oak tree removal permit shall be required for commercial firewood cutting of any native oak tree. In reviewing a permit application, the Planning Department shall consider the following:

- Whether the trees to be removed would have a significant negative environmental impact;
- Whether the proposed removal would not result in clear-cutting, but will result in thinning or stand improvement;
- Whether replanting would be necessary to ensure adequate regeneration;
- Whether the removal would create the potential for soil erosion;
- Whether any other limitations or conditions should be imposed in accordance with sound tree management practices; and
- What the extent of the resulting canopy cover would be.

~~Penalties. Fines will be issued to any person, firm, or corporation that is not exempt from the ordinance who damages or destroys an oak tree without first obtaining an oak tree removal permit. Fines may be as high as three times the current market value of replacement trees as well as the cost of replacement, and/or replacement of up to three times the number of trees required by the ordinance. If oak trees are removed without a tree removal permit, the County Planning Department may choose to deny or defer approval of any application for development of that property for a period of up to 5 years. All monies received for replacement of illegally removed or damaged trees shall be deposited in the County's Integrated Natural Resources Management Plan (INRMP) conservation fund.~~ The ORMP identifies standards for oak woodland and native oak tree impact determination, mechanisms to mitigate oak woodland and native oak tree impacts, technical report submittal requirements, minimum qualifications for technical report preparation, mitigation monitoring and reporting requirements, and projects or actions that are exempt from this policy. The ORMP also establishes an in-lieu fee payment option for impacts to oak woodlands and native oak trees, identifies Priority Conservation Areas (PCAs) where oak woodland conservation efforts may be focused, and outlines minimum standards for identification of oak woodland conservation areas outside the PCAs. Requirements for monitoring and maintenance of conserved oak woodland areas and identification of allowable uses within conserved oak woodland areas are also included in the ORMP.

PRESERVATION OF CULTURAL RESOURCES

GOAL 7.5: CULTURAL RESOURCES

Ensure the preservation of the County's important cultural resources.

OBJECTIVE 7.5.1: PROTECTION OF CULTURAL HERITAGE

Creation of an identification and preservation program for the County's cultural resources.

Policy 7.5.1.1 The County shall establish a Cultural Resources Ordinance. This ordinance shall provide a broad regulatory framework for the mitigation of impacts on cultural resources (including historic, prehistoric and paleontological resources) by discretionary projects. This Ordinance should include (but not be limited to) and provide for the following:

A. Appropriate (as per guidance from the Native American Heritage Commission) Native American monitors to be notified regarding projects involving significant ground-disturbing activities that could affect significant resources.

B. A 100-foot development setback in sensitive areas as a study threshold when deemed appropriate.

C. Identification of appropriate buffers, given the nature of the resources within which ground-disturbing activities should be limited.

D. A definition of cultural resources that are significant to the County. This definition shall conform to (but not necessarily be limited to) the significance criteria used for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) and Society of Vertebrate Paleontology.

E. Formulation of project review guidelines for all development projects.

F. Development of a cultural resources sensitivity map of the County.

Policy 7.5.1.2 Reports and/or maps identifying specific locations of archaeological or historical sites shall be kept confidential in the Planning Department but shall be disclosed where applicable.

Policy 7.5.1.3 Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged.

Policy 7.5.1.4 Promote the registration of historic districts, sites, buildings, structures, and objects in the National Register of Historic Places and inclusion in the California State Office of Historic Preservation's California Points of Historic Interest and California Inventory of Historic Resources.

Policy 7.5.1.5 A Cultural Resources Preservation Commission shall be formed to aid in the protection and preservation of the County's important cultural resources. The Commission's duties shall include, but are not limited to:

A. Assisting in the formulation of policies for the identification, treatment, and protection of cultural resources (including historic cemeteries) and the curation of any artifacts collected during field collection/excavation;

B. Assisting in preparation of a cultural resources inventory (to include prehistoric sites and historic sites and structures of local importance);

C. Reviewing all projects with identified cultural resources and making recommendations on appropriate forms of protection and mitigation; and

D. Reviewing sites for possible inclusion in the National Register of Historic Places, California Register, and other State and local lists of cultural properties.

The County shall request to become a Certified Local Government (CLG) through the State Office of Historic Preservation. Certification would qualify the County for grants to aid in historic preservation projects. The Cultural Resources Preservation Commission could serve as the Commission required for the CLG program.

Policy 7.5.1.6 The County shall treat any significant cultural resources (i.e., those determined California Register of Historical Resources/National Register of Historic Places eligible and unique paleontological resources), documented as a result of a conformity review for ministerial development, in accordance with CEQA standards.

OBJECTIVE 7.5.2: VISUAL INTEGRITY

Maintenance of the visual integrity of historic resources.

Policy 7.5.2.1 Create Historic Design Control Districts for areas, places, sites, structures, or uses which have special historic significance.

Policy 7.5.2.2 The County shall define Historic Design Control Districts (HDCDs). HDCD inclusions and boundaries shall be determined in a manner consistent with National Historic Preservation Act (NHPA) Historic District standards.

A. The County shall develop design guidelines for each HDCD. These guidelines shall be compatible with NHPA standards.

B. New buildings and structures and reconstruction/restoration of historic (historic as per National Register of Historic Places [NRHP] and California Register of Historical Resources [CRHR] criteria) buildings and structures shall generally conform to styles of architecture prevalent during the latter half of the 19th century into the first decade of the 20th century.

C. Any historic building or structure located within a designated HDCD, or any building or structure located elsewhere in the county that is listed on the NRHP or CRHR, is designated a California Building of Historic Interest, or a California State Historic Landmark, or is designated as significant as per NRHP/CRHR criteria, shall not be destroyed, significantly altered, removed, or otherwise changed in exterior appearance without a design review.

D. In cases where the County permits the significant alteration of a historic building or structure exterior, such alteration shall be required

to maintain the historic integrity and appearance of the building or structure and shall be subject to a design review.

E. In cases where new building construction is placed next to a historic building or structure in a designated HDCD or listed on the CRHR/NRHP, the architectural design of the new construction shall generally conform to the historic period of significance of the HDCD or listed property.

F. In cases where the County permits the destruction of a historic building or tearing down a structure, the building or structure shall first be recorded in a manner consistent with the standards of the NHPA Historic American Building Survey (HABS) by a qualified professional architectural historian.

G. The County shall mandate building and structure design controls within the viewshed of the Marshall Gold Discovery State Historic Park. These design controls shall be consistent with those mandated for designated Historic Design Control Districts.

Policy 7.5.2.3 New buildings and reconstruction in historic communities shall generally conform to the types of architecture prevalent in the gold mining areas of California during the period 1850 to 1910.

Policy 7.5.2.4 The County shall prohibit the modification of all National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) listed properties that would alter their integrity, historic setting, and appearance to a degree that would preclude their continued listing on these registers. If avoidance of such modifications on privately owned listed properties is deemed infeasible, mitigation measures commensurate with NRHP/CRHR standards shall be formulated in cooperation with the property owner.

Policy 7.5.2.5 In cases where the County permits the demolition or alteration of an historic building, such alteration or new construction (subsequent to demolition) shall be required to maintain the character of the historic building or replicate its historic features.

Policy 7.5.2.6 The County, in cooperation with the State, shall identify the viewshed of Coloma State Park and establish guidelines to be used for development within the viewshed. In addition, the County shall continue to support the relocation of State Route 49 to bypass the Park in order to protect its visual and physical integrity.

OBJECTIVE 7.5.3: RECOGNITION OF PREHISTORIC/HISTORIC RESOURCES

Recognition of the value of the County's prehistoric and historic resources to residents, tourists, and the economy of the County, and promotion of public access and enjoyment of prehistoric and historic resources where appropriate.

OBJECTIVE 7.5.4: PROTECTION OF CEMETERIES

Preservation and protection of existing cemeteries including access and parking.

Policy 7.5.4.1 Protect access routes and parking at existing cemeteries. Development proposals will be evaluated to ensure that they do not interfere with cemeteries or their access and parking.

PRESERVATION OF OPEN SPACE

GOAL 7.6: OPEN SPACE CONSERVATION

Conserve open space land for the continuation of the County's rural character, commercial agriculture, forestry and other productive uses, the enjoyment of scenic beauty and recreation, the protection of natural resources, for protection from natural hazards, and for wildlife habitat.

OBJECTIVE 7.6.1: IMPORTANCE OF OPEN SPACE

Consideration of open space as an important factor in the County's quality of life.

Policy 7.6.1.1 The General Plan land use map shall include an Open Space land use designation. The purpose of this designation is to implement the goals and objectives of the Land Use and the Conservation and Open Space Elements by serving one or more of the purposes stated below. In addition, the designations on the land use map for Rural Residential and Natural Resource areas are also intended to implement said goals and objectives. Primary purposes of open space include:

A. Conserving natural resource areas required for the conservation of plant and animal life including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, banks of rivers and streams and watershed lands;

B. Conserving natural resource lands for the managed production of resources including forest products, rangeland, agricultural lands important to the production of food and fiber; and areas containing important mineral deposits;

C. Maintaining areas of importance for outdoor recreation including areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes including those providing

access to lake shores, beaches and rivers and streams; and areas which serve as links between major recreation and open space reservations including utility easements, banks of rivers and streams, trails and scenic highway corridors;

D. Delineating open space for public health and safety including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs, and areas required for the protection and enhancement of air quality; and

E. Providing for open spaces to create buffers which may be landscaped to minimize the adverse impact of one land use on another.

Policy 7.6.1.2 The County will provide for Open Space lands through:

A. The designation of land as Open Space;

B. The designation of land for low-intensity land uses as provided in the Rural Residential and Natural Resource land use designations;

C. Local implementation of the Federal Emergency Management Agency's National Flood Insurance Program;

D. Local implementation of the State Land Conservation Act Program; and

E. Open space land set aside through Planned Developments (PDs).

Policy 7.6.1.3 The County shall implement Policy 7.6.1.1 through zoning regulations and the administration thereof. It is intended that certain districts and certain requirements in zoning regulations carry out the purposes set forth in Policy 7.6.1.1 as follows:

A. The Open Space (OS) Zoning District is consistent with and shall implement the Open Space designation of the General Plan land use map and all other land use designations.

B. The Agricultural (A), Exclusive Agricultural (AE), Planned Agricultural (PA), Select Agricultural (SA-10), and Timberland Production Zone (TPZ) zoning districts are consistent with Policy 7.6.1.1 and serve one or more of the purposes set forth therein.

C. Zoning regulations shall provide for setbacks from all flood plains, streams, lakes, rivers and canals to maintain Purposes A, B, C, and D set forth in Policy 7.6.1.1.

D. Zoning regulations shall provide for maintenance of permanent open space in residential, commercial, industrial, agricultural, and residential agricultural zone districts based on standards established in

those provisions of the County Code. The regulations shall minimize impacts on wetlands, flood plains, streams, lakes, rivers, canals, and slopes in excess of 30 percent and shall maintain Purposes A, B, C, and D in Policy 7.6.1.1.

E. Landscaping requirements in zoning regulations shall provide for vegetative buffers between incompatible land uses in order to maintain Purpose E in Policy 7.6.1.1.

F. Zoning regulations shall provide for Mineral Resource Combining Zone Districts and/or other appropriate mineral zoning categories which shall be applied to lands found to contain important mineral deposits if development of the resource can occur in compliance with all other policies of the General Plan. Those regulations shall maintain Purposes A, B, C, D, and E of Policy 7.6.1.1.

Policy 7.6.1.4 The creation of new open space areas, including Ecological Preserves, common areas of new subdivisions, and recreational areas, shall include wildfire safety planning.

IMPLEMENTATION PROGRAM

MEASURE CO-A

Review the Zoning Ordinance (Title 17 of the El Dorado County Code) to identify revisions that accomplish the following:

A. Incorporate tree canopy coverage standards outlined in Policy 7.4.4.4;

B. Develop standards for use of native plants in landscaping [Policy 7.4.5.2];

C. Establish Historic Design Control Combining Zone District and design guidelines for reconstruction and construction of new buildings and the demolition of existing buildings in such districts. Adopt an ordinance amendment implementing historic design review requirements and recordation procedures. [Policies 7.5.2.1, 7.5.2.2, and 7.5.2.4];

D. Develop buffer standards for new nonmining land uses next to existing mining operations [Policy 7.2.2.3];

E. Develop standards for minimizing erosion and sedimentation associated with earthwork and grading [Policy 7.1.2.2].

Responsibility:	Planning Department
Time Frame:	Update Zoning Ordinance within one year of General Plan adoption.

MEASURE CO-B

Coordinate with the Resource Conservation Districts to address erosion control issues. [Policy 7.1.2.4]

Responsibility:	Planning Department and Department of Transportation
Time Frame:	Ongoing

MEASURE CO-C

In coordination with the Resource Conservation Districts, develop a roadside maintenance program that addresses roadside drainage, the protection of adjacent surface waters, and vegetation control. [Policy 7.1.2.5]

Also refer to Measure CO-G.

Responsibility:	Department of Transportation
Time Frame:	Develop and implement program within three years of General Plan adoption.

MEASURE CO-D

Develop and agricultural permit program that includes standards for agricultural operations comparable to those in the Grading Ordinance and considers other issues important to the protection of agricultural lands.

Responsibility:	Department of Transportation, Department of Agriculture, and Planning Department
Time Frame:	Within three years of General Plan adoption

MEASURE CO-E

Request that the California Geological Survey conduct a non-metallic mineral survey for the County and manage resources appropriately. [Policy 7.2.1.3]

Responsibility:	Planning Department
Time Frame:	Request survey by state within two years of General Plan adoption. Amend General Plan upon completion of survey by state.

MEASURE CO-F

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MEASURE CO-G

Create guidelines for development projects that may affect surface water resources. The guidelines should include:

- Definition(s) of surface water resources;
- Criteria for determining the presence of surface water resources;
- Buffer standards;
- Mitigation standards; and
- Use of Best Management Practices.

[Policies 7.3.1.1, 7.3.2.1, 7.3.2.3, 7.3.3.1, 7.3.3.2, and 7.3.4.2]

Also refer to Measure CO-C.

Responsibility:	Environmental Management, Department of Transportation, and Planning Department
Time Frame:	Within five years of General Plan adoption.

MEASURE CO-H

Prepare and adopt an ordinance revision to permit the use of domestic gray water for irrigation purposes. [Policy 7.3.1.3]

Responsibility:	Environmental Management and Building Department
Time Frame:	Develop ordinance within five years of General Plan adoption.

MEASURE CO-I

Evaluate alternatives to the use of salt for snow removal on County roads. [Policy 7.3.2.4]

Responsibility:	Department of Transportation
Time Frame:	Complete evaluation within two years of General Plan adoption.

MEASURE CO-J

Develop and implement a program to perform water quality analysis and monitoring of the County's recreational waters. [Policy 7.3.2.5]

Responsibility:	Environmental Management and Department of Transportation
Time Frame:	Develop and implement program within eight years of General Plan adoption.

MEASURE CO-K

Work cooperatively with the State Department of Fish and Game, U.S. Fish and Wildlife Service, and Bureau of Land Management to implement the gabbro soils rare plant ecological preserve and recovery program and to develop a long-term preserve strategy. Develop implementation measures to incorporate in County development standards for ministerial and discretionary projects, which may include:

- Identification of compatible land uses within preserve sites, which may include passive recreation, research and scientific study, and interpretive education; and
- Fuels management and fire protection plans to reduce fire hazards at the interface between rare plant preserve sites and residential land uses; and

[Policies 7.4.1.1, 7.4.1.2, and 7.4.1.3 and Objective 7.4.3]

Responsibility:	Planning Department
Time Frame:	Ongoing implementation to continue immediately upon General Plan adoption. Development standards to be incorporated into updated Zoning Ordinance and design standards programs.

MEASURE CO-L

Develop guidelines for the preparation of biological ~~study~~resources technical reports. [Policy 7.4.~~1.6~~2.8]

Responsibility:	Planning Department and Department of Transportation
Time Frame:	Develop guidelines within five years of General Plan adoption.

MEASURE CO-M

~~Develop and implement an Integrated Natural Resources Management Plan consistent with Policy 7.4.2.8.~~

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~~Responsibility:~~	~~Planning Department~~
~~Time Frame:~~	~~Develop initial habitat protection strategy; develop and implement mitigation assistance program; and develop and implement conservation fund within two years of General Plan adoption. Develop framework for acquisition strategy and monitoring program within three years of General Plan adoption. Begin actual acquisition after completion of the initial inventory and mapping; develop management strategies as properties are acquired.~~ ~~Adaptive management of the entire program will be ongoing.~~

MEASURE CO-N

~~Review and update an Important Biological Corridor (-IBC) Overlay land use designation consistent with Policy 7.4.2.9.~~
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~~Responsibility:~~	~~Planning Department~~
~~Time Frame:~~	~~Within two years of General Plan adoption.~~

MEASURE CO-O

Prepare and adopt a riparian setback ordinance. The ordinance, which shall be incorporated into the Zoning Code, should address mitigation standards, including permanent protection mechanisms for protected areas, and exceptions to the setback requirements. The ordinance shall be applied to riparian areas associated with any surface water feature (i.e., rivers, streams, lakes, ponds, and wetlands) and should be prepared in coordination with Measure CO-B. [Policy 7.4.2.5]

Responsibility:	Planning Department
Time Frame:	Within three years of General Plan adoption.

MEASURE CO-P

Develop and adopt an Oak Resources Management Plan. The plan shall address the following:

- Mitigation standards ~~outlined in Policy 7.4.4.4~~for oak resources impacts;
- ~~Thresholds~~Definitions of ~~significance for the loss of oak woodlands;~~
- ~~Requirements for tree surveys~~exempt projects and actions;

- Technical report requirements;
- ~~Oak resources~~ mitigation ~~plans for discretionary projects;~~
- ~~Replanting~~options and ~~replacement~~ standards;
- Heritage~~/landmark tree protection~~ Tree mitigation standards; and
- ~~An Oak Tree Preservation Ordinance as outlined in~~ Oak resources mitigation monitoring and reporting requirements.

- ~~[~~Policy 7.4.~~5.1.~~

- ~~[Policies 7.~~4.4.~~4 and 7.4.5.1~~]

Responsibility:	Planning Department

~~Responsibility:~~	~~Planning Department~~
~~Time Frame:~~	~~Within two years of General Plan adoption.~~
Time Frame:	Concurrent with biological resources policy update.

MEASURE CO-Q

Develop and adopt a Cultural Resources Preservation Ordinance, consistent with Policy 7.5.1.1.

Responsibility:	Planning Department and Department of Transportation
Time Frame:	Adopt ordinance within two years of General Plan adoption.

MEASURE CO-R

Maintain a confidential cultural resources database of prehistoric and historic resources, including the location and condition of pioneer cemetery sites. Information may be made available consistent with state and federal law. [Policy 7.5.1.2]

Responsibility:	Planning Department
Time Frame:	Ongoing

MEASURE CO-S

Investigate becoming a Certified Local Government through the State Office of Historic Preservation. [Policy 7.5.1.5]

Responsibility:	Planning Department

Time Frame:	Report to the Board of Supervisors within five years of General Plan adoption.

MEASURE CO-T

Work with the State of California Department of Parks and Recreation to identify the viewshed of Marshall Gold Discovery State Historic Park (Coloma) and establish guidelines for development within that viewshed. [Policy 7.5.2.6]

Responsibility:	Planning Department
Time Frame:	Identify viewshed within four years of General Plan adoption. Adopt standards within six years.

MEASURE CO-U

~~Mitigation under Policy 7.4.1.6 shall include providing sufficient funding to the County's conservation fund to acquire and protect important habitat at a minimum 2:1 ratio. The cost associated with acquisition, restoration, and management of the habitat protected shall be included in the mitigation fee. For larger development projects (i.e., those that exceed a total of 10 acres), in addition to contributing to the conservation fund at a minimum 2:1 ratio, onsite preservation and/or restoration of important habitat shall be required at a 1:1 ratio. Impacts on important habitat and mitigation requirements shall be addressed in a Biological Resources Study and an Important Habitat Mitigation Program (described below).~~

~~A. Biological Resources Study. The County shall adopt biological resource assessment standards that apply to all discretionary projects that would result in disturbance of soil and native vegetation in areas that include important habitat as defined in the INRMP. The assessment of the project site must be in the form of an independent Biological Resources Study, and must be completed by a qualified biologist. The evaluation shall quantify the amount of important habitat, by habitat type, as defined in the General Plan and delineated on maps included in the INRMP. The Biological Resources Study shall also address the potential for the project to adversely affect important habitat through conversion or fragmentation. This requirement shall not apply to projects that are on lands that either (1) have already been the subject of a study and for which all mitigation requirements are being implemented or (2) have been evaluated by the County and found to not possess any important habitat resources.~~

~~B. Important Habitat Mitigation Program. The Biological Resource Study shall include an Important Habitat Mitigation Program that identifies options that would avoid, minimize, or compensate for impacts on important habitats in compliance with the standards of the INRMP and the General Plan. All mitigation programs shall include a monitoring and reporting component requiring reports to the County not less than once each year for a period of not less than 10 years. The report will include a description of the lands included in the mitigation program (including location and~~

~~size), a summary of the evaluation criteria established at the time the mitigation program was approved, an evaluation of the mitigation program based on those criteria, and recommendations for action during the following year. The County shall adopt standards for evaluating mitigation programs proposed as part of the Biological Resources Study described above. The standards shall ensure that the mitigation reduces direct and cumulative impacts of proposed development on important habitats to less than significant levels in accordance with CEQA thresholds.~~

~~Responsibility:~~	~~Planning Department~~
~~Time Frame:~~	~~Refer to Measures CO-L and CO-M as applicable.~~

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Attachment D:

Revised Draft Oak Resources Management Plan, clean

1.0 Introduction

This Oak Resources Management Plan (ORMP) updates and revises the Oak Woodland Management Plan adopted by the El Dorado County Board of Supervisors on May 6, 2008 (El Dorado County 2008). It incorporates more recent oak resources mapping data for the County and reflects policy language changes made during the General Plan Biological Policy Review project conducted in 2015. This ORMP incorporates relevant information included in the 2008 Plan, where applicable, and was prepared in coordination with El Dorado County Community Development Agency staff. It also incorporates public input gathered during project-focused hearings and direction given by the El Dorado County Board of Supervisors.

1.1 Purpose

The purpose of this ORMP is to define mitigation requirements for impacts to oak woodlands, individual native oak trees, and Heritage Trees and to outline the County's strategy for oak woodland conservation. This ORMP functions as the oak resources component of the County's biological resources mitigation program, identified in General Plan Policy 7.4.2.8. This ORMP identifies standards for oak woodland and native oak tree impact determination, mechanisms to mitigate oak woodland and native oak tree impacts, technical report submittal requirements, minimum qualifications for technical report preparation, mitigation monitoring and reporting requirements, and projects or actions that are exempt from mitigation requirements. This ORMP also establishes an in-lieu fee payment option for impacts to oak woodlands and native oak trees, identifies Priority Conservation Areas (PCAs) where oak woodland conservation efforts may be focused, and outlines minimum standards for identification of oak woodland conservation areas outside the PCAs. Requirements for monitoring and maintenance of conserved oak woodland areas and identification of allowable uses within conserved oak woodland areas are also included in this ORMP. Lastly, this ORMP provides guidance for voluntary oak woodland and oak tree conservation and management efforts by landowners and land managers.

Loss and fragmentation of wildlife habitat, including oaks and oak woodlands, was identified in the 2004 General Plan Environmental Impact Report (EIR) as a significant impact that would result from development under the General Plan. The County identified several mitigation measures which would reduce the severity of these impacts, although not to a less than significant level. These mitigation measures included Policies 7.4.4.4, 7.4.4.5 and 7.4.5.2, and the related Implementation Measure CO-P. During the General Plan Biological Policy Review project conducted in 2015, these policies were edited and consolidated into one single policy (Policy 7.4.4.4). Implementation Measure CO-P was also modified during this process. The revised language in Policy 7.4.4.4 states that mitigation requirements for impacts to oak resources (oak woodlands, individual native oak trees, and Heritage Trees) shall be outlined in this ORMP. Revised Implementation Measure CO-P directs the County to develop and adopt an ORMP that addresses the following:

- Mitigation standards for oak resources impacts;
- Definitions of exempt projects and actions;
- Technical report requirements;
- Oak resources mitigation options and standards;

- Heritage Tree mitigation standards; and
- Oak resources mitigation monitoring and reporting requirements.

An Oak Resources Conservation ordinance that incorporates the standards outlined in this ORMP will be developed in conjunction with adoption of the ORMP.

At the state level, the Oak Woodlands Conservation Act of 2001 recognizes the importance of private land stewardship in conserving oak woodlands. The legislation established the California Oak Woodlands Conservation Program (COWCP), the mission of which is to "conserve the integrity and diversity of oak woodlands across California's working landscapes through incentives and education." The COWCP provides technical and financial incentives to private landowners to protect and promote biologically functional oak woodlands.

This ORMP serves multiple purposes. It defines the County's conservation strategy for oak resources and provides a framework for mitigating impacts to oak resources. It also complies with Implementation Measure CO-P and constitutes the oak portion of the County's biological resources mitigation program (General Plan Policy 7.4.2.8). Finally, it establishes a plan for voluntary conservation that landowners, the County, and others can use to seek grants and cost-sharing from state and federal programs for oak woodland conservation in El Dorado County.

1.2 Goals and Objectives of Plan

The ORMP goals are guided by two General Plan Objectives: Objective 7.4.2 and Objective 7.4.4. General Plan Objective 7.4.2 states: *Identify and Protect Resources:* Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.

General Plan Objective 7.4.4 states: *Forest, Oak Woodland, and Tree Resources*: Protect and conserve forest, oak woodland, and tree resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

The following goals set forth by the General Plan are met in this ORMP:

- Identify standards for determining oak woodland and native oak tree impacts, outline impact mitigation requirements and options, identify technical report submittal requirements, and outline impact mitigation monitoring and reporting requirements;
- Define Heritage Trees and identify impact mitigation requirements;
- Provide mitigation alternatives for impacts to oak resources consistent with state-level requirements;
- Provide a flexible framework for oak resources mitigation via on-site and off-site mechanisms, including an in-lieu fee payment program;
- Develop an oak woodland in-lieu fee and an individual native oak tree-based in-lieu fee;

- Identify Priority Conservation Areas (PCAs) within large expanses of contiguous oak woodland habitat where land or conservation easements may be acquired from willing sellers to offset the effects of increased habitat loss and fragmentation elsewhere;
- Identify minimum standards under which oak woodland conservation may occur outside of identified PCAs;
- Enhance oak woodland conservation by connecting acquisitions from willing sellers with existing open space, including publicly-owned lands that are managed for oak woodland habitat values (e.g., ecological preserves, recreation lands, rangelands, or natural resource areas) consistent with the County's open space conservation goals (Goal 7.6; Policy 7.6.1.1); and
- Establish a database inventory of interested buyers and willing landowners wishing to participate in oak woodland acquisition and management mitigation options (Policy 7.4.2.8).

1.3 Oak Resources in El Dorado County

1.3.1 Oak Woodlands

The term "oak woodland" is defined in the Oak Woodlands Conservation Act (Article 3.5 (commencing with Section 1360) of Chapter 4 of Division 2 of the Fish and Game Code) as "an oak stand with a greater than ten percent canopy cover or that may have historically supported greater than ten percent canopy cover." For the purposes of this ORMP, the conservation focus is on existing oak woodlands. This ORMP addresses the same study area (below 4,000 feet elevation) and same categories of oak woodlands (California Fire and Resource Assessment Program (FRAP)) as were addressed in the 2008 Oak Woodland Management Plan. These categories of oak woodland were also addressed in the 2004 General Plan using FRAP data from 2002. More recent oak woodland distribution data for El Dorado County available via FRAP (2006) identifies six oak woodland types, which are listed in Table 1 below, along with the acreage of each category found within the ORMP study area. Less than 3,500 acres of valley oak woodland is mapped for El Dorado County, which is designated as a "sensitive habitat" in the General Plan EIR. Finally, while coastal oak woodland is identified in the 2006 FRAP vegetation data set for the ORMP planning area, its presence is unlikely given the range of its dominant tree species (coast live oak (*Quercus agrifolia*)). This classification may be the result of an image processing error during creation of the 2006 FRAP data set and the area is likely another oak woodland type.

Table 1
Acreage of Oak Woodland Types in the ORMP Planning Area (2006 FRAP Data)

Oak Woodland Type	CWHR Code	Acreage	Percent
Blue oak woodland	BOW	42,616	17.0%
Blue oak-foothill pine	BOP	12,915	5.2%
Coastal oak woodland	COW	13	<0.1%
Montane hardwood	MHW	157,455	62.8%
Montane hardwood-conifer	MHC	34,322	13.7%
Valley oak woodland	VOW	3,434	1.4%
	Total:	250,755	100%

A thorough discussion of oak woodland habitat identification and values is presented in Appendix A.

1.3.2 Oak Trees

There are six primary native oak tree species in El Dorado County, including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), and Oregon oak (*Quercus garryana*). Additionally, one native hybrid between California black oak and interior live oak exists, known as oracle oak (*Quercus x morehus*). These oak species comprise the County's oak woodlands and also occur outside of oak woodlands as isolated individuals or small groups.

1.4 Economic Activity, Land, and Ecosystem Values of Oak Resources

Agriculture and recreation-based tourism are important economic generators in El Dorado County. Oak resources provide value for these activities, including forage value for ranching, soil retention and watershed function benefits that contribute to agricultural activities, and aesthetic value for agri-tourism. Oak resources contribute to soil retention and provide watershed benefits, which have benefits to the agricultural community. Deer and other game species are dependent on oak woodland habitat and provide recreational hunting opportunities, which can generate revenues for ranching land owners through hunting leases. Oak resources contribute to a high-quality visit for recreation tourists, whose activities may include camping, fishing, hiking, bird-watching, and equestrian trail riding.

Studies have also concluded that the presence of oak resources enhances property value by providing shade, wind breaks, sound absorption, land use buffers, erosion control, and aesthetic beauty. Oak resources also contribute to healthy lands and watersheds. They do this by providing habitat for animals, maintaining water quality, and improving soil characteristics. Oak resources have also been identified as a valuable component in greenhouse gas reduction, trapping and storing atmospheric carbon dioxide.

More information regarding economic activities, land values, and ecosystem values are presented in Appendix A.

1.5 State-level Regulations

California Public Resources Code (PRC) Section 21083.4 requires a county to determine (as part of its project review required under the California Environmental Quality Act) whether a project may result in conversion of oak woodlands that will have a significant effect on the environment. If it determines that a project may have a significant effect, a county shall require one or more oak woodland mitigation alternatives "to mitigate the significant effect of the conversion of oak woodlands." Alternatives include: 1) conserve oak woodlands, 2) plant an appropriate number of replacement trees and maintain those trees for seven years, 3) contribute to the Oak Woodlands Conservation Fund, or 4) other mitigation measures developed by the County. Plantings shall not fulfill more than one half of the mitigation requirements for a project. Where a county adopts, and a project incorporates, one or more of these mitigation measures, the project is deemed to be in compliance with CEQA as it relates to effects on oaks and oak woodlands. This ORMP incorporates a range of mitigation alternatives that conform to these requirements.

No state-level regulations exist that require mitigation for impacts to individual oak trees that occur outside of oak woodlands; however, this ORMP identifies mitigation requirements for individual native oaks trees and Heritage Trees to meet the goals and objectives of the General Plan.

2.0 Oak Resources Impact Mitigation Requirements

The following sections outline mitigation requirements for impacts to oak resources. These mitigation requirements meet the goals and objectives of the General Plan and fulfill the requirements of General Plan Policy 7.4.4.4.

2.1 Applicability and Exemptions

The oak resources impact mitigation requirements outlined in this section apply to all new development projects or actions that result in impacts to oak woodlands and/or individual native oak trees, including Heritage Trees. Specifically, oak woodland impact mitigation is required for any action requiring discretionary development entitlements or approvals from El Dorado County. Individual native oak tree and Heritage Tree impact mitigation is required for any action requiring a building permit or grading permit issued by El Dorado County and/or any action requiring discretionary development entitlements or approvals from El Dorado County. Activities that do not require one of these two permit types or discretionary approvals do not trigger the impact mitigation requirements included in this ORMP for oak woodlands or for individual native oak trees. However, all impacts to Heritage Trees are subject to the mitigation requirements contained herein. Oak woodland impacts or removal of individual native oak trees (excluding Heritage Trees) associated with the following projects or actions are exempted from the mitigation requirements included in this ORMP:

- Projects or actions occurring on single-family residential lots of 1 acre or less that cannot be further subdivided;
- Actions taken pursuant to an approved Fire Safe Plan for existing structures or in accordance with defensible space maintenance requirements for existing structures in state responsibility areas (SRA) as identified in California Public Resources Code (PRC) Section 4291 (actions associated with Fire Safe Plans or defensible space areas for new or proposed development are not exempt);
- Actions taken to maintain safe operation of existing utility facilities in compliance with state regulations (PRC 4292-4293 and California Public Utilities Commission (CPUC) General Order 95) (actions associated with development of new utility facilities, including transmission or utility lines, are not exempt);
- Road widening and realignment projects necessary to increase capacity, protect public health, and improve safe movement of people and goods in existing public rights-of-way (as well as acquired rights-of-way necessary to complete the project) where the new alignment is dependent on an existing alignment (new proposed roads within the County Circulation Element and internal circulation roads within new or proposed development are not exempt);
- Affordable housing projects for lower income households, as defined pursuant to Section 50079.5 of the California Health and Safety Code, that are located within an urbanized area, or within a sphere of influence as defined pursuant to California Government Code §56076;
- Agricultural activities conducted for the purposes of producing or processing plant and animal products or the preparation of land for this purpose;

- Agricultural cultivation/operations, whether for personal or commercial purposes (excluding commercial firewood operations);
- Activities occurring on lands in Williamson Act Contracts or under Farmland Security Zone Programs;
- Actions taken during emergency firefighting operations and associated post-fire activities;
- Tree removal permitted under a Timber Harvest Plan approved by CAL FIRE;
- Native oak tree removal when a tree exhibits high failure potential with the potential to injure persons or damage property, as documented in writing by a Certified Arborist or Registered Professional Forester; or
- When a native oak tree, other than a Heritage Tree, is cut down on the owner's property for the owner's personal use.

Additionally, this ORMP provides for reductions to oak woodland mitigation for affordable housing projects that are not exempted as defined above. Specifically, development projects that propose a minimum of 10 percent of the dwelling units as income restricted affordable units, as defined by California Health and Safety Code §50052.5, 50053, and 50093, shall be granted a reduction in the amount of oak woodland that is required to be mitigated, as set forth in Table 2. The reduction is to be applied to the mitigation ratio presented in Table 3 and shall only be applied to the residential portion(s) of the proposed project. This reduction for affordable housing projects applies to oak woodland and individual native oak tree impacts and but not to Heritage Tree impacts. In no case shall the mitigation requirement be less than zero.

Table 2
Affordable Housing Mitigation Reduction

Affordable Housing Type (Household Income Level)	Percent Oak Woodland Mitigation Reduction (for portion of project that is income restricted)
Very Low	200%
Lower	100%
Moderate	50%

Example: A project proposes 25% of the units to be affordable in the Lower income category. The oak woodland mitigation ratio may be reduced by 25%. A Moderate income project that provides all units at that income level may reduce the oak woodland mitigation ratio by 50%. A project with 20% Very Low income units would receive a 40% reduction in oak woodland mitigation ratio.

2.2 Oak Woodland Permits and Mitigation

The policy of the County is to preserve oak woodlands when feasible, through the review of all proposed development activities where woodlands are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner. As such, the County shall require mitigation for impacts to oak woodlands. The following sections outline oak woodland permit and mitigation requirements and Figure 1 outlines the permit and mitigation process.

2.2.1 Oak Woodland Removal Permits

An oak woodland removal permit shall be required for a discretionary project to authorize removal of any trees that are a component of an oak woodland. An oak resources technical report shall accompany any oak woodland removal permit application submitted to the County. The County may impose such reasonable conditions of approval as are necessary to protect the health of existing oak woodlands, the public, and the surrounding property. Oak woodland removal permit review will occur concurrently with the environmental review process for discretionary projects. In addition to findings of consistency with the requirements and standards of this ORMP, the County shall make the following findings before approving an oak woodland removal permit application:

- The proposed action is consistent with the General Plan; and
- The proposed action would not be detrimental to the public health, safety and welfare, or injurious to the neighborhood; and
- The proposed action is specifically allowed by an oak woodland removal permit pursuant to this ORMP.

An appeal to the fees established through this ORMP shall be in accordance with the appeal procedure set forth in Section 130.22.220 of the County Code.

Commercial firewood cutting operations in oak woodlands shall also require an oak woodland removal permit. In reviewing an oak woodland removal permit application for firewood cutting operations, the County shall consider the following:

- Whether the removal of the tree(s) would have a significant negative environmental impact;
- Whether the proposed removal would not result in clear-cutting, but would result in thinning or stand improvement;
- Whether replanting would be necessary to ensure adequate regeneration;
- Whether the removal would create the potential for soil erosion;
- Whether any other limitations or conditions should be imposed in accordance with sound tree management practices; and
- What the extent of the resulting oak woodland coverage would be.

Fines shall be issued to any person, firm, or corporation that is not exempt from the standards included in this ORMP who impacts an oak woodland without first obtaining an oak woodland removal permit. Fines may be as high as three times the current oak woodland in-lieu fee amount. If an oak woodland is impacted without an oak woodland removal permit, in addition to issuing a fine, the County may choose to deny or defer approval of any applications for development of that property for a period of up to 5 years. All monies received as fines for illegal oak tree and woodland removal shall be deposited in the County's Oak Woodland Conservation Fund.

2.2.2 Oak Woodland Mitigation

In order to incentivize on-site retention of oak woodlands, mitigation for impacts to oak woodlands shall be based on the ratios presented in Table 3.

Table 3
Oak Woodland Mitigation Ratios

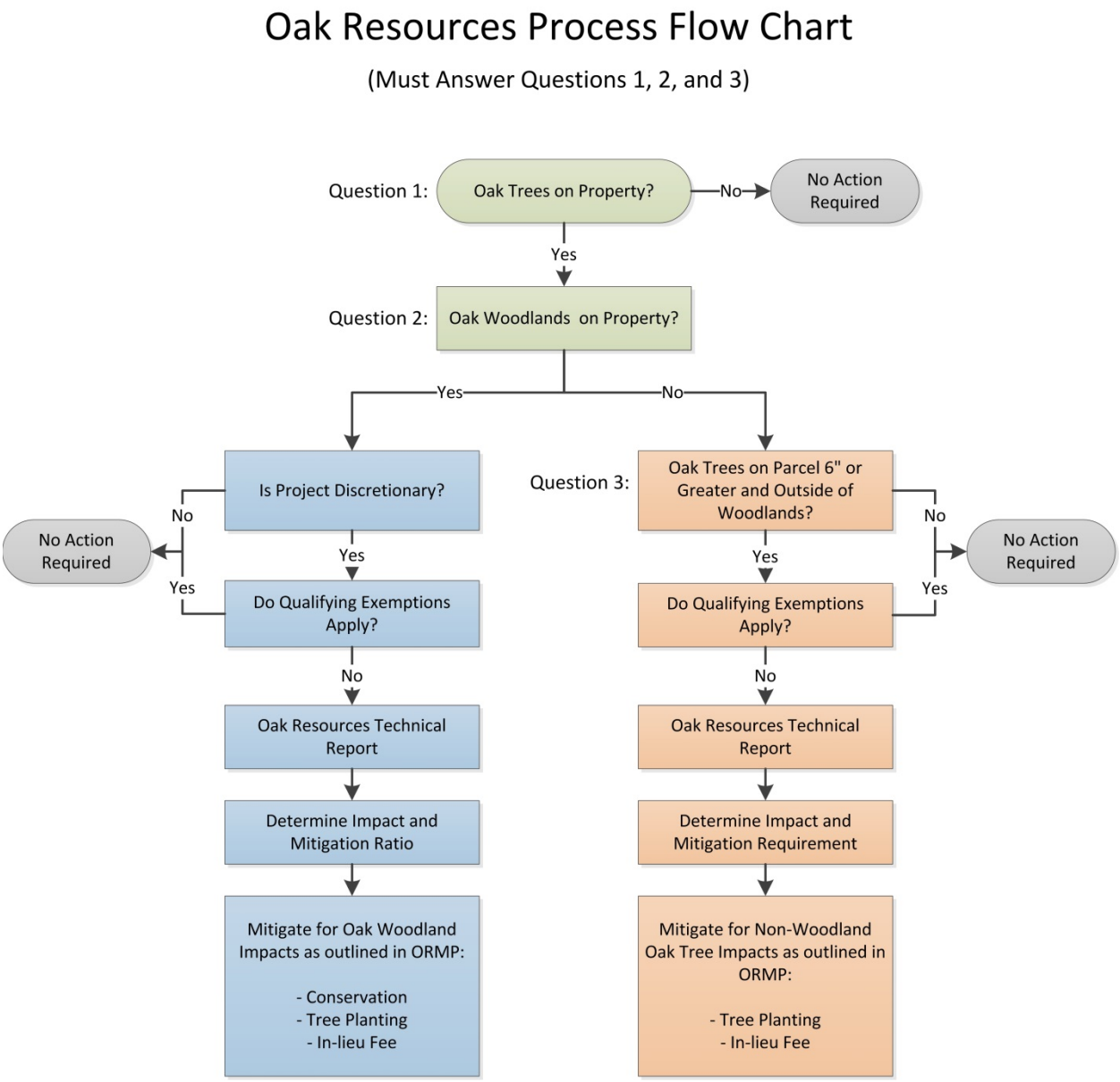
Percent of Oak Woodland Impact	Oak Woodland Mitigation Ratio
0-50%	1:1
50.1-75%	1.5:1
75.1-100%	2:1

Oak woodland impacts and mitigation shall be addressed in an oak resources technical report. As presented in Table 3, all of a project's oak woodland impacts shall be mitigated at a 1:1 ratio where 50 percent or less of on-site oak woodlands are impacted, all of a project's oak woodland impacts shall be mitigated at a 1.5:1 ratio where 50.1 to 75 percent of on-site oak woodlands are impacted, and all of a project's oak woodland impacts shall be mitigated at a 2:1 ratio where greater than 75 percent of on-site oak woodlands are impacted. Non-exempt County road projects shall provide oak woodland mitigation at a ratio of 1:1 regardless of the amount of onsite retention. A deed restriction or conservation easement shall be placed over retained on-site woodlands and those woodlands retained on site shall not be counted towards the impacted amount or towards the required mitigation. Mitigation for the impacted oak woodlands shall occur at the ratio required under Table 3 using one or more of the following options:

1. Deed restriction or conservation easement acquisition (off-site), and/or acquisition in fee title by a land conservation organization (off-site);
2. In-lieu fee payment;
3. Replacement planting on-site within an area subject to a deed restriction or conservation easement;
4. Replacement planting off-site within an area subject to a conservation easement; or
5. A combination of numbers 1 through 4 above.

Consistent with California PRC 21083.4, replacement planting shall not account for more than 50 percent of the oak woodland mitigation requirement.

Figure 1. Oak Resources Permitting and Mitigation Process



2.3 Individual Native Oak Tree and Heritage Tree Permits and Mitigation

The policy of the County is to preserve native oak trees when feasible, through the review of all proposed development activities where such trees are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner. As such, the County shall require mitigation for impacts to individual native oak trees and Heritage Trees.

2.3.1 Oak Tree Removal Permits

A tree removal permit shall be required by the County for removal of any individual native oak tree not located within an oak woodland and/or for removal of any Heritage Tree. An oak resources technical report shall accompany any tree removal permit application submitted to the County. The County may impose such reasonable conditions of approval as are necessary to protect the health of existing oak trees, the public, and the surrounding property. Oak tree removal permit review will occur concurrent with the environmental review process for discretionary projects or concurrently with other permit review and processing for ministerial projects (e.g., building permits). The County will prepare a permit application for ministerial review. In addition to findings of consistency with the requirements and standards of this ORMP, the County shall make the following findings before approving an oak tree removal permit application:

- The proposed action is consistent with the General Plan; and
- The proposed action would not be detrimental to the public health, safety and welfare, or injurious to the neighborhood; and
- The proposed action is specifically allowed by an oak woodland removal permit pursuant to this ORMP.

An appeal to the fees established through this ORMP shall be in accordance with the appeal procedure set forth in Section 130.22.220 of the County Code.

Commercial firewood cutting operations shall also require a tree removal permit if not approved under an oak woodland removal permit. In reviewing a tree removal permit application for commercial firewood cutting operations, the County shall consider the following:

- Whether the removal of the tree(s) would have a significant negative environmental impact;
- Whether the tree proposed for removal is a Heritage Tree;
- Whether replanting would be necessary to ensure adequate regeneration;
- Whether the removal would create the potential for soil erosion; and
- Whether any other limitations or conditions should be imposed in accordance with sound tree management practices.

- Any person, firm, or corporation that is not exempt from the standards included in this ORMP who removes.

Fines shall be issued to any person, firm, or corporation that is not exempt from the standards included in this ORMP who removes an oak tree without first obtaining an oak tree removal permit. Fines may be as high as three times the current market value of replacement trees, as well as the cost of replacement, and/or the cost of replacement of up to three times the number of required replacement trees. In the case of unpermitted Heritage Tree removal, fines may be as high as 9 times the current market value of replacement trees, as well as the cost of replacement, and/or the cost of replacement of up to 9 times the number of required replacement trees. If individual native oak trees or Heritage Trees are removed without an oak tree removal permit, in addition to issuing a fine, the County may choose to deny or defer approval of any applications for development of that property for a period of up to 5 years. All monies received as fines for illegal oak tree and woodland removal shall be deposited in the County's Oak Woodland Conservation Fund.

2.3.2 Oak Tree Mitigation

Mitigation for removal of individual native oak trees shall be based on an inch-for-inch replacement standard (defined in Section 2.4) and shall be quantified and outlined in an oak resources technical report (defined in Section 6.0). Mitigation for removal of Heritage Trees shall be based on an inch-for-inch replacement standard at a 3:1 ratio and shall also be quantified and outlined in an oak resources technical report.

Options for individual native oak tree and Heritage Tree impact mitigation requirements include:

1. Replacement planting on-site within an area subject to a deed restriction or conservation easement;
2. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by a land conservation organization;
3. In-lieu fee payment; or
4. A combination of numbers 1 through 3 above.

Mitigation for individual native oak tree and/or Heritage Tree impacts shall be addressed in an oak resources technical report.

2.4 Replacement Planting Guidelines

This section provides guidelines for projects that elect to mitigate via replacement planting. Replacement plantings may be accepted if the replanting area can support oak resources (e.g., proper soil type and general environment). The intent is not to remove existing natural habitats for replacement plantings or to create a continuous canopy that would reduce wildlife value or contribute to increased fire hazard. Replacement plantings are subject to County approval and shall be completed as follows:

- Oak Woodland Impacts: For impacts to oak woodlands, planting density shall be based on recommendations made by a qualified professional and presented in an oak resources

technical report. Planting density shall be based on the density of impacted oak woodlands, which shall be documented in the oak resources technical report. Replacement trees shall be regularly monitored and maintained and shall survive for a period of 7 years, calculated from the day of planting. Acorns may be used instead of container trees. If acorns are used, they shall be planted at a 3:1 ratio as determined by the tree replacement formula. The replacement is as follows:

Replacement planting with container trees (one-gallon or DeePot 40-sized container trees, that are locally sourced, shall follow this formula for ratios:

(Impacted Oak Woodland Area in acres) x (Impacted Oak Woodland Density in trees/acre) = the total number of replacement trees to be replanted

Replacement replanting by acorn shall be from locally-sourced acorns (acorns gathered locally). The replacement ratio by acorn replanting shall be obtained by the following formula

(Impacted Oak Woodland Area in acres) x (Impacted Oak Woodland Density in trees/acre) x (3 acorns per tree) = the total number of acorns to be replanted

This ORMP does not preclude over-planting so that the identified woodland density may be accomplished at the end of the 7-year maintenance and monitoring period. Replacement planting may use a combination of replacement tree sizes (one-gallon, DeePot 40, acorns) if consistency with these ratios is maintained and documented in an oak resources technical report. Monitoring reports shall be submitted to the County at least annually during the 7-year maintenance and monitoring period and documentation of replacement planting success shall be provided to the County at the end of the 7-year monitoring and maintenance period (final monitoring report).

- Individual Native Oak Tree and Heritage Tree Impacts: For impacts to individual native oak trees that are not otherwise mitigated, replacement planting shall be calculated based upon an inch-for-inch replacement of removed individual native oak trees. The total of replacement trees shall have a combined diameter of the tree(s) removed. Replacement tree species shall be the same proportion as those removed. For the purposes of this requirement, a 15-gallon replacement tree is assumed to represent 1-inch of trunk diameter. Replacement trees shall be planted on-site and monitored and maintained for a period of 7 years, calculated from the day of planting. Documentation of replacement planting success shall be provided to the County at the end of the 7-year monitoring and maintenance period. Any trees that do not survive the 7-year monitoring and maintenance period shall be replaced by the responsible party listed on the Oak Tree Removal Permit and shall be monitored and maintained for 7 years. Replacement tree sizes may vary and may include acorn plantings, based on documentation of inch-for-inch replacement consistency included in an oak resources technical report. If acorns are used, they shall be planted at a 3:1 ratio (3 acorns for every 1-inch of trunk diameter removed) under the direction of a qualified professional. The replacement planting area shall be suitable for tree planting, shall not conflict with current or planned land uses, and shall be large enough to accommodate replacement plantings at a density no greater than 200 trees per acre. This ORMP does not preclude over-planting so that the minimum survival rate may be accomplished at the end of the 7-year maintenance and monitoring period. Monitoring reports shall be submitted to the County at least annually during the 7-year maintenance

and monitoring period and documentation of replacement planting success shall be provided to the County at the end of the 7-year monitoring and maintenance period (final monitoring report).

For impacts to Heritage Trees, replacement planting shall adhere to the standards identified for individual native oak trees; however, replacement totals shall be calculated based upon an inch-for-inch replacement at a 3:1 ratio.

- On-Site Replacement Planting: On-site replacement trees are to be planted to the satisfaction of the Development Services Director. The replacement planting area shall be suitable for tree planting, shall not conflict with current or planned land uses, and shall be large enough to accommodate replacement plantings at a density equal to the density of oak woodlands impacted. A deed restriction or conservation easement to the satisfaction of County Counsel and the Director shall be required to ensure the long term conservation of any on-site replacement trees planted. The Conservation Easement shall be in favor of the County or a County-approved conservation organization. Maintenance and monitoring shall be required for a minimum of 7 years after planting. Any trees that do not survive during this period of time shall be replaced by the responsible party listed on the Oak Tree Removal Permit and monitored to ensure survival for a period of 7 years from the date of planting.
- Off-Site Replacement Planting: The applicant may be permitted to procure an off-site planting area for replacement planting, preferably in proximity and/or in connection with oak woodlands contiguous to the project site or within or adjacent to a PCA or an Important Biological Corridor as designated in the General Plan or important ecological area as identified in the Initial Inventory and Mapping (June 2010). The replacement planting area shall be suitable for tree planting, shall not conflict with current or planned land uses, and shall be large enough to accommodate replacement plantings at a density no greater than 200 trees per acre. A conservation easement to the satisfaction of County Counsel and the Development Services Director shall be required to ensure the long term maintenance and preservation of any on-site replacement trees planted. The Conservation Easement shall be in favor of the County or a County approved conservation organization. Maintenance and monitoring shall be required for a minimum of 7 years after planting. Any trees that do not survive during this period of time shall be replaced by the responsible party listed on the Oak Tree Removal Permit and monitored to ensure survival for a period of 7 years from the date of planting.
- Replacement Planting Plans: Oak resources replacement planting plans shall be prepared for all replacement planting efforts (on- and off-site) by a qualified professional and may be prepared in conjunction with oak resources technical report. Replacement planting plans shall address the following:
    - Consistency with the accepted native oak tree planting standards, including those outlined in Regenerating Rangeland Oaks in California (McCreary 2009), How to Grow California Oaks (McCreary 1995), How to Collect, Store and Plant Acorns (McCreary undated), and other publications and protocols that may be established by the University of California, Division of Agriculture and Natural Resources.
    - The suitability of the site shall be demonstrated with soil information, aerial photography, or other resources.

- The density of replanting shall be determined by the qualified professional, based on accepted practice and current research, but shall not exceed 200 trees per acre.
- The intent of the replacement planting plan is to provide replacement oak trees or acorns with a similar mix of species as those removed, however, the species may vary based on site specific conditions, as determined by the qualified professional.
- Acorns or container trees for replanting shall be from local sources, when available, to maintain local genetic strains.
- Replacement planting shall not be located within the 100-foot defensible space zone from an existing or proposed structure unless otherwise consistent with CAL FIRE's defensible space guidelines and fuels reduction requirements mandated under PRC 4291.
- Replacement plantings shall be maintained in a manner determined by the qualified professional, based on the site-specific conditions, which may include weed control, irrigation, tree protection, pest management, and/or fertilization.
- The replacement planting plan shall identify the frequency and methods of maintenance and monitoring, as well as contingencies or alternatives if the success criteria are not met annually or at the end of the monitoring term along with a means to ensure compliance with the replacement planting plan. The monitoring term shall be 7 years (PRC 21083.4).
- Best Management Practices (BMPs) for protection of retained oaks during and after construction (refer to Appendix D).
- An estimate of the total costs associated with implementation of the replacement plan.

2.5 Oak Resources Technical Reports

This section provides guidelines for projects that require preparation of an oak resources technical report. An oak resources technical report is a stand-alone report prepared by a qualified professional that includes the following:

- Identification, location, and quantification of all oak resources on the property:
  - Oak woodlands shall be mapped and assessed in accordance with the CDFG 2009 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* and subsequent updates, and the *List of Vegetation Alliances and Associations* (CDFG 2010) and subsequent updates;
  - Data collected for individual native oak trees and Heritage Trees shall include: location, species, trunk diameter (dbh), height, canopy radius, and general health and structural condition;
- Identification and quantification of project-related impacts to oak resources;
- Measures identifying how specific trees and woodlands (or retained portions thereof) shall be protected during development and related work;

- Proposed actions to mitigate impacts to oak resources, consistent with the requirements included in this ORMP:
    - For replacement planting, the report shall provide detail regarding the quantity, location, planting density, and acorn/seedling source consistent with the definition of Replacement Planting included in this ORMP;
    - For conservation easement placement/acquisition and/or land acquisition in fee title, the report shall provide documentation of easement placement on-site and/or documentation of easement or land acquisition off-site to the satisfaction of the County;
    - For in-lieu fee payment, the report shall document the quantity of impacts (acreage of oak woodlands and/or total diameter inches of individual native oak trees/Heritage Trees) and the total in-lieu fee payment necessary (presented separately for oak woodlands, individual native oak trees, and Heritage Trees, where applicable);
- Identification of responsible parties;
- Identification of maintenance, monitoring, and reporting requirements;
- Analysis of non-PCA conservation easement areas, where applicable;
- A site map(s) depicting the location of all oak woodlands, individual native oak trees, and Heritage Trees and the location of all proposed project-related improvements (including, but not limited to, the limits of grading, fuel modification/defensible space areas, and above- and below-ground infrastructure). The site map(s) shall also clearly identify impacted oak resources.

2.6 Mitigation Program Flexibility

This ORMP provides for flexibility in meeting oak resources mitigation requirements. An applicant for a development project may comply with the provisions of this ORMP by combining mitigation options, except as specified for replacement planting to mitigate oak woodland impacts. Off-site mitigation may be accomplished through private agreements between the applicant and another private party consistent with the standards included in this ORMP and subject to approval by the County. When dedication of off-site conservation easements outside of PCAs is proposed by a developer, the proposed site shall be prioritized based on the standards set forth in this ORMP (Section 4.0). A developer that dedicates a County-approved conservation easement is not subject to the acquisition component of the in-lieu fee, but is subject to the management component and monitoring component of the fee.

3.0 In-Lieu Fee

The methodology for determining the in-lieu fee for impacts to individual native oak trees and oak woodlands is provided in detail in Appendix B. In general, the in-lieu fee for oak woodlands is based on the costs of acquisition of land and conservation easements, along with management, monitoring, and administrative costs. For individual native oak trees, the in-lieu fee is based on an inch-for-inch replacement approach that accounts for costs associated with purchasing and planting 1-inch of trunk diameter.

3.1 Oak Woodlands

As noted, the in-lieu fee for impacts to oak woodlands is based on the costs of acquisition of land and conservation easements, along with management, monitoring, and administrative costs. A breakdown of costs per acre is provided in Table 4.

Table 4
Oak Woodland In-Lieu Fee

Activity	Cost per Acre
Acquisition	$4,400
Initial Management and Monitoring	$2,300
Long-Term Management and Monitoring	$875
Administration	$379
Total Cost per Acre	$7,954

Source: New Economics & Advisory Draft Oak Resource In-Lieu Fee Nexus Study (June 2015)

The in-lieu fee payment option for impacts to oak woodlands shall be made at the ratio outlined in Table 3, which provides for a variable mitigation ratio depending on the percentage of oak woodland impacted on a project site. The County shall deposit all oak woodland in-lieu fees into its Oak Woodland Conservation Fund, which shall be used to fund the acquisition of land and/or conservation easements from willing sellers as described in Section 4. This fund shall also be used for ongoing monitoring and management activities, including but not limited to fuels treatment, weed control, periodic surveys, and reporting. It is anticipated that conservation easements and mitigation lands would be held by a land conservation organization; therefore, ongoing monitoring and management activities would be conducted by such organizations. Funding to support the negotiation of the purchase price and oversight of the land transaction is included in the management component of the oak woodland in-lieu fee.

As costs change over time, there will be a need to adjust the fee to closely match future cost increases or decreases. Appendix B details the fee adjustment approach. A report regarding fee adjustments will be included in a report to be submitted to the Planning Commission and Board of Supervisors every other March, as described in Appendix A. The first fee adjustment study would occur at least 12 months after adoption of this ORMP.

3.2 Oak Trees

For individual native oak trees, the in-lieu fee is based on an inch-for-inch replacement approach that accounts for costs associated with purchasing and planting 1-inch of trunk diameter and

maintaining those trees for a period of seven years. Specifically, a 15-gallon size native oak tree is assumed to represent one inch of trunk diameter. The acquisition and planting component of the per-inch mitigation fee is then based on the costs to purchase and plant one 15-gallon native oak tree. To determine the per-inch fee, the median price of 15-gallon oak trees was calculated from a survey of eight nurseries in El Dorado County and the surrounding region. This price was then doubled to account for costs associated with planting. Doubling the per-tree cost to account for purchasing and planting a tree (inclusive of labor and materials) is a standard approach in the landscape/habitat restoration industry. The management and monitoring component of the per-inch mitigation fee is based on annual costs associated with maintaining planted trees for a period of seven years. Data for this fee was derived from cost estimates provided by a habitat restoration contracting firm, Habitat Restoration Sciences, Inc. Based on this analysis, the per-inch individual native oak tree mitigation fee was calculated to be $186.00. In the case of Heritage Trees, the per-inch mitigation fee shall be $558.00 (3:1 ratio). Table 5 summarizes the cost breakdown associated with the in-lieu fee for individual native oak trees.

Table 5
Individual Oak Tree In-Lieu Fee

Activity	Cost per Inch
Acquisition and Planting	$120
Initial Management & Monitoring (Years 1-7)	$56.70
Administration (5%)	$8.84
Total Cost per Inch **(rounded to nearest whole dollar)**	$186

Source: New Economics & Advisory Draft Oak Resource In-Lieu Fee Nexus Study (June 2015)

As described in this ORMP, this per-inch mitigation fee may be paid as mitigation for impacts to individual native oak trees or Heritage Trees. The per-inch fee shall be multiplied by the total number of trunk diameter inches removed (dbh). The County shall deposit all oak tree in-lieu fees into its Oak Woodland Conservation Fund and shall use collected per-inch mitigation fees for native oak tree planting projects or may use such funds to acquire oak woodland conservation easements, with documentation that the number of diameter inches meets those for which mitigation fees have been paid.

As costs change over time, there will be a need to adjust the fee to closely match future cost increases or decreases. Appendix B details the fee adjustment approach. A report regarding fee adjustments will be included in a report to be submitted to the Planning Commission and Board of Supervisors every other March, as described in Appendix A. The first fee adjustment study would occur at least 12 months after adoption of this ORMP.

4.0 Priority Conservation Areas

4.1 Identification of Priority Conservation Areas

Figure 2 identifies the areas in which acquisition of land or conservation easements from willing sellers shall be prioritized using the Oak Woodland Conservation Fund generated by the payment of the in-lieu fees described above. These areas were identified using the FRAP classification of oak woodland habitat in the county. After those areas were mapped, the areas were narrowed down to large expanses consisting of 500 acres or more. Those large expanses were further narrowed to lands where oak woodland habitat would not likely undergo substantial fragmentation and oak woodland conservation would be consistent with the 2004 General Plan land use designations. Areas specifically excluded were lands within Community Regions and Rural Centers and lands designated Low Density Residential. These resulting areas are classified as Priority Conservation Areas (PCAs).

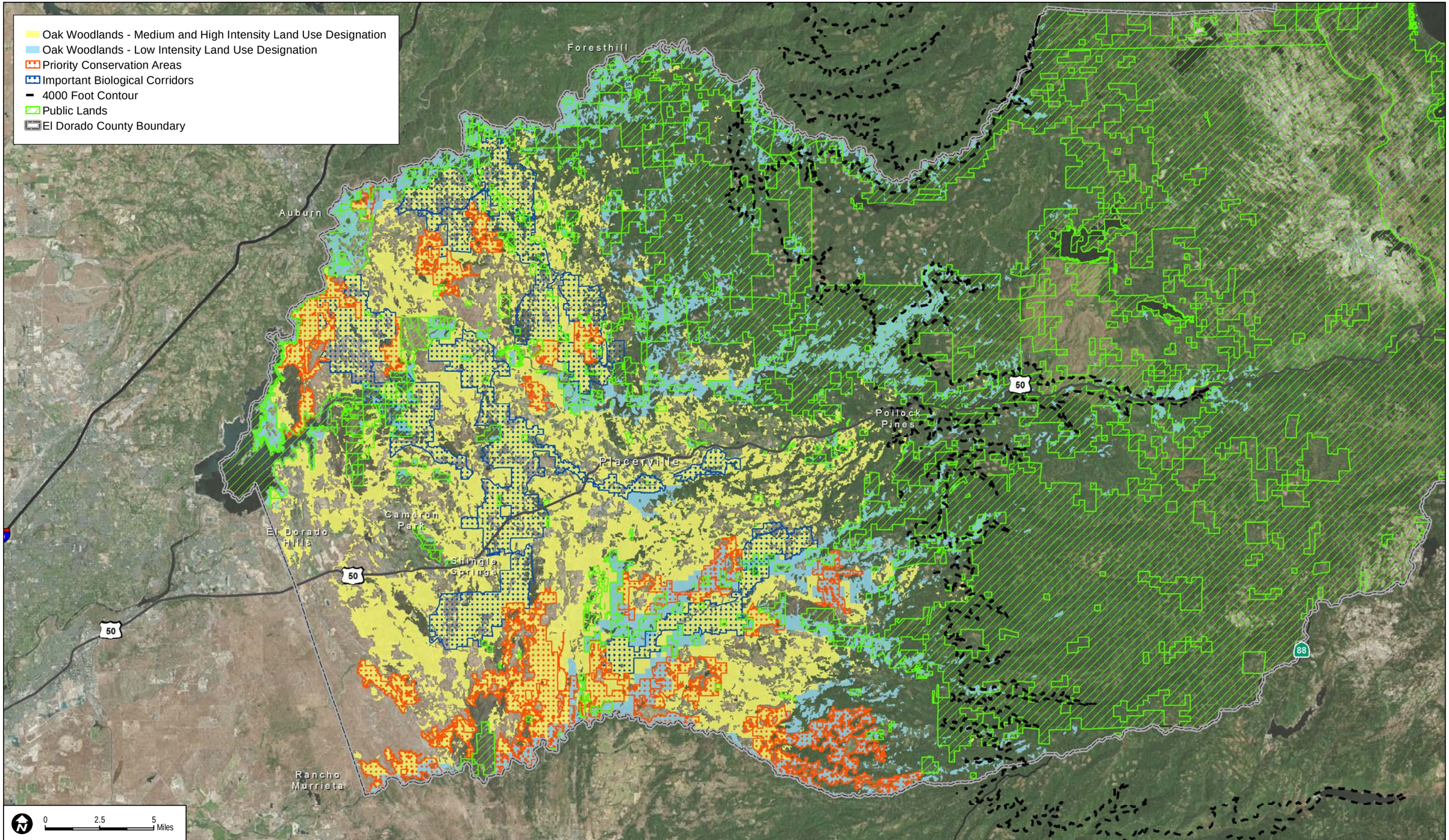
The 500-acre PCAs are generally made up of 40-acre and larger privately owned parcels. A breakdown of parcel sizes within the large expanses is shown in Table ~~5~~6. A more detailed description of the mapping process and data used to identify PCAs is provided in Appendix A. Figure 2 also shows existing public lands with oak woodlands contiguous to the PCAs.

Table 6
PCA Parcel Statistics

Parcel size (Acres)	Number of Parcels	Acres
40-60	170	7,666.3
60.1-120	155	13,176.7
120.1-340	175	31,674.3
340.1+	29	13,535.5
Total	*529*	*66,052.8*
	Avg. Size	124.9
	Median Size	84.3

Oak woodland offered as mitigation must be configured in such a manner as to best preserve the integrity of the oak woodland ecosystem. Priority should be given to conserving oak woodland habitat within PCAs, particularly areas that are adjacent to existing woodlands lying west of the National Forest within the Important Biological Corridor overlay, under a conservation easement, on public lands, in open space lands, in riparian corridors, or ecological preserves.

Oak woodlands within the PCAs will be conserved to mitigate for losses of oak woodlands. Prioritization will be given to areas that provide a diversity of oak woodland types. The acreage of oak woodlands conserved shall be based on the quantity of those impacted as a result of new development.



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SOURCE: Bing Maps 2014; FRAP 2006; El Dorado County 2014

FIGURE 2

Priority Conservation Areas, Oak Woodlands, and Public Lands in El Dorado County

Draft Oak Resources Management Plan

This ORMP establishes a strategy for conserving oak woodland habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the county. Identification of PCAs and standards for prioritizing conservation of oak woodlands outside of PCAs (Section 4.3) fulfills the oak woodlands portion of the conservation requirements outlined in General Plan Policy 7.4.2.8.

4.2 Management of PCAs

Existing oak woodlands within the PCAs identified as mitigation for project impacts, whether on or off a project site, will be protected from further development through a conservation easement granted to the County or a land conservation group approved by the County or by acquisition in fee title by a land conservation group. Management activities would be conducted by land conservation organizations and may include, but are not limited to, one or more of the following activities, as determined appropriate and/or necessary through monitoring of the sites: inspections, biological surveys, fuels treatment to reduce risk of wildfire and to improve habitat, weed control, database management, and mapping. Agricultural use (i.e., grazing) shall be allowed in conserved oak woodlands as long as the activity occurred prior to the establishment of the conservation easement, the spatial extent of the agricultural use is not expanded on conserved lands, and the agricultural use does not involve active tree harvest or removal (e.g., fuelwood operations, land clearing for crop planting, etc.).

4.3 Conservation Outside of PCAs

The PCAs have been delineated to prioritize the acquisition of land or oak woodland conservation easements either by the County (using the funds collected in the County's Oak Woodland Conservation Fund) or privately by developers. However, acquisition of land or oak woodland conservation easements outside of the PCAs may also occur. The following criteria shall be used for selecting potential oak woodlands conservation lands or easements outside of PCAs, consistent with General Plan Policy 7.4.2.8 (D):

- Location within IBCs;
- Location within other important ecological areas as identified in the Initial Inventory and Mapping (June 2010);
- Woodlands with diverse age structure;
- Woodlands with large trees and dense canopies;
- Opportunities for active land management to be used to enhance or restore natural ecosystem processes;
- Potential to support special-status species;
- Connectivity with adjacent protected lands;
- Parcels that achieve multiple agency and community benefits;
- Parcels that are located generally to the west of the Eldorado National Forest; and
- Parcels that would preserve natural wildlife movement corridors such as crossings under major roadways (e.g., U.S. Highway 50 and across canyons).

Land or conservation easement acquisition as mitigation of oak woodland impacts that occurs outside of PCAs shall occur on minimum contiguous habitat blocks of 5 acres (the acquired land or conservation easement shall be contiguous to or shall create a contiguous area of no less than 5 acres of oak woodland in conserved or open space status (e.g., parks, national forest, other conserved oak woodlands on private property). For transactions where land is acquired or a conservation easement outside of the PCAs is negotiated between a developer and a private seller, an analysis of the proposed oak woodland conservation area shall be performed by a qualified professional to demonstrate that the proposed conservation area is of equal or greater biological value as the oak woodland proposed to be removed. The analysis of conservation areas shall be included as a component of an oak resources technical report.

Should the County elect to purchase land or oak woodlands conservation easements outside of PCAs using funds from its Oak Woodland Conservation Fund, an analysis of the proposed oak woodland conservation area shall be performed by a qualified professional to determine its suitability in meeting the criteria listed above.

4.4 Conservation Easements

Where the mitigation requirements of this ORMP are met through conservation easements for oak woodlands, whether within or outside of PCAs, the conservation easement shall be granted in perpetuity to the County or a land conservation group approved by the County. The easement shall be provided on a form approved by the County and shall be recorded with the County Clerk/Recorder prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the project.

4.5 Deed Restrictions

Where the mitigation requirements of this ORMP are met through deed restrictions for oak woodlands, whether within or outside of PCAs, the deed restriction shall commit the property to oak woodland conservation use in perpetuity. The deed restriction shall be recorded with the County Clerk/Recorder prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the project.

5.0 Application of ORMP to Development Review Process

Determination of the applicability of the ORMP to a development project shall be made as follows:

1. Planning staff and applicant determine if oak resources exist on the property and if the proposed project would impact any of the oak resources.
2. Oak resources are mapped, quantified, and categorized (oak woodland, individual native oak tree, and/or Heritage Tree) by a qualified professional hired by the applicant and documented in an oak resources technical report.
3. Oak resources impacts are quantified in the oak resources technical report. Oak resources impacts are calculated by identifying all disturbed areas as proposed, including:
    a. Roads, driveways, and access drives;
    b. Graded areas for building pads, parking lots, staging areas, and other improvements; and
    c. Other disturbed areas resulting in oak resources impacts including septic system leach fields, above- and below-ground utilities, and defensible space vegetation removal for new construction.
4. The proposed oak woodland impact area is compared with the total on-site oak woodland area to determine the appropriate mitigation ratio.
5. Impacts to individual native oak trees and/or Heritage Trees are determined and the sum of impacted trunk diameter (dbh) calculated.
6. If applicable, the applicant proposes mitigation for impacts to oak woodlands in an oak resources technical report by one of the following mechanisms:
    a. Deed restriction and/or conservation easement dedication (on-site), conservation easement acquisition (off-site), acquisition in fee title by a land conservation organization (on-site and/or off-site);
    b. In-lieu fee payment at the ratio determined by percentage of on-site oak woodland impact and based on the currently-adopted per-acre fee amount;
    c. Replacement planting on-site within an area subject to a deed restriction or conservation easement;
    d. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by the County or a County-approved land conservation organization; or
    e. A combination of two or more of the above provisions.

    In no case shall replacement planting exceed 50 percent of oak woodland mitigation requirement.
7. If applicable, the applicant proposes mitigation for impacts to individual native oak trees and/or Heritage Trees in an oak resources technical report by one of the following mechanisms:

a. Replacement planting on-site within an area subject to a deed restriction or conservation easement;

b. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by the County or a County-approved land conservation organization;

c. In-lieu fee payment for all diameter inches removed (dbh), or 3 times the total diameter inches removed for Heritage Trees, and based on the currently-adopted per-inch fee amount; or

d. A combination of two or more of the above provisions.

8. Payment of applicable in-lieu fees and establishment of any required deed restrictions and/or granting of any required conservation easements and/or land acquisition in fee title shall be required as a condition of approval of all discretionary permits for which these provisions apply, and shall be completed prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the project. The payment of in-lieu fees may be phased to reflect the timing of the oak resources removal/impact. For phasing, permits issued for oak resources removal shall only be for the area covered by the fee payment.

9. Payment of in-lieu fees and establishment of any required deed restrictions and/or granting of any required conservation easements and/or land acquisition in fee title, if necessary, shall be completed prior to issuance of a building or grading permit for ministerial projects.

6.0 Definitions

For the purposes of this ORMP, the following terms and phrases shall have the meanings respectively ascribed to them by this section:

Agricultural Conversion: As defined by General Plan Policy 7.1.2.7.

Agricultural Cultivation/Operations: As defined by General Plan Policy 8.2.2.1.

Agricultural Lands: As defined by General Plan Policies 2.2.1.2 and 8.1.1.8, and further, Policy 8.2.2.1.

Arborist: A person certified by the International Society of Arboriculture (ISA) that provides professional advice regarding trees in the County.

CAL FIRE: California Department of Forestry and Fire Protection.

Commercial Firewood Cutting: Fuel wood production where a party cuts firewood for sale or profit.

Conservation Easement: An easement granting a right or interest in real property that is appropriate to retaining land or water areas predominately in their natural, scenic, open, or wooded condition; retaining such areas as suitable habitat for fish, plants, or wildlife; or maintaining existing land uses.

For conservation easement dedication (on-site) or acquisition (off-site) as mitigation for oak woodland impacts, a conservation easement to the satisfaction of County Counsel and the Development Services Director shall be required to ensure the long term maintenance and preservation of oak woodlands. The conservation easement shall provide for the preservation of the designated area in perpetuity and shall include such terms, conditions, and financial endowments for monitoring and management deemed necessary by the County to ensure the long term preservation of the oak woodland within the easement area. The conservation easement shall be in favor of the County or a County-approved conservation organization.

Construction/Disturbance Area: Any area in which movement of earth, alteration in topography, soil compaction, disruption of vegetation, change in soil chemistry, and any other change in the natural character of the land occurs as a result of site preparation, grading, building construction or any other construction activity.

Deed Restriction: Private agreements that restrict the use of the real estate and are listed in the deed. Restrictions travel with the deed, and cannot generally be removed by new owners.

Defensible Space: The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, in order to defend against encroaching wildfires or provide for people to escape structure fires.

Defensible space is required by any person who owns, leases, controls, operates or maintains a building or structure in or adjoining any mountainous area, forest-covered lands, brush-covered

lands, grass-covered lands or any land that is covered with flammable material and is within the State Responsibility Area. PRC 4291 requires 100 feet of Defensible Space (or to the property line if less than 100 feet) from every building or structure that is used for support or shelter of any use or occupancy.

Diameter at Breast Height (dbh): The measurement of the diameter of a tree in inches, specifically four (4) feet six (6) inches above natural grade on the uphill side of the tree. In the case of trees with multiple trunks, the diameter of all stems (trunks) at breast height shall be combined to calculate the diameter at breast height of the tree.

Fire Safe Plan: Defined in the El Dorado County General Plan (Policy 6.2.2.2) as a plan prepared by a Registered Professional Forester (RPF) and approved by the local Fire Protection District and/or California Department of Forestry and Fire Protection. The plan is prepared to demonstrate that development can be adequately protected from wildland fire hazard in areas of high and very high wildland fire hazard or in areas identified as "urban wildland interface communities within the vicinity of Federal lands that are a high risk for wildfire," as listed in the Federal Register of August 17, 2001.

Habitat: The physical location or type of environment in which an organism or biological population lives or can be found.

Heritage Trees: Any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring 36 inches dbh or greater, or with a multiple trunk with an aggregate trunk diameter measuring 36 inches or greater.

Impact: For individual native oak trees, the physical destruction, displacement or removal of a tree or portions of a tree caused by poisoning, cutting, burning, relocation for transplanting, bulldozing or other mechanical, chemical, or physical means. For ask woodlands, tree and land clearing associated with land development, including, but not limited to, grading, clearing, or otherwise modifying land for roads, driveways, building pads, landscaping, utility easements, fire-safe clearance and other development activities.

In-lieu Fee: Cash payments that may be paid into the County's Oak Woodland Conservation Fund by an owner or developer as a substitute for deed restriction or conservation easement or replacement planting. In-lieu fee amounts for individual native oak trees, Heritage Trees, and oak woodlands are presented in this ORMP and may be adjusted by the County over time to reflect changes in land values, labor costs, and nursery stock costs.

Individual Native Oak Trees: Any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring greater than 6 but less than 36 inches dbh, or with a multiple trunk with an aggregate trunk diameter measuring greater than 10 but less than 36 inches dbh.

Monitoring Report: A report prepared by a qualified professional documenting site observations and replacement planting survival totals for oak resources mitigation efforts. A Final Monitoring Report is one prepared at the end of the 7-year maintenance and monitoring period that summarizes replacement planting survival totals. A copy of the Final Monitoring Report shall be submitted to the County.

Oak Resources: Collectively, oak woodlands, individual native oak trees, and Heritage Trees.

Oak Resources Impacts: For individual native oak trees and Heritage Trees, removal or actions that cause the death of the tree shall constitute an impact. For oak woodlands, the oak woodland acreage that occurs within project-related disturbance areas shall be considered impacted.

Oak Tree Removal Permit: A permit issued by the County allowing removal of individual native oak trees not located within an oak woodland. An oak resources technical report shall accompany any tree removal permit application submitted to the County. Conditions of approval may be imposed on the permit. If a tree removal permit application is denied, the County shall provide written notification, including the reasons for denial, to the applicant. Oak tree removal permit processing and approval will be conducted concurrently with the environmental review process for discretionary projects or concurrent with other permit review and processing for ministerial projects (e.g., building permits).

Oak Woodlands: An oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover (California Fish and Game Code Section 1361).

Oak Woodland Removal Permit: A permit issued by the County allowing removal of oak trees that are a component of an oak woodland. An oak resources technical report shall accompany any oak woodland removal permit application submitted to the County. Conditions of approval may be imposed on the permit. If an oak woodland removal permit application is denied, the County shall provide written notification, including the reasons for denial, to the applicant. Oak woodland removal permit processing and approval will be conducted concurrently with the environmental review process for discretionary projects.

Qualified Professional: An arborist certified by the International Society of Arboriculture (ISA), a qualified wildlife biologist, or a registered professional forester (RPF).

Qualified Wildlife Biologist: A professional with a BA or BS or advanced degree in biological sciences or other degree specializing in the natural sciences; professional or academic experience as a biological field investigator, with a background in field sampling design and field methods; taxonomic experience and knowledge of plant and animal ecology; familiarity with plants and animals of the area, including the species of concern; and familiarity with the appropriate county, state, and federal policies and protocols related to special status species and biological surveys.

Registered Professional Forester (RPF): A Registered Professional Forester (RPF) is a person licensed by the State of California to perform professional services that require the application of forestry principles and techniques to the management of forested landscapes. RPFs have an understanding of forest growth, development, and regeneration; soils, geology, and hydrology; wildlife and fisheries biology and other forest resources. RPFs are also trained in fire

management and, if involved in timber harvesting operations, have expertise in both forest road design and application of the various methods used to harvest.

Replacement Tree: A tree planted as mitigation for oak resources impacts. Replacement trees include container tree stock (one-gallon or DeePot 40 size) and acorns. If acorns are used, the planting ratio shall be 3:1 as compared with container tree stock. Acorns and container stock shall be locally-sourced (from within El Dorado County).

Sensitive Habitat: In El Dorado County, this includes the following habitat types: montane riparian, valley-foothill riparian, aspen, valley oak woodland, wet meadow, and vernal pools, as defined in the 2004 El Dorado County General Plan EIR.

Woodland Habitats: Biological communities that range in structure from open savannah to dense forest. In El Dorado County, major woodland habitats include blue oak-foothill pine, blue oak woodland, montane hardwood, montane hardwood-conifer, and valley oak woodland.

Attachment E:

Revised Draft Oak Resources Management Plan, changes tracked

~~1. Introduction~~

~~A. Purpose~~

~~The Purpose of this~~ 1.0 Introduction

This Oak Resources Management Plan (ORMP) updates and revises the Oak Woodland Management Plan ~~(OWMP)~~adopted by the El Dorado County Board of Supervisors on May 6, 2008 (El Dorado County 2008). It incorporates more recent oak resources mapping data for the County and reflects policy language changes made during the General Plan Biological Policy Review project conducted in 2015. This ORMP incorporates relevant information included in the 2008 Plan, where applicable, and was prepared in coordination with El Dorado County Community Development Agency staff. It also incorporates public input gathered during project-focused hearings and direction given by the El Dorado County Board of Supervisors.

1.1 Purpose

The purpose of this ORMP is to define mitigation requirements for impacts to oak woodlands, individual native oak trees, and Heritage Trees and to outline the County's strategy for oak woodland conservation ~~of its valuable oak woodland resources. Through the OWMP, the County~~ . This ORMP functions as the oak resources component of the County's biological resources mitigation program, identified in General Plan Policy 7.4.2.8. This ORMP identifies ~~areas where~~ standards for oak woodland and native oak tree impact determination, mechanisms to mitigate oak woodland and native oak tree impacts, technical report submittal requirements, minimum qualifications for technical report preparation, mitigation monitoring and reporting requirements, and projects or actions that are exempt from mitigation requirements. This ORMP also establishes an in-lieu fee payment option for impacts to oak woodlands and native oak trees, identifies Priority Conservation Areas (PCAs) where oak woodland conservation ~~easements~~efforts may be ~~acquired from willing sellers as a means to offset and mitigate the loss or fragmentation of oak woodlands in other~~focused, and outlines minimum standards for identification of oak woodland conservation areas outside the PCAs. Requirements for monitoring and maintenance of conserved oak woodland areas ~~as a result of implementation of the 2004 El Dorado County General Plan (General Plan). Additionally, the OWMP~~and identification of allowable uses within conserved oak woodland areas are also included in this ORMP. Lastly, this ORMP provides guidance for voluntary oak woodland and oak tree conservation and management efforts by landowners and land managers. ~~Lastly, the OWMP sets forth further guidance on General Plan Policy 7.4.4.4 Option A, which includes measures designed to encourage retention of existing oak canopy in areas planned for development.~~

Loss and fragmentation of wildlife habitat, including oaks and oak woodlands, was identified in the 2004 General Plan Environmental Impact Report (EIR) as a significant impact that would result from development under the General Plan. ~~–~~The County identified several mitigation measures which would reduce the severity of these impacts, although not to ~~below~~ a less than significant level ~~of significance.~~ . These mitigation measures included Policies 7.4.4.4, 7.4.4.5 and 7.4.5.2, and the related ~~implementation~~Implementation Measure CO-P. During the General Plan Biological Policy Review project conducted in 2015, these policies were edited and consolidated into one single policy (Policy 7.4.4.4). Implementation Measure CO-P was also

modified during this process. The revised language in Policy 7.4.4.4 states that mitigation requirements for impacts to oak resources (oak woodlands, individual native oak trees, and Heritage Trees) shall be outlined in this ORMP. Revised Implementation Measure CO-P directs the County to develop and adopt an ORMP that addresses the following:

~~Measure CO-P directs the County to develop and adopt an Oak Resources Management Plan that addresses the following:~~

- ~~Mitigation standards outlined in Policy 7.4.4.4;~~
  - ~~Thresholds of significance~~ for ~~the loss of~~ oak ~~woodlands~~resources impacts;
  - ~~Requirements for tree surveys and~~ Definitions of exempt projects and actions;
  - Technical report requirements;

Oak resources mitigation ~~plans for discretionary projects;~~

- ~~Replanting~~options and ~~replacement~~ standards;
- ~~Heritage/Landmark~~ Tree ~~protection~~mitigation standards; and

~~An Oak Tree Preservation ordinance as outlined in Policy 7.4.5.2.~~

- Oak resources mitigation monitoring and reporting requirements.

An Oak ~~Tree Preservation~~Resources Conservation ordinance that incorporates the standards outlined in ~~Policy 7.4.5.2 and Heritage and Landmark Tree protection standards~~this ORMP will be developed ~~after the~~in conjunction with adoption of the ~~OWMP~~ORMP.

At the state level, the Oak Woodlands Conservation Act of 2001 recognizes the importance of private land stewardship in conserving oak woodlands. ~~-~~The legislation established the California Oak Woodlands Conservation Program (COWCP), the mission of which is to "conserve the integrity and diversity of oak woodlands across California's working landscapes through incentives and education." ~~-~~The COWCP provides technical and financial incentives to private landowners to protect and promote biologically functional oak woodlands.

~~The OWMP~~This ORMP serves multiple purposes. It defines the County's conservation strategy for oak ~~woodland~~ resources and ~~implements Option B of Policy 7.4.4.4.~~ provides a framework for mitigating impacts to oak resources. It also ~~partially~~ complies with Implementation Measure CO-P~~,~~ and constitutes the oak portion of the County's ~~Integrated Natural Resources Management~~biological resources mitigation program (General Plan ~~(INRMP).~~ Policy 7.4.2.8). Finally, it ~~will establish~~establishes a plan for voluntary conservation that landowners, the County, and others can use to seek grants and cost-sharing from ~~State~~state and ~~Federal~~federal programs for oak woodland conservation in El Dorado County.

~~*B.*~~ *1.2 Goals and Objectives of Plan*

The ~~OWMP~~ORMP goals are guided by two General Plan Objectives:~~–~~ Objective 7.4.2 and Objective 7.4.4. General Plan Objective 7.4.2 states: *Identify and Protect Resources:* ~~"~~Identification and protection, where feasible, of critical fish and wildlife habitat including deer

winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.".

General Plan Objective 7.4.4 states: *Forest and, Oak Woodland, and Tree Resources*: "Protect and conserve forest and, oak woodland, and tree resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.".

The following goals are set forth by the OWMPGeneral Plan are met in this ORMP:

- Mitigate oak canopy removal by providing flexibility through a range of on-site and off-site mitigation alternatives;
- Establish a Conservation Fund In-Lieu Fee that is sufficient to fully fund the mitigation program;
- Identify standards for determining oak woodland and native oak tree impacts, outline impact mitigation requirements and options, identify technical report submittal requirements, and outline impact mitigation monitoring and reporting requirements;
- Define Heritage Trees and identify impact mitigation requirements;
- Provide mitigation alternatives for impacts to oak resources consistent with state-level requirements;
- Provide a flexible framework for oak resources mitigation via on-site and off-site mechanisms, including an in-lieu fee payment program;
- Develop an oak woodland in-lieu fee and an individual native oak tree-based in-lieu fee;
- Identify Priority Conservation Areas (PCAs) within large expanses of contiguous oak woodland habitat where land or conservation easements may be acquired from willing sellers to offset the effects of increased habitat loss and fragmentation elsewhere;
- Focus conservation easement acquisition efforts within areas not currently fragmented and which are unlikely to become fragmented through implementation of the General Plan;
- When weighing acquisition opportunities for conservation easements, generally maintain the relative acreages of all five oak woodland California Wildlife Habitat Relationship (CWHR) types (Valley Oak Woodland, Blue Oak Woodland, Blue Oak-Foothill Pine, Montane Hardwood Woodland, and Montane Hardwood-Conifer Woodland), but emphasize conservation of Valley Oak Woodlands, considered a "sensitive habitat" due to its relative rarity in the county;
- Encourage voluntary conservation and management of oak woodlands, including sustainable ranching and farming operations within working landscapes;
- Provide incentives (e.g., grants or cost-sharing for fuels/fire risk management) for the voluntary protection of oak woodlands providing superior wildlife values on private land (COWCP legislative goal);

- ~~Provide oak woodland conservation guidance to private landowners and County planners through education and outreach (COWCP goals);~~
- ~~•~~ Identify minimum standards under which oak woodland conservation may occur outside of identified PCAs;
- Enhance oak woodland conservation by connecting acquisitions from willing sellers with existing open space, including publicly-owned lands that are managed for oak woodland habitat values (e.g., ecological preserves, recreation lands, rangelands, or natural resource areas) consistent with the County's open space conservation goals (Goal 7.6; Policy 7.6.1.1); and
- ~~•~~ Establish a database inventory of interested buyers and willing landowners wishing to participate in oak woodland acquisition and management mitigation options (Policy 7.4.2.8).

~~*C. 1.3*~~ *Oak ~~Woodland Habitat~~Resources in El Dorado County*

1.3.1 Oak Woodlands

The term "oak woodland" is defined in the Oak ~~Woodland~~Woodlands Conservation Act (Article 3.5 (commencing with Section 1360) of Chapter 4 of Division 2 of the Fish and Game Code ~~§1361~~) as "an oak stand with a greater than ten percent canopy cover or that may have historically supported greater than ten percent canopy cover~~.~~." For the purposes of this ~~OWMP~~ORMP, the conservation focus is on existing oak woodlands. ~~The General Plan uses the term "oak woodland" interchangeably and in the same context as "oak canopy." For the purposes of mitigation, measurement of oak canopy shall apply.~~

~~The OWMP~~This ORMP addresses the same study area (below 4,000 feet elevation) and same categories of oak woodlands (California Fire and Resource Assessment Program~~, or~~ (FRAP~~)~~)) as were addressed in the 2008 Oak Woodland Management Plan. These categories of oak woodland were also addressed in the 2004 General Plan~~. The General Plan~~ ~~EIR~~using FRAP data from 2002. More recent oak woodland distribution data for El Dorado County available via FRAP (2006) identifies ~~five~~six oak woodland types, which are listed in Table 1 below, along with the acreage of each category found within the ~~OWMP study area. A sixth woodland type is Valley-Foothill Riparian which may include Fremont cottonwood, willow and valley oak. Valley-Foothill Riparian habitats in which valley oaks are the dominant tree species are considered oak woodlands under the OWMP. Both Valley Oak Woodland and Valley-Foothill Riparian are designated as "sensitive habitats" in the General Plan EIR. Less than 3,500 acres of Valley Oak Woodland and none of the Valley Foothill Riparian appears on the FRAP mapping for El Dorado County.~~ ORMP study area. Less than 3,500 acres of valley oak woodland is mapped for El Dorado County, which is designated as a "sensitive habitat" in the General Plan EIR. Finally, while coastal oak woodland is identified in the 2006 FRAP vegetation data set for the ORMP planning area, its presence is unlikely given the range of its dominant tree species (coast live oak (*Quercus agrifolia*)). This classification may be the result of an image processing error during creation of the 2006 FRAP data set and the area is likely another oak woodland type.

Table 1:
Acreage of Oak ~~Woodlands~~Woodland Types in ~~OWMP Study~~the ORMP Planning Area (2006 FRAP Data)

Oak Woodland ~~Category~~Type	~~Abbreviation~~ CWHR Code	Acreage	~~% of Total~~Percent
Blue ~~Oak Woodland~~oak woodland	BOW	42,~~400~~616	~~(~~17~~)~~.0%
Blue ~~Oak-Foothill Pine~~oak-foothill pine	BOP	12,~~900~~915	~~(~~5~~)~~.2%
Coastal oak woodland	COW	13	<0.1%
Montane ~~Hardwood Woodland~~hardwood	MHW	~~155,900~~157,455	~~(63)~~62.8%
Montane ~~Hardwood-Conifer Woodland~~hardwood-conifer	MHC	34,~~200~~322	~~(14)~~13.7%
Valley ~~Oak Woodland~~oak woodland	VOW	3,~~400~~434	~~(~~1~~)~~.4%
Total ~~**Oak Woodland in Study Area**~~:		~~**248,800**~~250,755	~~**(**~~100~~**)**~~%

A thorough discussion of oak woodland habitat identification and values is ~~contained~~presented in Appendix A.

~~**D.**~~ 1.3.2 Oak Trees

There are six primary native oak tree species in El Dorado County, including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), and Oregon oak (*Quercus garryana*). Additionally, one native hybrid between California black oak and interior live oak exists, known as oracle oak (*Quercus x morehus*). These oak species comprise the County's oak woodlands and also occur outside of oak woodlands as isolated individuals or small groups.

1.4 Economic Activity, Land, and Ecosystem Values of Oak ~~Woodlands~~Resources

Agriculture and recreation-based tourism are important economic generators in El Dorado County. ~~-~~Oak ~~woodlands~~resources provide value for these activities~~. Oak woodlands provide~~, including forage value for ranching, ~~and~~ soil retention and watershed function benefits that contribute to ~~the~~ agricultural activities, and aesthetic ~~qualities of~~value for agri-tourism. ~~-~~Oak ~~woodlands~~resources contribute to soil retention and provide watershed benefits, which have benefits to the agricultural community. ~~-~~Deer and other game species are dependent on oak woodland habitat and provide recreational hunting opportunities, which can generate revenues for ranching land owners through hunting leases. ~~-~~Oak ~~woodlands~~resources contribute to a high-quality visit for recreation tourists, whose activities ~~among oak woodlands could~~may include camping, fishing, hiking, bird-watching, and equestrian trail riding.

Studies have also concluded that the presence of oak ~~woodlands on properties enhance~~resources enhances property value by providing shade, wind breaks, sound absorption, land use buffers, erosion control, and aesthetic beauty.

Oak ~~woodlands~~resources also contribute to healthy lands and watersheds. They do this by providing habitat for animals, maintaining water quality, and improving soil characteristics. ~~Oak woodlands have been acknowledged in studies to contributing to the control of climate effects~~Oak resources have also been identified as a valuable component in greenhouse gas reduction, trapping and storing atmospheric carbon dioxide.

More information regarding economic activities, land values, and ecosystem values are ~~available~~presented in Appendix A.

~~*E.* 1.5~~ *State-level Regulations*

California ~~Oak Woodlands Conservation Act~~

~~In September, 2004, the state~~ Public Resources Code ~~was amended to require~~(PRC) Section 21083.4 requires a county to determine (as part of its ~~CEQA~~project review required under the California Environmental Quality Act) whether a project may result in conversion of oak woodlands that will have a significant effect on the environment ~~(PRC 21083.4).~~. If it determines that a project may have a significant effect, a county shall require one or more oak woodland mitigation alternatives "to mitigate the significant effect of the conversion of oak woodlands." Alternatives include: 1) conserve oak woodlands, 2) plant an appropriate number of replacement trees and maintain those trees for seven years, 3) contribute to the Oak Woodlands Conservation Fund, or 4) other mitigation measures developed by the County. Plantings shall not fulfill more than one half of the mitigation requirements for a project. Where a county adopts, and a project incorporates, one or more of these mitigation measures, the project is deemed to be in compliance with CEQA as it relates to effects on oaks and oak woodlands. This ~~plan~~ORMP incorporates a range of mitigation alternatives ~~which~~that conform to these requirements.

~~2. Policy 7.4.4.4~~

~~A.~~ No state-level regulations exist that require mitigation for impacts to individual oak trees that occur outside of oak woodlands; however, this ORMP identifies mitigation requirements for individual native oaks trees and Heritage Trees to meet the goals and objectives of the General Plan.

2.0 Oak Resources Impact Mitigation Requirements

The following sections outline mitigation requirements for impacts to oak resources. These mitigation requirements meet the goals and objectives of the General Plan and fulfill the requirements of General Plan Policy 7.4.4.4.

2.1 Applicability and Exemptions

~~Policy 7.4.4.4 of the 2004 General Plan applies~~The oak resources impact mitigation requirements outlined in this section apply to all new development projects or actions that ~~would~~ result in ~~soil disturbance (see Appendix C for complete policy) on parcels that meet one of the following criteria:~~

- ~~Less than or equal to one acre with at least 10% total~~impacts to oak woodlands and/or individual native oak trees, including Heritage Trees. Specifically, oak woodland ~~canopy cover; or~~
- ~~Greater than one acre with at least 1% oak woodland canopy cover.~~

~~Development, as affected by this Plan (OWMP),~~impact mitigation is required for any ~~structure~~action requiring discretionary development entitlements or approvals from El Dorado County. Individual native oak tree and Heritage Tree impact mitigation is required for any action requiring a building permit or grading ~~activity requiring a grading~~ permit~~.~~ issued by El Dorado County and/or any action requiring discretionary development entitlements or approvals from El Dorado County. Activities that do not require one of these two permit types~~, such as agricultural grading requiring an agricultural grading permit, tree removal for safety reasons, or the clearing of land for purposes other than construction or grading,~~ or discretionary approvals do not trigger the ~~provisions of this plan. The following activities are specifically~~ impact mitigation requirements included in this ORMP for oak woodlands or for individual native oak trees. However, all impacts to Heritage Trees are subject to the mitigation requirements contained herein. Oak woodland impacts or removal of individual native oak trees (excluding Heritage Trees) associated with the following projects or actions are exempted from ~~Policy 7.4.4.4~~the mitigation requirements included in this ORMP:

- ~~agricultural cultivation; and~~
- Projects or actions occurring on single-family residential lots of 1 acre or less that cannot be further subdivided;
- Actions taken pursuant to ~~a County~~ an approved Fire Safe Plan ~~necessary to protect~~ for existing structures~~.~~ or in accordance with defensible space maintenance requirements for existing structures in state responsibility areas (SRA) as identified in California Public Resources Code (PRC) Section 4291 (actions associated with Fire Safe Plans or defensible space areas for new or proposed development are not exempt);

~~These exemptions are detailed below:~~

- Actions taken to maintain safe operation of existing utility facilities in compliance with state regulations (PRC 4292-4293 and California Public Utilities Commission (CPUC) General Order 95) (actions associated with development of new utility facilities, including transmission or utility lines, are not exempt);

- Road widening and realignment projects necessary to increase capacity, protect public health, and improve safe movement of people and goods in existing public rights-of-way (as well as acquired rights-of-way necessary to complete the project) where the new alignment is dependent on an existing alignment (new proposed roads within the County Circulation Element and internal circulation roads within new or proposed development are not exempt);

- Affordable housing projects for lower income households, as defined pursuant to Section 50079.5 of the California Health and Safety Code, that are located within an urbanized area, or within a sphere of influence as defined pursuant to California Government Code §56076;

- Agricultural ~~Cultivation – The removal of native vegetation, including oaks,~~activities conducted for the purposes of producing or processing plant and animal products or the preparation of land for this purpose~~ is exempt. This is consistent with State PRC 21083.4. ~~;

~~Existing Structure Defensible Space/Fire Safe Measures – The intent of this exemption is to exempt oak tree removal from mitigation in the 100-foot defensible space zone around an existing building or structure. Defensible space, for the purposes of this plan, is the 100-foot area around an existing structure, or to the property line, whichever is closer. Defensible space is required pursuant to Public Resources Code (PRC) 4291 and Title 14 California Code of Regulations (CCR) 1299.~~

~~Fuel modification actions, inside and outside of the 100-foot defensible space zone, are also exempt from Policy 7.4.4.4 mitigation. Examples are actions to ensure the safety of emergency fire equipment and personnel; to allow evacuation of civilians; to provide a point of attack or defense for firefighters during a wildland fire; to prevent the movement of a wildfire from a structure to the vegetated landscape; and/or the maintenance or creation of fuel breaks for fire safety, where no grading permit or building permit is applicable.~~

~~The County encourages the creation of defensible space around existing structures and the provisions of the OWMP are by no means intended to impede the fuels reduction required by law to protect existing structures. However, oak tree removal in the 100-foot defensible space zone, pursuant to PRC 4290 and Title 14 CCR 1270-1276 of the Fire Safe Regulations, and fuel modification actions pursuant to a Fire Safe Plan, inside and outside of the 100-foot defensible space zone for all new development projects, is not exempt from Policy 7.4.4.4 mitigation. The 100-foot defensible space zone, and fuels modification necessary for a Fire Safe Plan, is part of the project footprint and oak canopy removed shall be counted in the project total oak canopy removal. Any oak trees that can be safely retained, even if separated from the oak woodland, will count as oak canopy retained.~~

~~The County further encourages developers and landowners to review the 100-foot defensible space information available from CAL FIRE; specimens of oak trees and native habitat can be retained in the 100-foot defensible space by keeping lower branches of oak trees pruned, removing surface litter, separating trees and shrubs (horizontally), and reducing ladder fuels~~

~~(vertically separating trees and shrubs). See CAL FIRE's website or brochures for detailed information.~~

~~Because of the ability to safely retain some of the oak canopy within the defensible space, when calculating oak tree canopy loss with new subdivisions and parcel maps, an applicant may assume 80% retention of the oak tree canopy within the defensible space area around building pads or sites.~~

- Agricultural cultivation/operations, whether for personal or commercial purposes (excluding commercial firewood operations);
- Activities occurring on lands in Williamson Act Contracts or under Farmland Security Zone Programs;
- Actions taken during emergency firefighting operations and associated post-fire activities;
- Tree removal permitted under a Timber Harvest Plan approved by CAL FIRE;
- Native oak tree removal when a tree exhibits high failure potential with the potential to injure persons or damage property, as documented in writing by a Certified Arborist or Registered Professional Forester; or
- When a native oak tree, other than a Heritage Tree, is cut down on the owner's property for the owner's personal use.

Additionally, ~~the OWMP~~this ORMP provides for reductions to oak ~~canopy~~woodland mitigation for affordable housing projects ~~as described below and provides for an exemption for public road safety projects and public utility projects.~~

~~Affordable Housing Development~~that are not exempted as defined above. Specifically, development projects that propose a minimum of 10 percent of the dwelling units as income restricted affordable units, as defined by California Health and Safety Code §50052.5, 50053, and 50093, shall be granted a reduction in the amount of oak ~~canopy~~woodland that is required to be ~~protected under Option A, or the amount of fee to be paid under Option B~~mitigated, as set forth in Table 2. The reduction is to be applied to the mitigation ratio presented in Table 3 and shall only be applied to the residential portion(s) of the proposed project. This reduction for affordable housing projects applies to oak woodland and individual native oak tree impacts and but not to Heritage Tree impacts. In no case shall the mitigation requirement be less than zero.

~~**Table 2: Affordable Housing Reduction**~~

Table 2
Affordable Housing Mitigation Reduction

Affordable Housing Type (Household Income Level)	~~% Reduction of~~Percent Oak ~~Canopy~~Woodland Mitigation Reduction (for portion of project that is income restricted)
Very Low	200%
Lower	100%

Table 2
Affordable Housing Mitigation Reduction

Affordable Housing Type (Household Income Level)	~~% Reduction of~~Percent Oak ~~Canopy~~Woodland Mitigation Reduction (for portion of project that is income restricted)
Moderate	50%

Example: A project proposes 25% of the units to be affordable in the ~~lower~~*Lower income category. The* ~~*amount of*~~ ~~on-site retention or Conservation Fund In-Lieu Fee~~ *oak woodland mitigation ratio may be reduced by 25%. A* ~~moderate~~*Moderate income project that provides all units at that income level may reduce the* ~~retention and/or fee~~ *oak woodland mitigation ratio by 50%. A project with 20%* ~~very low~~*Very Low income units would receive a 40% reduction.* ~~(Note: PRC §21083.4(d) provides exemptions for affordable housing projects~~ *in* ~~urbanized areas for lower income households.)~~

~~Public Road and Public Utility Projects Exempt from Policy 7.4.4.4 – Oak canopy removal necessary to complete County capital improvement projects are exempt from the canopy retention and replacement standards, when the new alignment is dependent on the existing alignment. This exemption applies to road widening and realignments which are necessary to increase capacity, to protect the public's health, and to improve the safe movement of people and goods in existing public road rights-of-way, as well as acquired rights-of-way necessary to complete the project. This exemption shall also apply to removal of oak canopy necessary to comply with the safety regulations of the Public Utilities Commission and necessary to maintain a safe operation of utility facilities. The County shall minimize, where feasible, the impacts to oaks through the design process and right-of-way acquisition for such projects.~~

~~This exemption to the oak canopy retention and replacement standards does not apply to new roads or utility installation, or to internal circulation roads within new development.~~

~~B. Replacement Objectives~~

~~When determining the amount of *oak* canopy replacement on a parcel, consistency can be achieved by a combination of Policy 7.4.4.4 Options A and B. These replacement objectives may be achieved, subject to County approval, by:~~*woodland mitigation ratio.*

~~1. Replacement planting on-site at a 1:1 canopy surface area ratio; or~~
~~2. Contributing to the County's INRMP/Conservation fund at a 2:1 ratio; or~~
~~3. Acquiring an off-site conservation easement on oak woodlands at a 2:1 ratio; or~~
~~4. A combination of 1, 2, or 3 above.~~

~~C. Mitigation Option A~~

~~Option A sets forth limitations on the amount of oak canopy that may be removed with each project, based on calculations of the percent of oak canopy existing on the subject parcel. Oak~~

~~canopy must be retained in the amount established in the Table of Policy 7.4.4.4, provided below as Table 3.~~

~~**Table 3: Canopy Retention Requirements from Policy 7.4.4.4**~~

2.2 Oak Woodland Permits and Mitigation

The policy of the County is to preserve oak woodlands when feasible, through the review of all proposed development activities where woodlands are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner. As such, the County shall require mitigation for impacts to oak woodlands. The following sections outline oak woodland permit and mitigation requirements and Figure 1 outlines the permit and mitigation process.

2.2.1 Oak Woodland Removal Permits

An oak woodland removal permit shall be required for a discretionary project to authorize removal of any trees that are a component of an oak woodland. An oak resources technical report shall accompany any oak woodland removal permit application submitted to the County. The County may impose such reasonable conditions of approval as are necessary to protect the health of existing oak woodlands, the public, and the surrounding property. Oak woodland removal permit review will occur concurrently with the environmental review process for discretionary projects. ~~If~~ In addition to findings of consistency with the requirements and standards of this ORMP, the County shall make the following findings before approving an oak woodland removal permit application: ~~is denied, the County shall provide written notification, including the reasons for denial, to the applicant.~~

- The proposed action is consistent with the General Plan; and
- The proposed action would not be detrimental to the public health, safety and welfare, or injurious to the neighborhood; and
- The proposed action is specifically allowed by an oak woodland removal permit pursuant to this ORMP.

An appeal to the fees established through this ORMP shall be in accordance with the appeal procedure set forth in Section 130.22.220 of the County Code.

Commercial firewood cutting operations in oak woodlands shall also require an oak woodland removal permit. In reviewing an oak woodland removal permit application for firewood cutting operations, the County shall consider the following:

- Whether the removal of the tree(s) would have a significant negative environmental impact;
- Whether the proposed removal would not result in clear-cutting, but would result in thinning or stand improvement;
- Whether replanting would be necessary to ensure adequate regeneration;
- Whether the removal would create the potential for soil erosion;

- Whether any other limitations or conditions should be imposed in accordance with sound tree management practices; and
- What the extent of the resulting oak woodland coverage would be.

Fines shall be issued to any person, firm, or corporation that is not exempt from the standards included in this ORMP who ~~removes oak trees within~~ impacts an oak woodland without first obtaining an oak woodland removal permit. Fines may be as high as three times the current oak woodland in-lieu fee amount. If an oak woodland is impacted without an oak woodland removal permit, in addition to issuing a fine, the County may choose to deny or defer approval of any applications for development of that property for a period of up to 5 years. All ~~shall be subject to the penalties identified in El Dorado County Code Section 13.12.030. Any~~ monies received as fines for illegal oak tree and woodland ~~tree~~ removal shall be deposited in the County's Oak Woodland Conservation Fund.

2.2.2 Oak Woodland Mitigation

In order to incentivize on-site retention of oak woodlands, mitigation for impacts to oak woodlands shall be based on the ratios presented in Table 3.

Table 3
Oak Woodland Mitigation Ratios

Percent ~~Existing Canopy Cover~~of Oak Woodland Impact	~~Canopy Cover to be Retained~~Oak Woodland Mitigation Ratio
~~80 – 100~~0-50%	~~60% of existing canopy cover~~1:1
~~60 – 79~~	~~70% of existing canopy cover~~
~~40 – 69~~	~~80% of existing canopy cover~~
~~20 – 39~~	~~85% of existing canopy cover~~
~~10 – 19~~	~~90% of existing canopy cover~~
~~1 – 9 for parcels > 1 acre~~50.1-75%	~~90% of existing canopy cover~~1.5:1
75.1-100%	2:1

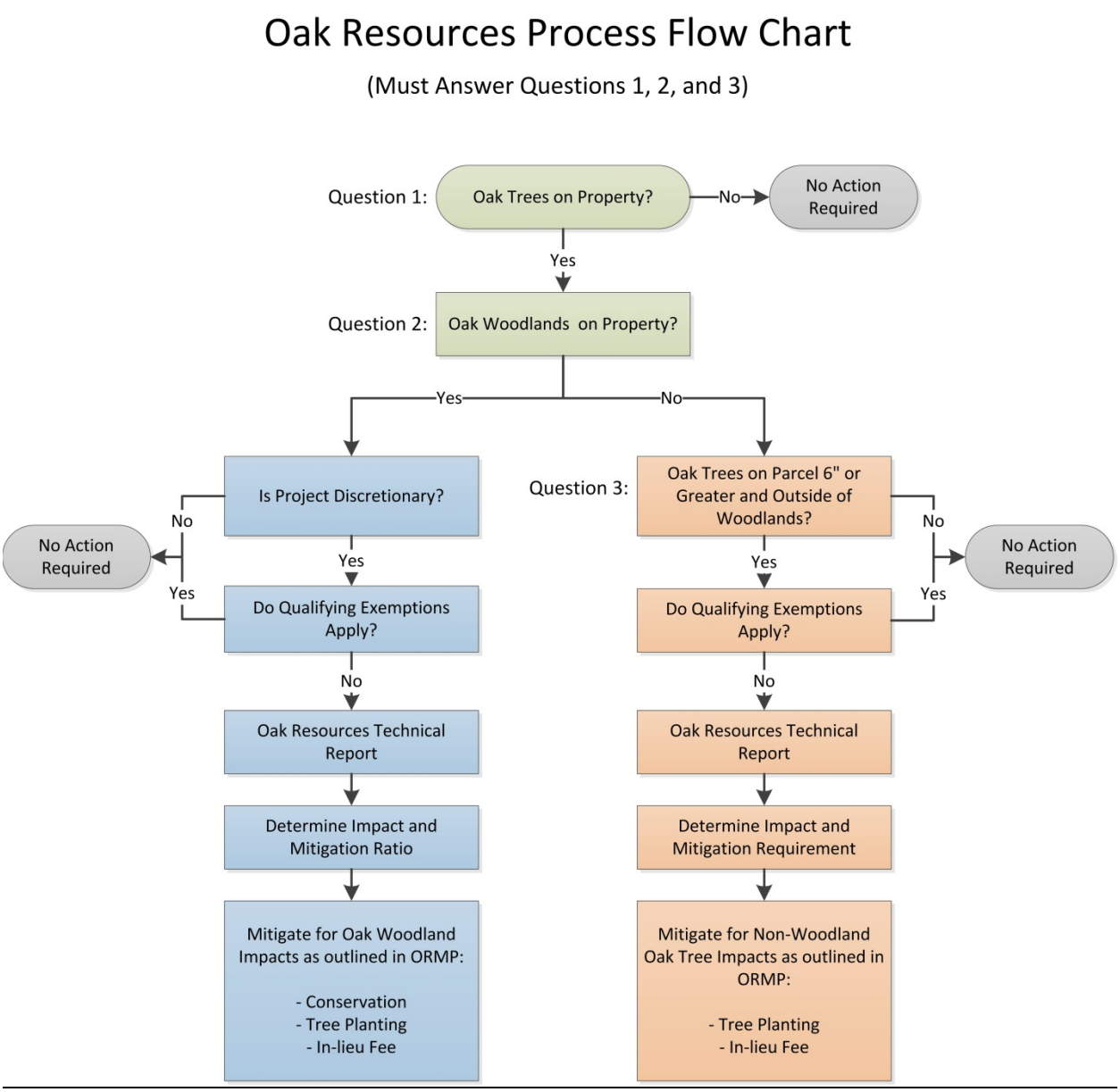
Oak woodland impacts and mitigation shall be addressed in an oak resources technical report. ~~In addition to retention, Option A requires that removed~~As presented in Table 3, all of a project's oak ~~canopy~~ woodland impacts shall be ~~replaced~~mitigated at a 1:1 ratio~~. The size of the designated~~ where 50 percent or less of on-site oak woodlands are impacted, all of a project's oak woodland impacts shall be mitigated at a 1.5:1 ratio where 50.1 to 75 percent of on-site oak woodlands are impacted, and all of a project's oak woodland impacts shall be mitigated at a 2:1 ratio where greater than 75 percent of on-site oak woodlands are impacted. Non-exempt County road projects shall provide oak woodland mitigation at a ratio of 1:1 regardless of the amount of onsite retention. ~~Mitigation for oak woodland impacts shall be addressed in an oak resources technical report. Options for oak woodland impact mitigation requirements include~~A deed restriction or conservation easement shall be placed over retained on-site woodlands and those woodlands retained on site shall not be counted towards the impacted amount or towards the

required mitigation. Mitigation for the impacted oak woodlands shall occur at the ratio required under Table 3 using one or more of the following options:

1. Deed restriction ~~(on-site), conservation easement dedication (on-site), and/~~or conservation easement acquisition (off-site), and/or acquisition in fee title by a land conservation organization (~~on-site and/or~~ off-site);
2. In-lieu fee payment;
3. Replacement planting on-site within an area subject to a deed restriction or conservation easement;
4. Replacement planting off-site within an area subject to a conservation easement ~~or acquisition in fee title by a land conservation organization~~; or
5. A combination of numbers 1 through 4 above.

Consistent with California PRC 21083.4, replacement ~~area~~planting shall ~~equal~~not account for more than 50 percent of the ~~total area~~oak woodland mitigation requirement.

Figure 1. Oak Resources Permitting and Mitigation Process



2.3 Individual Native Oak Tree and Heritage Tree Permits and Mitigation

The policy of the ~~oak canopy cover~~ County is to preserve native oak trees when feasible, through the review of all proposed ~~to be removed. For example,~~development activities where such trees are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner. As such, the County shall require mitigation for impacts to individual native oak trees and Heritage Trees.

2.3.1 Oak Tree Removal Permits

A tree removal ~~of 2 acres of oak canopy requires~~permit shall be required by the County for removal of any individual native oak tree not located within an oak woodland and/or for removal of any Heritage Tree. An oak resources technical report shall accompany any tree removal permit application submitted to the County. The County may impose such reasonable conditions of approval as are necessary to protect the health of existing oak trees, the public, and the surrounding property. Oak tree removal permit review will occur concurrent with the environmental review process for discretionary projects or concurrently with other permit review and processing for ministerial projects (e.g., building permits). ~~If a~~ The County will prepare a permit application for ministerial review. In addition to findings of consistency with the requirements and standards of this ORMP, the County shall make the following findings before approving an oak tree removal permit application~~: is denied, the County shall provide written notification, including the reasons for denial, to the applicant.~~

- The proposed action is consistent with the General Plan; and
- The proposed action would not be detrimental to the public health, safety and welfare, or injurious to the neighborhood; and
- The proposed action is specifically allowed by an oak woodland removal permit pursuant to this ORMP.

An appeal to the fees established through this ORMP shall be in accordance with the appeal procedure set forth in Section 130.22.220 of the County Code.

Commercial firewood cutting operations shall also require a tree removal permit if not approved under an oak woodland removal permit. In reviewing a tree removal permit application for commercial firewood cutting operations, the County shall consider the following:

- Whether the removal of the tree(s) would have a significant negative environmental impact;
- Whether the tree proposed for removal is a Heritage Tree;
- Whether replanting would be necessary to ensure adequate regeneration;
- Whether the removal would create the potential for soil erosion; and
- Whether any other limitations or conditions should be imposed in accordance with sound tree management practices.

- Any person, firm, or corporation that is not exempt from the standards included in this ORMP who removes.

Fines shall be issued to any person, firm, or corporation that is not exempt from the standards included in this ORMP who removes an oak tree without first obtaining an oak tree removal permit ~~shall be subject to the penalties identified in El Dorado County Code Section 13.12.030~~. Fines may be as high as three times the current market value of replacement trees, as well as the cost of replacement, and/or the cost of replacement of up to three times the number of required replacement trees. In the case of unpermitted Heritage Tree removal, fines may be as high as 9 times the current market value of replacement trees, as well as the cost of replacement, and/or the cost of replacement of up to 9 times the number of required replacement trees. If individual native oak trees or Heritage Trees are removed without an oak tree removal permit, in addition to issuing a fine, the County may choose to deny or defer approval of any applications for development of that property for a period of up to 5 years. All ~~shall be subject to the penalties identified in El Dorado County Code Section 13.12.030. Any~~ monies received as fines for illegal oak tree and woodland ~~tree~~ removal shall be deposited in the County's Oak Woodland Conservation Fund.

2.3.2 Oak Tree Mitigation

Mitigation for removal of individual native oak trees shall be based on an inch-for-inch replacement ~~of 2 acres of oak canopy; removal of 5,000 square feet of oak canopy requires~~standard (defined in Section 2.4) and shall be quantified and outlined in an oak resources technical report (defined in Section 6.0). Mitigation for removal of Heritage Trees shall be based on an inch-for-inch replacement ~~of 5,000 square feet of oak canopy.~~standard at a 3:1 ratio and shall also be quantified and outlined in an oak resources technical report.

~~D. On-Site Mitigation – Replanting~~Options for individual native oak tree and Heritage Tree impact mitigation requirements include:

1. Replacement ~~(Option A)~~planting on-site within an area subject to a deed restriction or conservation easement;

~~As provided under Option A, Policy 7.4.4.4, all oak canopy removed for development must be replaced at a 1:1 ratio. In lieu of on-site replacement, where such replacement is not feasible due to soil/habitat considerations and/or land use constraints or not desirable by the applicant, off-site mitigation may be substituted for replacement plantings by payment of the Conservation Fund In-Lieu Fee at a 1:1 canopy surface area ratio or dedication of an off-site conservation easement as described in Section 4.C, also at a 1:1 ratio. Off-site replacement at a 1:1 ratio is offered to avoid circumstances that would result in replacement plantings occurring in marginal habitat or at the expense of other existing habitat. The following provisions apply to on-site and off-site replacement:~~

2. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by a land conservation organization;
3. In-lieu fee payment; or
4. A combination of numbers 1 through 3 above.

Mitigation for individual native oak tree and/or Heritage Tree impacts shall be addressed in an oak resources technical report.

2.4 Replacement Planting Guidelines

This section provides guidelines for projects that elect to mitigate via replacement planting. Replacement plantings may be accepted if ~~adequate openings exist on site and~~ the replanting area ~~likely would~~can support oak ~~woodland~~resources (e.g., proper soil type and general environment). The intent is not to remove existing natural habitats for replacement plantings or to create a continuous canopy that would reduce wildlife value or contribute to increased fire hazard. Replacement plantings ~~shall meet the County's replanting and replacement standards and is~~are subject to County approval~~.~~ and shall be completed as follows:

- ~~Oak canopy replacement plans shall be prepared by a qualified professional (such as a certified arborist, registered professional forester, certified rangeland manager, or biologist, as described in Section 8.A, Appendix A). Replacement plans shall address the following: (For more detailed criteria, please see Appendix E.)~~
- ~~An oak planting mitigation plan consistent with the standards established in the 2004 University of California publication,~~Oak Woodland Impacts: For impacts to oak woodlands, planting density shall be based on recommendations made by a qualified professional and presented in an oak resources technical report. Planting density shall be based on the density of impacted oak woodlands, which shall be documented in the oak resources technical report. Replacement trees shall be regularly monitored and maintained and shall survive for a period of 7 years, calculated from the day of planting. Acorns may be used instead of ~~saplings or one-gallon~~ container trees. If acorns are used, they shall be planted at a 3:1 ratio as determined by the tree replacement formula. The replacement is as follows:

  Replacement planting ~~from saplings or~~ with container trees (one-gallon or DeePot 40-sized container trees, that are locally sourced, shall follow this formula for ratios:

  (Impacted Oak Woodland Area in acres) x (Impacted Oak Woodland Density in trees/acre) = the total number of replacement trees to be replanted

  Replacement replanting by acorn shall be from locally-sourced acorns (acorns gathered locally). The replacement ratio by acorn replanting shall be obtained by the following formula

  (Impacted Oak Woodland Area in acres) x (Impacted Oak Woodland Density in trees/acre) x (3 acorns per tree) = the total number of acorns to be replanted

  This ORMP does not preclude over-planting so that the ~~90-percent survival rate~~ identified woodland density may be accomplished at the end of the 7-year maintenance and monitoring period. Replacement planting may use a combination of replacement tree sizes (~~saplings,~~ one-gallon, DeePot 40, acorns) if consistency with these ratios is maintained and documented in an oak resources technical report. Monitoring reports shall be submitted to the County at least annually during the 7-year maintenance and monitoring period and documentation of replacement planting success shall be provided to the County at the end of the 7-year monitoring and maintenance period (final monitoring report).

- Individual Native Oak Tree and Heritage Tree Impacts: For impacts to individual native oak trees that are not otherwise mitigated, replacement planting shall be calculated based upon an inch-for-inch replacement of removed individual native oak trees. The total of replacement trees shall have a combined diameter of the tree(s) removed. Replacement tree species shall be the same proportion as those removed. For the purposes of this requirement, a 15-gallon replacement tree is assumed to represent 1-inch of trunk diameter. Replacement trees shall be planted on-site and monitored and maintained for a period of 7 years, calculated from the day of planting. Documentation of replacement planting success shall be provided to the County at the end of the 7-year monitoring and maintenance period. Any trees that do not survive the 7-year monitoring and maintenance period shall be replaced by the ~~property owner~~ responsible party listed on the Oak Tree Removal Permit and shall be monitored and maintained for 7 years. Replacement tree sizes may vary and may include acorn plantings, based on documentation of inch-for-inch replacement consistency included in an oak resources technical report. If acorns are used, they shall be planted at a 3:1 ratio (3 acorns for every 1-inch of trunk diameter removed) under the direction of a qualified professional. The replacement planting area shall be suitable for tree planting, shall not conflict with current or planned land uses, and shall be large enough to accommodate replacement plantings at a density no greater than 200 trees per acre. This ORMP does not preclude over-planting so that the minimum survival rate may be accomplished at the end of the 7-year maintenance and monitoring period. Monitoring reports shall be submitted to the County at least annually during the 7-year maintenance and monitoring period and documentation of replacement planting success shall be provided to the County at the end of the 7-year monitoring and maintenance period (final monitoring report).

  For impacts to Heritage Trees, replacement planting shall adhere to the standards identified for individual native oak trees; however, replacement totals shall be calculated based upon an inch-for-inch replacement at a 3:1 ratio.

- On-Site Replacement Planting: On-site replacement trees are to be planted to the satisfaction of the Development Services Director. The replacement planting area shall be suitable for tree planting, shall not conflict with current or planned land uses, and shall be large enough to accommodate replacement plantings at a density equal to the density of oak woodlands impacted. A deed restriction or conservation easement to the satisfaction of County Counsel and the Director shall be required to ensure the long term conservation of any on-site replacement trees planted. The Conservation Easement shall be in favor of the County or a County-approved conservation organization. Maintenance and monitoring shall be required for a minimum of 7 years after planting. Any trees that do not survive during this period of time shall be replaced by the ~~property owner~~ responsible party listed on the Oak Tree Removal Permit and monitored to ensure survival for a period of 7 years from the date of planting.

- Off-Site Replacement Planting: The applicant may be permitted to procure an off-site planting area for replacement planting, preferably in proximity and/or in connection with oak woodlands contiguous to the project site or within or adjacent to a PCA or an Important Biological Corridor as designated in the General Plan or important ecological area as identified in the Initial Inventory and Mapping (June 2010). The replacement planting area shall be suitable for tree planting, shall not conflict with current or planned

land uses, and shall be large enough to accommodate replacement plantings at a density no greater than 200 trees per acre. A conservation easement to the satisfaction of County Counsel and the Development Services Director shall be required to ensure the long term maintenance and preservation of any on-site replacement trees planted. The Conservation Easement shall be in favor of the County or a County approved conservation organization. Maintenance and monitoring shall be required for a minimum of 7 years after planting. Any trees that do not survive during this period of time shall be replaced by the ~~property owner~~ responsible party listed on the Oak Tree Removal Permit and monitored to ensure survival for a period of 7 years from the date of planting.

- Replacement Planting Plans: Oak resources replacement planting plans shall be prepared for all replacement planting efforts (on- and off-site) by a qualified professional and may be prepared in conjunction with oak resources technical report. Replacement planting plans shall address the following:
    - Consistency with the accepted native oak tree planting standards, including those outlined in Regenerating Rangeland Oaks in California~~,~~ (McCreary 2009), How to Grow California Oaks~~,~~ (McCreary 1995), How to Collect, Store and Plant Acorns~~,~~ (McCreary undated), and other publications and protocols that may be established by the University of California ~~Integrated Hardwood Range Management Program~~, Division of Agriculture and Natural Resources.
    - The suitability of the site ~~for oak woodlands~~ shall be demonstrated with soil information, aerial photography, or other resources. ~~The qualified professional shall demonstrate that the replanting plan does not remove existing non-oak woodland and enhances existing oak woodland habitat.~~
    - The density of replanting shall be determined by the qualified professional, based on accepted practice and current research, but shall not exceed 200 trees per acre.
    - The intent of the replacement planting plan is to provide replacement oak trees or acorns with a similar mix of species as those removed, however, the species may vary based on site specific conditions, as determined by the qualified professional.
    - Acorns or ~~saplings~~ container trees for replanting shall be from local sources, when available, to maintain local genetic strains.
    - Replacement planting ~~should~~shall not be located within the ~~0-100'~~100-foot defensible space zone from an existing or proposed structure unless otherwise consistent with CAL FIRE's defensible space guidelines and fuels reduction requirements mandated under ~~California Public Resources Code (PRC) §~~PRC 4291.
    - Replacement plantings shall be maintained in a manner determined by the qualified professional, based on the site-specific conditions, which may include weed control, irrigation ~~(if appropriate), herbivory/grazing~~, tree protection, pest management, and/or fertilization~~, and planting methods~~.
    - The replacement planting plan shall identify the frequency and methods of maintenance and monitoring, as well as contingencies or alternatives if the success criteria are not met annually or at the end of the monitoring term along

with a means to ensure compliance with the replacement planting plan. The monitoring term shall be ~~seven~~7 years (PRC 21083.4).

- Best Management Practices (BMPs) for protection of retained oaks during and after construction (refer to Appendix D).
- An estimate of the total costs associated with implementation of the replacement plan.

- ~~An oak tree easement shall be recorded on each property by the County, project applicant, or landowner for all replanting areas approved by the County as mitigation, prior to issuance of a permit.~~

~~E. Mitigation Option B~~

~~Option B does not require the retention of a minimum percentage of oak canopy on-site. This mitigation alternative is intended to preserve existing oak woodland canopy of equal or greater biological value as those lost. To compensate for both habitat loss and fragmentation, the preservation mitigation ratio was set at 2:1 based on the acreage of oak canopy affected. For purposes of the fee program, the standard for off-site mitigation under Option B is payment of the Conservation Fund In-Lieu fee at a ratio of 2:1. In other words, for each acre of oak canopy that is lost, the payment is the fee per acre multiplied by two. The Conservation In-Lieu Fee Mitigation Method is described in detail in Appendix B.~~

~~Alternatives to the Conservation Fund In-Lieu Fee, including dedication of off-site conservation easements by a landowner/developer as direct mitigation at a 2:1 ratio are considered the functional equivalent of the Option B in-lieu fee, and will be permitted, subject to County approval. While landowners/developers will not have to pay the Acquisition Component of the fee as they are themselves acquiring a conservation easement, they are still required to pay the Management Component and Monitoring Component of the Conservation Fund In-Lieu Fee to provide for the ongoing endowment for management and monitoring.~~

~~*F. 2.5 Oak Resources Technical Reports*~~

This section provides guidelines for projects that require preparation of an oak resources technical report. An oak resources technical report is a stand-alone report prepared by a qualified professional that includes the following:

- Identification, location, and quantification of all oak resources on the property:
  - Oak woodlands shall be mapped and assessed in accordance with the CDFG 2009 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* and subsequent updates, and the *List of Vegetation Alliances and Associations* (CDFG 2010) and subsequent updates;
  - Data collected for individual native oak trees and Heritage Trees shall include: location, species, trunk diameter (dbh), height, canopy radius, and general health and structural condition;

- Identification and quantification of project-related impacts to oak resources;
- Measures identifying how specific trees and woodlands (or retained portions thereof) shall be protected during development and related work;
- Proposed actions to mitigate impacts to oak resources, consistent with the requirements included in this ORMP:
    - For replacement planting, the report shall provide detail regarding the quantity, location, planting density, and acorn/seedling source consistent with the definition of Replacement Planting included in this ORMP;
    - For conservation easement placement/acquisition and/or land acquisition in fee title, the report shall provide documentation of easement placement on-site and/or documentation of easement or land acquisition off-site to the satisfaction of the County;
    - For in-lieu fee payment, the report shall document the quantity of impacts (acreage of oak woodlands and/or total diameter inches of individual native oak trees/Heritage Trees) and the total in-lieu fee payment necessary (presented separately for oak woodlands, individual native oak trees, and Heritage Trees, where applicable);
- Identification of responsible parties;
- Identification of maintenance, monitoring, and reporting requirements;
- Analysis of non-PCA conservation easement areas, where applicable;
- A site map(s) depicting the location of all oak woodlands, individual native oak trees, and Heritage Trees and the location of all proposed project-related improvements (including, but not limited to, the limits of grading, fuel modification/defensible space areas, and above- and below-ground infrastructure). The site map(s) shall also clearly identify impacted oak resources.

2.6 Mitigation Program Flexibility

~~The OWMP~~This ORMP provides for flexibility in meeting ~~the~~ oak ~~canopy~~resources mitigation requirements.~~-~~ An applicant for a development project may comply with the provisions of ~~Policy 7.4.4.4 by meeting the retention and 1:1 replacement requirements of Option A, providing off-site mitigation through the payment of the OWMP fee as established by the OWMP and the implementing fee ordinance, or a combination of the two provisions. Additionally, off~~this ORMP by combining mitigation options, except as specified for replacement planting to mitigate oak woodland impacts. Off-site mitigation may be accomplished through private agreements between the applicant and another private party consistent with the ~~2:1 replacement provisions of Option B~~standards included in this ORMP and subject to approval by the County~~ of the suitability of the oak woodland to be protected.~~ . When dedication of off-site conservation easements outside of ~~the~~ PCAs is proposed by a developer, ~~a biological study shall be required for the off-site mitigation location to demonstrate that the site is of equal or greater biological value as the oak woodland proposed to be removed. The biological study shall evaluate and demonstrate parity of habitat elements such as snags, large woody debris, and the diversity and~~

~~structure of the understory between the oak woodlands lost and those being protected. If the off-site conservation easement is to mitigate for Valley Oak Woodland removed, then the easement must be within Valley Oak Woodland of equal or greater biological value.~~ the proposed site shall be prioritized based on the standards set forth in this ORMP (Section 4.0). A developer that dedicates a County-approved conservation easement is not subject to the ~~Acquisition Component~~acquisition component of the ~~Conservation Fund In-Lieu Fee~~in-lieu fee, but is subject to the ~~Management Component~~management component and ~~Monitoring Component~~monitoring component of the fee.

~~3. Conservation Fund In-Lieu Fee Methodology~~

~~The Conservation Fund~~

3.0 In-Lieu Fee

The methodology for determining the in-lieu fee for impacts to individual native oak trees and oak woodlands is provided in detail in Appendix B. In general, the in-lieu fee for oak woodlands is based on the costs of acquisition of land and conservation easements, along with management, monitoring, and administrative costs. For individual native oak trees, the in-lieu fee is based on an inch-for-inch replacement approach that accounts for costs associated with purchasing and planting 1-inch of trunk diameter.

3.1 Oak Woodlands

As noted, the in-lieu fee for impacts to oak woodlands is based on the costs of acquisition of land and conservation easements, along with management, monitoring, and administrative costs. A breakdown of costs per acre is provided in Table 4. ~~Details of the analysis to establish the fee is contained in Appendix B.~~

~~Table 4: Conservation Fund In-Lieu Fee~~

Table 4
Oak Woodland In-Lieu Fee

Activity	Cost ~~Per~~per Acre
Acquisition-~~1~~	~~$ 2,300To be provided~~$4,400
Initial Management and Monitoring-~~2~~	~~$1,200To be provided~~$2,300
Long-Term Management and Monitoring-~~3~~	~~$ 1,200 To be provided~~$875
Administration	$379
Total Cost/~~Fee Per~~ per Acre	~~$4,700~~ ~~To be provided~~$7,954

Source: New Economics & Advisory Draft Oak Resource In-Lieu Fee Nexus Study (June 2015)

~~(1) Conservation easement on rural land acquisition of 125 acres, which is the average parcel size within the PCAs. Acquisition costs include the easement land value (approximately $1,800, or 40% discount value) and conveyance costs.~~
~~(2) Includes biological survey/baseline documentation, weed control and fuels treatment.~~
~~(3) Includes endowment for on-going monitoring.~~

~~As provided~~The in ~~Option B of Policy 7.4.4.4, off-site mitigation in the form of~~ lieu fee payment ~~of the fee~~ option for impacts to oak woodlands shall be made at ~~a 2:1 canopy surface area~~ the ratio~~, requiring the payment of $9,400~~ outlined in Table 3, which provides for ~~every acre of oak canopy removed in excess of the amount provided in the table of Option A. To meet the Option A 1:1 replacement standard, an applicant may opt to pay the Conservation Fund In-Lieu Fee at the 1:1 rate for that portion~~a variable mitigation ratio depending on the percentage of oak ~~canopy removed consistent with the table. If payment into the Conservation Fund is utilized for the replacement portion of Option A, then on-site retention requirements would still apply.~~

woodland impacted on a project site. The County shall deposit all ~~Conservation Fund In-Lieu~~oak woodland in-lieu fees into ~~an~~its Oak Woodland Conservation Fund, which shall be used to ~~acquire~~ fund the acquisition of land and/or conservation easements from willing sellers ~~in the PCAs~~ as described ~~below~~ in Section 4.~~-~~ This fund shall also be used for ongoing monitoring and

management activities, including but not limited to fuels treatment, weed control, periodic surveys, and reporting. ~~The County may provide~~It is anticipated that conservation easements and mitigation lands would be held by a land conservation organization; therefore, ongoing monitoring and management ~~services by employees or contract management and monitoring~~ activities ~~with a qualified firm, individual, outside agency, or non-profit organization.~~ would be conducted by such organizations. Funding to support the~~ identification of willing sellers,~~ negotiation of the purchase price, and oversight of the land transaction is included in the management component of the ~~Conservation Fund In-Lieu Fee~~oak woodland in-lieu fee.

As costs~~ for off-site mitigation~~ change over time, there will be a need to adjust the fee to closely match future cost increases or decreases. Appendix B details the fee adjustment approach. ~~–~~A report regarding fee adjustments will be included in ~~an annual~~a report to be submitted to the Planning Commission and Board of Supervisors ~~each~~every other March, as described in Appendix A~~.~~. The first fee adjustment study would occur at least 12 months after adoption of ~~the OWMP.~~this ORMP.

~~4. Priority Conservation Areas~~

~~A. Identification of Priority Conservation Areas~~

3.2 Oak Trees

For individual native oak trees, the in-lieu fee is based on an inch-for-inch replacement approach that accounts for costs associated with purchasing and planting 1-inch of trunk diameter and maintaining those trees for a period of seven years. Specifically, a 15-gallon size native oak tree is assumed to represent one inch of trunk diameter. The acquisition and planting component of t~~T~~he per-inch mitigation fee is then based on the costs to purchase and plant one 15-gallon native oak tree. To determine the per-inch fee, the median price of 15-gallon oak trees was calculated from a survey of eight nurseries in El Dorado County and the surrounding region. This price was then doubled to account for costs associated with planting. Doubling the per-tree cost to account for purchasing and planting a tree (inclusive of labor and materials) is a standard approach in the landscape/habitat restoration industry. The management and monitoring component of the per-inch mitigation fee is based on annual costs associated with maintaining planted trees for a period of seven years. Data for this fee was derived from cost estimates provided by a habitat restoration contracting firm, Habitat Restoration Sciences, Inc. Based on this analysis, the per-inch individual native oak tree mitigation fee was calculated to be $186~~120~~.00. In the case of Heritage Trees, the per-inch mitigation fee shall be $558~~360~~.00 (3:1 ratio). Table 5 summarizes the cost breakdown associated with the in-lieu fee for individual native oak trees.

Table 5
Individual Oak Tree In-Lieu Fee

Activity	Cost per Inch
Acquisition and Planting	$120

Table 5
Individual Oak Tree In-Lieu Fee

Activity	Cost per Inch
Initial Management & Monitoring (Years 1-7)	$56.70
Administration (5%)	$8.84
Total Cost per Inch **(rounded to nearest whole dollar)**	$186

Source: New Economics & Advisory Draft Oak Resource In-Lieu Fee Nexus Study (June 2015)

As described in this ORMP, this per-inch mitigation fee may be paid as mitigation for impacts to individual native oak trees or Heritage Trees. The per-inch fee shall be multiplied by the total number of trunk diameter inches removed (dbh). The County shall deposit all oak tree in-lieu fees into its Oak Woodland Conservation Fund and shall use collected per-inch mitigation fees for native oak tree planting projects or may use such funds to acquire oak woodland conservation easements, with documentation that the number of diameter inches meets those for which mitigation fees have been paid.

As costs change over time, there will be a need to adjust the fee to closely match future cost increases or decreases. Appendix B details the fee adjustment approach. A report regarding fee adjustments will be included in a report to be submitted to the Planning Commission and Board of Supervisors every other March, as described in Appendix A. The first fee adjustment study would occur at least 12 months after adoption of this ORMP.

4.0 Priority Conservation Areas

4.1 Identification of Priority Conservation Areas

Figure ~~1~~2 identifies the areas in which acquisition of land or conservation easements~~ shall be acquired~~ from willing sellers shall be prioritized using the Oak Woodland Conservation Fund generated by the payment of the ~~Conservation Fund In Lieu Fee~~in-lieu fees described above. These areas were identified using the FRAP classification of ~~the five~~ oak woodland habitat~~ types~~ in the county.~~ ~~After those areas were mapped, the areas were narrowed down to large expanses consisting of 500 acres or more. ~~Those large expanses were further narrowed to lands where oak woodland habitat would not likely undergo substantial fragmentation and oak woodland conservation would be consistent with the 2004 General Plan land use designations. ~~Areas specifically excluded were lands within Community Regions and Rural Centers and lands designated Low Density Residential. ~~These resulting areas are classified as Priority Conservation Areas (PCAs).

The 500-acre PCAs are generally made up of 40-acre and larger privately owned parcels. ~~A breakdown of parcel sizes within the large expanses is shown in Table ~~5~~6.~~ A more detailed description of the mapping process and data used to identify PCAs is provided in Appendix ~~G.~~ A. Figure ~~1~~2 also shows existing public lands with~~ high-value~~ oak woodlands contiguous to the PCAs.

Table ~~5~~6
PCA Parcel Statistics

Parcel size (Acres)	#Number of ~~parcels~~Parcels	Acres
40-60	170	~~7,666.3
60.1-120	155	~~13,176.7
120.1-340	175	~~31,674.3
340.1+	29	~~13,535.5
Total	*529*	*66,052.8*
	Avg. Size	124.9
	Median Size	84.3

~~*Data produced using parcel data from El Dorado County and the PCA shapefile for the Draft Plan (VOWH_PRVT_grtr500ac.shp)~~

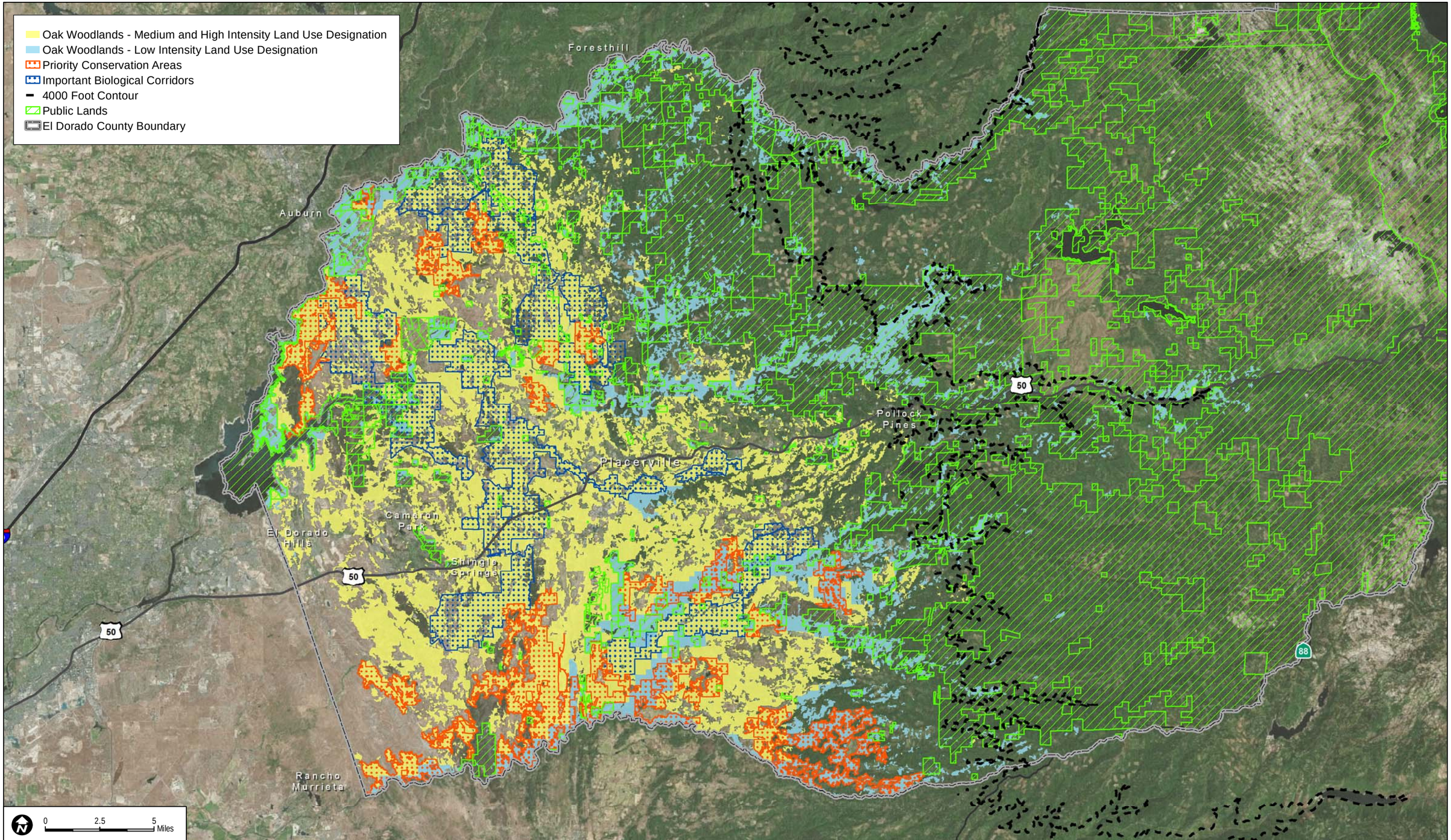
Oak woodland offered as mitigation must be configured in such a manner as to best preserve the integrity of the oak woodland ecosystem. ~~Priority should be given to conserving oak woodland habitat within PCAs, particularly areas that are adjacent to existing woodlands ~~under or subject to an~~lying west of the National Forest within the Important Biological Corridor~~,~~ overlay, under a conservation easement, on public lands, in open space lands, in riparian corridors, or ecological preserves~~ or other PCAs lying west of the National Forest~~.

~~Valley~~ Oak ~~Woodland~~woodlands within the PCAs will be ~~specifically acquired~~conserved to mitigate for losses of ~~Valley Oak Woodland~~ oak woodlands. Prioritization will be given to areas that provide a diversity of oak woodland types. The acreage of oak woodlands conserved shall be based on the quantity of those impacted as a result of new development. ~~Only Valley~~

Figure 2. Priority Conservation Areas, Oak Woodlands ~~will be targeted this way~~, and Public Lands in ~~order to provide a method ensuring that this General Plan-designated "sensitive habitat" is adequately preserved. If the Valley Oak Woodland habitat within currently designated PCAs becomes insufficient, then additional acreage of this habitat type will be added to the PCAs as necessary upon annual review of the OWMP.~~El Dorado County

~~The OWMP establishes an oak woodlands resource base that, when managed for conservation and preservation purposes, conserves a substantial portion of oak woodland habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the county. This approach is considered superior to one that attempts to conserve oak woodlands in areas designated for development. Such areas are less desirable for mitigation lands because they are more expensive, have reduced habitat values, and would conflict with approved General Plan land use designations. Subsequent adoption and implementation of the INRMP, and incorporation of this plan into that document, will ensure connectivity between the PCAs. The INRMP will also address north-south connectivity across Highway 50 and the potential role of oak woodlands less than 40 acres in maintaining connectivity between larger expanses of oak woodlands. Existing public lands, Important Biological Corridors as identified on the 2004 General Plan land use diagram, and stream setback requirements provided under Policy 7.3.3.4 provide sufficient interim connectivity to provide wildlife movement between the PCAs (See Figure 2).~~

~~B.~~



DUDEK

8229-01

SOURCE: Bing Maps 2014; FRAP 2006; El Dorado County 2014

FIGURE 2

Priority Conservation Areas, Oak Woodlands, and Public Lands in El Dorado County

Draft Oak Resources Management Plan

This ORMP establishes a strategy for conserving oak woodland habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the county. Identification of PCAs and standards for prioritizing conservation of oak woodlands outside of PCAs (Section 4.3) fulfills the oak woodlands portion of the conservation requirements outlined in General Plan Policy 7.4.2.8.

4.2 Management of PCAs

Existing ~~native~~ oak ~~woodland~~woodlands within the PCAs identified as mitigation for project impacts, whether on or off ~~the~~a project site, will be protected from further development through a conservation easement granted to the County or a land conservation group approved by the County~~.~~ or by acquisition in fee title by a land conservation group. Management activities would be conducted by land conservation organizations and may include, but are not limited to, one or more of the following activities, as determined appropriate and/or necessary through monitoring of the sites:– inspections, biological surveys, fuels treatment to reduce risk of wildfire and to improve habitat, weed control, database management, and mapping. Agricultural use (i.e., grazing) shall be allowed in conserved oak woodlands as long as the activity occurred prior to the establishment of the conservation easement, the spatial extent of the agricultural use is not expanded on conserved lands, and the agricultural use does not involve active tree harvest or removal (e.g., fuelwood operations, land clearing for crop planting, etc.).

~~C. Conservation Easements~~

~~***Conservation easements for oak woodlands shall be granted to the County in perpetuity.***~~ ***4.3 Conservation Outside of PCAs***

The PCAs have been delineated to prioritize the acquisition of land or oak woodland conservation easements either by the County (using the funds collected in the County's Oak Woodland Conservation Fund) or privately by developers. However, acquisition of land or oak woodland conservation easements outside of the PCAs may also occur. The following criteria shall be used for selecting potential oak woodlands conservation lands or easements outside of PCAs, consistent with General Plan Policy 7.4.2.8 (D):

- Location within IBCs;
- Location within other important ecological areas as identified in the Initial Inventory and Mapping (June 2010);
- Woodlands with diverse age structure;
- Woodlands with large trees and dense canopies;
- Opportunities for active land management to be used to enhance or restore natural ecosystem processes;
- Potential to support special-status species;
- Connectivity with adjacent protected lands;
- Parcels that achieve multiple agency and community benefits;

- Parcels that are located generally to the west of the Eldorado National Forest; and
- Parcels that would preserve natural wildlife movement corridors such as crossings under major roadways (e.g., U.S. Highway 50 and across canyons).

Land or ~~C~~conservation easement acquisition as mitigation of oak woodland impacts that occurs outside of PCAs shall occur on minimum contiguous habitat blocks of 5 acres~~. For transactions where~~ (the acquired land or conservation easement shall be contiguous to or shall create a contiguous area of no less than 5 acres of oak woodland in conserved or open space status (e.g., parks, national forest, other conserved oak woodlands on private property). For transactions where land is acquired or a conservation easement outside of the PCAs is negotiated between a developer and a private seller, an analysis of the proposed oak woodland conservation area shall be performed by a qualified professional to demonstrate that the proposed conservation area is of equal or greater biological value as the oak woodland proposed to be removed. The analysis of conservation areas shall be included as a component of an oak resources technical report.

Should the County elect to purchase land or oak woodlands conservation easements outside of PCAs using funds from its Oak Woodland Conservation Fund, an analysis of the proposed oak woodland conservation area shall be performed by a qualified professional to determine its suitability in meeting the criteria listed above.

4.4 Conservation Easements

Where the mitigation requirements of this ORMP are met through conservation easements for oak woodlands, whether within or outside of PCAs, the conservation easement shall be granted in perpetuity to the County or a land conservation group approved by the County. The easement shall be provided on a form approved by the County and shall be recorded with the County Clerk/Recorder prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the project.

~~5. Application of OWMP to Development Review Process~~

4.5 Deed Restrictions

Where the mitigation requirements of this ORMP are met through deed restrictions for oak woodlands, whether within or outside of PCAs, the deed restriction shall commit the property to oak woodland conservation use in perpetuity. The deed restriction shall be recorded with the County Clerk/Recorder prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the project.

5.0 Application of ORMP to Development Review Process

Determination of the applicability of the ~~OWMP~~ORMP to a development project shall be made as follows:

1. ~~1.~~ Planning staff and applicant ~~determines~~determine if oak ~~woodland exists~~resources exist on the ~~parcel~~property and if the proposed project ~~impacts~~would impact any of the oak ~~canopy~~resources.

2. ~~2.~~ Oak ~~canopy loss is calculated by a consultant hired by the applicant, utilizing either an on-site survey~~resources are mapped, quantified, and categorized (oak woodland, individual native oak tree, and/or Heritage Tree) by a qualified professional~~, aerial photography, or other means acceptable to the County to determine total oak canopy area and the area proposed to be removed as a part of the project. Canopy loss is~~ hired by the applicant and documented in an oak resources technical report.

~~2.~~3. Oak resources impacts are quantified in the oak resources technical report. Oak resources impacts are calculated by identifying all disturbed areas as proposed, including:

   a. ~~a.~~ Roads, driveways, and access drives;

   b. ~~b.~~ Graded areas for building pads, parking lots, staging areas, and other improvements; and

   c. ~~c.~~ Other disturbed areas resulting in ~~tree removal~~oak resources impacts including septic system leach fields ~~and fire safety~~, above- and below-ground utilities, and defensible space vegetation removal for new construction.

~~d. Fire Safe Plans allow for some retention of oak canopy. To simplify the calculation of oak canopy retention in this zone, the OWMP assumes 80% retention. A site specific analysis of tree removal may be utilized instead of the 80% retention assumption.~~

~~3.~~4. ~~3.~~ The proposed oak ~~canopy removal~~woodland impact area is compared with the ~~retention standards provided in the Option A table.~~total on-site oak woodland area to determine the appropriate mitigation ratio.

5. ~~4.~~ ~~If~~ Impacts to individual native oak trees and/or Heritage Trees are determined and the ~~amount~~sum of ~~oak canopy removed is within the retention standards set forth in the Option A table~~impacted trunk diameter (dbh) calculated.

~~4.~~6. If applicable, the applicant ~~may mitigate~~proposes mitigation for ~~the loss~~impacts to oak woodlands in an oak resources technical report by one of the following mechanisms:

~~a. Planting on-site at a 1:1 canopy surface area ratio the area of oak canopy removed; or~~

~~b. Paying into the Oak Woodland Conservation Fund an amount equal to 1:1 replacement for the oak canopy removed; or~~

   a. ~~c. Acquire a~~ Deed restriction and/or conservation easement ~~from a willing seller for an area equal to the area (i.e., 1:1 ratio) of removed oak canopy, in an area either~~dedication (on-site), conservation easement acquisition (off-site), acquisition in fee title by a land conservation organization (on-site and/or off-site);

b. In-lieu fee payment at the ratio determined by percentage of on-site oak woodland impact and based on the currently-adopted per-acre fee amount;

c. Replacement planting on-site within ~~the PCA or other~~an area ~~acceptable~~subject to a deed restriction or conservation easement;

~~a.~~d. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by the County or a County-approved land conservation organization; or

~~b.~~e. ~~d.~~ A combination of two or more of the above provisions.

~~5. If the amount~~In no case shall replacement planting exceed 50 percent of oak woodland ~~canopy removed exceeds the amount permitted under the Option A retention table, in addition to the provisions of steps 1 through 3, above~~ mitigation requirement.

7. If applicable, the applicant ~~shall do~~proposes mitigation for impacts to individual native oak trees and/or Heritage Trees in an oak resources technical report by one of the following mechanisms:

a. Replacement planting on-site within an area subject to a deed restriction or conservation easement;

b. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by the County or a County-approved land conservation organization;

c. In-lieu fee payment for ~~oak canopy~~all diameter inches removed (dbh), or 3 times the total diameter inches removed ~~in excess of that permitted under Option A:~~for Heritage Trees, and based on the currently-adopted per-inch fee amount; or

~~a. Pay into the County's Oak Woodland Conservation Fund the fee amount based on a 2:1 replacement ratio; or~~

~~b. Acquire a conservation easement from a willing seller for two times the area of oak canopy removed in excess of that permitted under the Option A table, in an area either within the PCA or other area acceptable to the County, along with fees for management and monitoring; or~~

d. ~~c.~~ A combination of two or more of the above provisions.

~~5.~~8. ~~6.~~ Payment of applicable ~~fees and~~ in-lieu fees and establishment of any required deed restrictions and/or granting of any required conservation easements and/or land acquisition in fee title shall be required as a condition of approval of all discretionary permits for which these provisions apply, and shall be completed prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the project. The payment of ~~the fee~~in-lieu fees may be phased to reflect the timing of the ~~tree canopy~~oak resources removal/impact. For phasing, permits issued for oak resources removal shall only be for the area covered by the fee payment.

~~6.~~9. ~~7.~~ Payment of ~~applicable~~in-lieu fees and establishment of any required deed restrictions and/or granting of any required conservation easements and/or land acquisition in fee title, if necessary, shall be completed prior to issuance of a building or grading permit for ministerial projects.

6.0 Definitions

For the purposes of this ORMP, the following terms and phrases shall have the meanings respectively ascribed to them by this section:

Agricultural Conversion: As defined by General Plan Policy 7.1.2.7.

Agricultural Cultivation/Operations: As defined by General Plan Policy 8.2.2.1.

Agricultural Lands: As defined by General Plan Policies 2.2.1.2 and 8.1.1.8, and further, Policy 8.2.2.1.

Arborist: A person certified by the International Society of Arboriculture (ISA) that provides professional advice regarding trees in the County.

CAL FIRE: California Department of Forestry and Fire Protection.

Commercial Firewood Cutting: Fuel wood production where a party cuts firewood for sale or profit.

Conservation Easement: An easement granting a right or interest in real property that is appropriate to retaining land or water areas predominately in their natural, scenic, open, or wooded condition; retaining such areas as suitable habitat for fish, plants, or wildlife; or maintaining existing land uses.

For conservation easement dedication (on-site) or acquisition (off-site) as mitigation for oak woodland impacts, a conservation easement to the satisfaction of County Counsel and the Development Services Director shall be required to ensure the long term maintenance and preservation of oak woodlands. The conservation easement shall provide for the preservation of the designated area in perpetuity and shall include such terms, conditions, and financial endowments for monitoring and management deemed necessary by the County to ensure the long term preservation of the oak woodland within the easement area. The conservation easement shall be in favor of the County or a County-approved conservation organization.

Construction/Disturbance Area: Any area in which movement of earth, alteration in topography, soil compaction, disruption of vegetation, change in soil chemistry, and any other change in the natural character of the land occurs as a result of site preparation, grading, building construction or any other construction activity.

Deed Restriction: Private agreements that restrict the use of the real estate and are listed in the deed. Restrictions travel with the deed, and cannot generally be removed by new owners.

Defensible Space: The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, in order to defend against encroaching wildfires or provide for people to escape structure fires.

Defensible space is required by any person who owns, leases, controls, operates or maintains a building or structure in or adjoining any mountainous area, forest-covered lands, brush-covered

lands, grass-covered lands or any land that is covered with flammable material and is within the State Responsibility Area. PRC 4291 requires 100 feet of Defensible Space (or to the property line if less than 100 feet) from every building or structure that is used for support or shelter of any use or occupancy.

Diameter at Breast Height (dbh): The measurement of the diameter of a tree in inches, specifically four (4) feet six (6) inches above natural grade on the uphill side of the tree. In the case of trees with multiple trunks, the diameter of all stems (trunks) at breast height shall be combined to calculate the diameter at breast height of the tree.

Fire Safe Plan: Defined in the El Dorado County General Plan (Policy 6.2.2.2) as a plan prepared by a Registered Professional Forester (RPF) and approved by the local Fire Protection District and/or California Department of Forestry and Fire Protection. The plan is prepared to demonstrate that development can be adequately protected from wildland fire hazard in areas of high and very high wildland fire hazard or in areas identified as "urban wildland interface communities within the vicinity of Federal lands that are a high risk for wildfire," as listed in the Federal Register of August 17, 2001.

Habitat: The physical location or type of environment in which an organism or biological population lives or can be found.

Heritage Trees: Any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring 36 inches dbh or greater, or with a multiple trunk with an aggregate trunk diameter measuring 36 inches or greater.

Impact: For individual native oak trees, the physical destruction, displacement or removal of a tree or portions of a tree caused by poisoning, cutting, burning, relocation for transplanting, bulldozing or other mechanical, chemical, or physical means. For ask woodlands, tree and land clearing associated with land development, including, but not limited to, grading, clearing, or otherwise modifying land for roads, driveways, building pads, landscaping, utility easements, fire-safe clearance and other development activities.

In-lieu Fee: Cash payments that may be paid into the County's Oak Woodland Conservation Fund by an owner or developer as a substitute for ~~oak woodland~~ deed restriction or conservation easement ~~placement or~~ acquisition or replacement planting. In-lieu fee amounts for individual native oak trees, Heritage Trees, and oak woodlands are presented in this ORMP and may be adjusted by the County over time to reflect changes in land values, labor costs, and nursery stock costs.

Individual Native Oak Trees: Any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main

trunk measuring greater than 6 but less than 36 inches dbh, or with a multiple trunk with an aggregate trunk diameter measuring greater than 10 but less than 36 inches dbh.

Monitoring Report: A report prepared by a qualified professional documenting site observations and replacement planting survival totals for oak resources mitigation efforts. A Final Monitoring Report is one prepared at the end of the 7-year maintenance and monitoring period that summarizes replacement planting survival totals. A copy of the Final Monitoring Report shall be submitted to the County.

Oak Resources: Collectively, oak woodlands, individual native oak trees, and Heritage Trees.

Oak Resources Impacts: For individual native oak trees and Heritage Trees, removal or actions that cause the death of the tree shall constitute an impact. For oak woodlands, the oak woodland acreage that occurs within project-related disturbance areas shall be considered impacted.

Oak Tree Removal Permit: A permit issued by the County allowing removal of individual native oak trees not located within an oak woodland. An oak resources technical report shall accompany any tree removal permit application submitted to the County. Conditions of approval may be imposed on the permit. If a tree removal permit application is denied, the County shall provide written notification, including the reasons for denial, to the applicant. Oak tree removal permit processing and approval will be conducted concurrently with the environmental review process for discretionary projects or concurrent with other permit review and processing for ministerial projects (e.g., building permits).

Oak Woodlands: An oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover (California Fish and Game Code Section 1361).

Oak Woodland Removal Permit: A permit issued by the County allowing removal of oak trees that are a component of an oak woodland. An oak resources technical report shall accompany any oak woodland removal permit application submitted to the County. Conditions of approval may be imposed on the permit. If an oak woodland removal permit application is denied, the County shall provide written notification, including the reasons for denial, to the applicant. Oak woodland removal permit processing and approval will be conducted concurrently with the environmental review process for discretionary projects.

Qualified Professional: An arborist certified by the International Society of Arboriculture (ISA), a qualified wildlife biologist, or a registered professional forester (RPF).

Qualified Wildlife Biologist: A professional with a BA or BS or advanced degree in biological sciences or other degree specializing in the natural sciences; professional or academic experience as a biological field investigator, with a background in field sampling design and field methods; taxonomic experience and knowledge of plant and animal ecology; familiarity with plants and animals of the area, including the species of concern; and familiarity with the appropriate county, state, and federal policies and protocols related to special status species and biological surveys.

Registered Professional Forester (RPF): A Registered Professional Forester (RPF) is a person licensed by the State of California to perform professional services that require the application of

forestry principles and techniques to the management of forested landscapes. RPFs have an understanding of forest growth, development, and regeneration; soils, geology, and hydrology; wildlife and fisheries biology and other forest resources. RPFs are also trained in fire management and, if involved in timber harvesting operations, have expertise in both forest road design and application of the various methods used to harvest.

~~Removal: The physical destruction, displacement or removal of a tree, or portions of a tree caused by poisoning, cutting, burning, relocation for transplanting, bulldozing or other mechanical, chemical, or physical means.~~

Replacement Tree: A tree planted as mitigation for oak resources impacts. Replacement trees include container tree stock (one-gallon or DeePot 40 size) and acorns. If acorns are used, the planting ratio shall be 3:1 as compared with container tree stock. Acorns and container stock shall be locally-sourced (from within El Dorado County).

Sensitive Habitat: In El Dorado County, this includes the following habitat types: montane riparian, valley-foothill riparian, aspen, valley oak woodland, wet meadow, and vernal pools, as defined in the 2004 El Dorado County General Plan EIR.

Woodland Habitats: Biological communities that range in structure from open savannah to dense forest. In El Dorado County, major woodland habitats include blue oak-foothill pine, blue oak woodland, montane hardwood, montane hardwood-conifer, and valley oak woodland.