VIII. Mitigation Option B Fee Method

This section describes the approach used to develop the Policy 7.4.4.4 Option B mitigation fee. The intent of the Option B fee is to provide landowners and developers an alternative to Policy 7.4.4.4 Option A for mitigating impacts resulting from the loss of habitat and fragmentation of oak woodlands due to development. Funds from Option B are to be used for conserving, preserving, restoring, managing, and monitoring off-site oak woodlands. This section summarizes the steps and results that are described in more detail in Appendix B.

A. Option B Mitigation Fee Methodology

A series of steps were followed and analyses conducted to develop the fee for oak woodland mitigation, which is intended to capture the full cost of acquiring, restoring, managing and monitoring oak woodlands. The steps included the following:

a) Clarifying the Option B Mitigation Ratio Policy, including defining full mitigation as it applies to the fee, and clarifying the mitigation ratio of 2:1;

b) Identifying and evaluating potential acquisition, restoration, management and monitoring alternatives;

c) Estimating the costs (and fee) of acquiring, restoring and managing oak woodlands; and,

d) Identifying a mitigation fee and potential adjustments to the fee in the future.

B. Clarifying the Mitigation Ratio of 2:1

The 2004 General Plan and Draft EIR, Master Responses to Comments on the General Plan, the CEQA Statement of Overriding Considerations, and the Motion for Review of County's Return to Writ of Mandate-Ruling direct the establishment of a 2:1 mitigation ratio for Option B. The General Plan and EIR and the Motion for Review direct the establishment of the mitigation ratio. The Master Responses clarify the preservation aspect of Option B, while the CEQA Statement of Overriding Considerations refers to establishing a minimum mitigation ratio to compensate for direct (removal) and indirect (fragmentation) impacts to habitat.

General Plan EIR Master Response 18 – Oak Tree Canopy Coverage "…the intent of this option [Option B] is to preserve (through acquisition or conservation easements) existing woodlands of equal or greater biological value as those lost."

General Plan Policy 7.4.4.4 references the 2:1 mitigation ratio in terms of total acreage impacted on-site, but it does not clearly interpret how such impacts would be assessed for determining a mitigation fee structure. For a project proponent to compensate for the full costs of mitigation, the direct costs for the total impacted acreage plus the indirect costs associated with the

acquisition, restoration, management and monitoring of the replacement acreage must be taken into account. To be consistent with the General Plan, the fee would be structured on a per acre basis. For each acre of oak woodland that is lost, the mitigation ratio of 2:1 would require payment of twice the fee per acre.

C. Acquisition, Restoration, Management, and Monitoring Alternatives

Alternative approaches are available for acquiring, restoring, managing, and monitoring oak woodlands. Primary mechanisms for acquiring land are through fee title, or through obtaining usage rights of land in private ownership through a conservation easement. In either case, the purpose of acquisition is to maintain use of the land in perpetuity for conservation.

Restoration and management of oak woodlands help to ensure the viability of the land to support oak tree growth and habitat functions. Different levels of restoration and/or management would be needed depending on the existing condition of the land, the purpose and intensity of uses, and habitat quality. Activities include biological surveys, removing non-native species, planting oak seedlings or acorns, installing fencing for seedling protection, fuels treatment and noxious plant control.

Monitoring assesses the on-going success of the off-site mitigation sites. Monitoring activities include annual field visits, photo documentation, tracking oak tree success/mortality rates, and database management.

The advantages and disadvantages of various acquisition, restoration, and management alternatives were identified. They are discussed in detail in Appendix B (Option B – Mitigation Fee).

D. Cost Components of Option B Fee Mitigation Program

The costs for acquisition, restoration, management, and monitoring of oak woodlands were estimated using information from a variety of sources, including research by institutions such as the UC Integrated Hardwood Range Management Program (IHRMP); existing habitat conservation fee programs implemented by local jurisdictions; discussions with local land trusts that manage conservation easements; case studies compiled by the Center for Natural Lands Management; and research using the Metro Listing Services (MLS) for recent land prices in El Dorado County. The information from each source assisted with building the range of estimated costs for each mitigation component (acquisition, restoration, management and monitoring).

A cost spreadsheet model was developed that incorporates the cost for each program element. The spreadsheet model is an adaptation of the Property Analysis Record (PAR) model developed by Center for Natural Lands Management, which is an industry accepted tool to derive mitigation costs that are applicable to the mitigation site. The model divides the cost variables into two categories: initial capital costs (one time), and on-going (annual) costs. The annual costs are dependent on the frequency or regularity of the on-going activities (e.g., annual monitoring versus less than annual monitoring). The detailed cost sheets for this evaluation are presented in Appendix B (Option B – Mitigation Fee).

Costs for restoration and management activities take into account such factors as the estimated hours of labor to provide the service, as well as an allocation for the use of equipment. For example, the cost of field and office equipment can be shared over a given number of mitigation projects. Therefore, only a marginal cost is applied to any single project. Hours of labor are estimated from case studies of other habitat conservation efforts on a per acre basis. In addition, to restore oak woodlands or to establish regeneration if and where it is lacking, the costs for planting of oak seedlings is assumed to be 50 percent of the replanting density, which equates to a rate of 100 seedlings per acre (Standiford, McCreary, and Frost (2002)).

Annual site monitoring was assumed for the first 10 years. The cost model annualizes costs for activities that are undertaken at given intervals, such as every year, every 5 years, 10 years, etc. For example, an activity that costs $100 and is conducted every 5 years will have an annual cost of $20 in the model.

To ensure that fee revenues are available to pay for on-going costs in perpetuity, an endowment fund was included. The endowment fund accounts for a substantial portion of the monitoring component of the fee because funding of the endowment must be sufficient to generate interest every year to avoid drawing down the principal investment to pay for on-going costs. In addition, the endowment must generate interest that is reinvested with the principal to account for future cost increases due to inflation. The assumed interest rate of return in the fee structure is six percent (3 percent allocated toward on-going costs, and 3 percent reinvested for inflation adjustment).

To maintain flexibility in implementing the Option B program, costs were estimated separately for each mitigation component (acquisition, restoration, management and monitoring). This cost structure would enable an applicant to undertake certain mitigation activities on their own if they choose, and then pay only the remaining fee components. For example, a landowner/developer could acquire off-site land for mitigation, subject to County approval, in lieu of paying the acquisition portion of the fee. The landowner/developer would then pay the County the balance of the fee for restoration, management and monitoring.

Three cost scenarios were developed based on different assumptions on the ratio of rural to urban acquisitions, the ratio of fee title to conservation easement acquisitions, and the level of restoration and on-going management. The tables below summarize the range of the mitigation cost components on a per acre basis under these assumptions:

Table VIII-1: Summary of Off-Site Mitigation Cost Scenarios (Cost Per Acre)

Scenario	Low [1]	High [2]
#1 – 100% Rural Land Acquisition	$ 8,700	$ 20,000
#2 – 90% Rural/ 10% Urban Acquisition	$ 11,400	$ 24,700
#3 – 80% Rural/ 20% Urban Acquisition	$ 14,000	$ 29,300

(1) 100% conservation easement acquisition, and low ranges of restoration, management and monitoring costs.
(2) 100% fee title acquisition, and high ranges of restoration, management and monitoring costs.

Table VIII-2: Scenario #1 – 100% Rural Land Acquisition (Cost Per Acre)

	Low	High
Acquisition [1]	$ 3,300	$ 12,500
Restoration [2]	$ 1,400	$ 2,500
Management	$ 1,400	$ 1,400
Monitoring [3]	$ 2,600	$ 3,600
Total Cost/Fee Per Acre [4]	**$ 8,700**	**$ 20,000**

(1) 100% conservation easement for low range of acquisition cost. 100% fee title for high range of acquisition cost. Assumes rural land acquisition of 40 acres and over.
(2) High range includes installation of oak seedling protection device (e.g., screen cage).
(3) Includes endowment for on-going monitoring (low range), and endowment for on-going restoration, management and monitoring (high range).
(4) 10% Contingency and 20% administration costs added to each cost component.

Table VIII-3: Scenario #2 – 90% Rural/10% Urban Land Acquisition (Cost Per Acre)

	Low	High
Acquisition [1]	$ 6,000	$ 17,200
Restoration [2]	$ 1,400	$ 2,500
Management	$ 1,400	$ 1,400
Monitoring [3]	$ 2,600	$ 3,600
Total Cost/Fee Per Acre [4]	**$ 11,400**	**$ 24,700**

(1) 100% conservation easement for low range of acquisition cost. 100% fee title for high range of acquisition cost. Assumes rural land acquisition over 40 acres, and urban land acquisition between 5 and 40 acres.
(2) High range includes installation of oak seedling protection device (e.g., screen cage).
(3) Includes endowment for on-going monitoring (low range), and endowment for on-going restoration, management and monitoring (high range).
(4) 10% Contingency and 20% administration costs added to each cost component.

Table VIII-4: Scenario #3 – 80% Rural/20% Urban Land Acquisition (Cost Per Acre)

	Low	High
Acquisition [1]	$ 8,600	$ 21,800
Restoration [2]	$ 1,400	$ 2,500
Management	$ 1,400	$ 1,400
Monitoring [3]	$ 2,600	$ 3,600
Total Cost/Fee Per Acre [4]	**$ 14,000**	**$ 29,300**

(1) 100% conservation easement for low range of acquisition cost. 100% fee title for high range of acquisition cost. Assumes rural land acquisition over 40 acres, and urban land acquisition between 5 and 40 acres.
(2) High range includes installation of oak seedling protection device (e.g., screen cage).
(3) Includes endowment for on-going monitoring (low range), and endowment for on-going restoration, management and monitoring (high range).
(4) 10% Contingency and 20% administration costs added to each cost component.

Scenario #1 assumes that acquisition (conservation easement or fee title) essentially is limited only to rural land, which encompasses a proportion of the PCAs. Scenario #2 assumes that acquisition is primarily on rural land, but includes a small proportion of acquisitions near urbanized areas or where development potential is higher, as shown by some of the PCAs and OWCs. Scenario #3 continues to assume that acquisition is primarily on rural land, but assumes an increased proportion of acquisitions, relative to Scenario #2, where development potential is high, such as the Highway 50 North-South Corridors.

E. Recommended Option B Mitigation Fee

This OWMP identifies a mitigation fee for Option B corresponding to the low end of the cost range for Scenario #3 ($14,000 per acre) in Table VIII-1 above. The fee selection is based on the relative distribution of rural and urban lands in the study area, as shown in the mapping of the PCAs and OWCs in Figure S-1. This mapping reflects acquisitions primarily in rural settings, but includes some urban acquisitions and land management activities through the higher cost lands along the Highway 50 corridor. The low end of the cost range for Scenario #3 assumes obtaining land through conservation easement and low levels of restoration and management activity for most of the PCAs. Low levels of restoration and management are assumed because a sufficiently large area (about 40,000 acres, see Table S-2) of oak woodland habitat is available for mitigation acquisition within the PCAs identified on Figure S-1.

This OWMP would initially implement for Option B a mitigation fee corresponding to the low end of the cost range for Scenario #3 ($14,000 per acre).

At this time, acquisitions within OWCs are uncertain and the OWCs are subject to further review in the INRMP process. Should the OWCs not include an acquisition component, the cost per acre would be $5,400 (Scenario #3 of $14,000 minus acquisition component of $8,600).

As costs for off-site mitigation grow over time, the mitigation fee will need to be adjusted to account for future cost increases. Because the fee structure is divided among the mitigation components (acquisition, restoration, management and monitoring), adjustments can be made according to appropriate measures that pertain to each of the components. For instance, the acquisition portion of the fee can be adjusted annually by the year-to-year change (or five or ten-year average change) in assessed valuation of County land as recorded by the County Assessor using the Property System Use Codes. Land uses excluded from the PCAs (e.g., commercial/industrial, community regions and rural centers, and low density residential) would not be included in the assessed valuation determination. According to the County Assessor data, from 1996 through 2006, total assessed land valuation for rural residential and agricultural land zones increased on average by seven percent per year over the past ten years, and by nine percent over the past five years (2001 through 2006).

Because costs for restoration, management and monitoring are labor intensive, adjustments can be made according to the change in labor rates, as indicated by the State's mean wage rate for forestry and conservation related employment reported by the Federal Bureau of Labor Statistics (BLS). Five forestry and conservation related occupations reported by the BLS are identified and can be tracked for the change in wages for these occupations. The occupations include: conservation scientists; foresters; forest and conservation technicians; first-line supervisors/managers of forestry workers; and forest and conservation workers. According to BLS data specific to California, from 2000 through 2006, the average change in wages for these occupations was 2.2 percent per year. (The BLS contains separate wage data for Natural scientists located in the Sacramento/Yolo area. However, this occupational heading is broad and does not specifically reflect forestry and conservation related professions).

F. Other Funding Sources for Oak Woodland Conservation

This plan identifies oak woodland acquisition (PCAs) and management (OWCs) areas that fulfill the purposes described in Section I. One of the purposes is to provide a landscape-level planning document for the long-term conservation of oak woodlands for reasons other than mitigation for development. These include joint planning efforts with non-profit organizations, resource agencies, and other land management agencies (e.g., Placer and Amador counties, Wildlife Conservation Board, and American River Conservancy) that are seeking to coordinate regional-level oak woodland conservation. Joint efforts by the County with these organizations and willing landowners can increase and help to maximize the value of available funds for broader-scale goals that will meet many other conservation goals and policies of the 2004 General Plan.