

El Dorado County
Integrated Natural Resources Management Plan
Phase I

- Working Draft Annotated Outline -
INRMP Implementation Options Report

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EXECUTIVE SUMMARY

This report is an annotated outline of information that will ultimately be presented as the fourth and final report of the El Dorado County (County) Integrated Natural Resources Management Plan (INRMP) Phase I study. The report will be titled “INRMP Implementation Options Report” (Optional Approaches Report), and will present optional strategies that could be employed to develop the final plan, and recommendations for an INRMP Phase II scope of work.

The Optional Approaches Report will be based on the outline of the INRMP components as currently defined by General Plan Policy 7.4.2.8. It *will not* provide options to the structure, but rather implementation options for each of the main components, or sub-sections, of Policy 7.4.2.8 as currently written. As defined by County General Plan Policy 7.4.2.8, the INRMP shall consist of eight sections as follows:

1. Habitat Inventory
2. Habitat Protection Strategy
3. Mitigation Assistance
4. Habitat Acquisition
5. Habitat Management
6. Monitoring
7. Public Participation
8. Funding

The Optional Approaches Report will include, for each of these sections, an Introduction, what the General Plan Context is, pertinent Background Information on what has been done so far (in Phase I), a description of the defined Optional Approaches and finally a Summary describing advantages and disadvantages of each option and relative costs.

INRMP Relationship to Pine Hill Preserve

The INRMP is not intended to add to the Pine Hill Preserve, or reserve certain lands for the species that are protected by the Pine Hill Preserve (other than perhaps acquiring parcels that provide connectivity to those lands). Instead, the INRMP is intended to focus on overall biodiversity within the study area and on habitat for species that do not currently have habitat protection measures.

INRMP Relationship to Oak Woodland Management Plan (OWMP)

The Oak Woodland Management Plan (OWMP) is a portion of the INRMP but it is also a standalone document. Other components of the INRMP (such as mitigation fee structure) may be based on policies already established by the OWMP, or new policies may be developed. Oak Woodland Priority Conservation Areas (PCA’s) that coincide with or complement the oak woodland portions of the large expanses of native vegetation identified by the INRMP mapping may be targeted as some of the first areas for acquisition.

An appendix will also be included with the report. The appendix is a summary of how other jurisdictions are addressing wildlife needs.

1. HABITAT INVENTORY

1.1 Introduction

This part of the INRMP will include the identification and mapping of important habitat within the study area, including the amount of important habitat by habitat type to be protected. The General Plan states that the Inventory is to be updated every three years. The Inventory also includes identification of the amount of important habitat (also by habitat type) removed because of new development during that period. The initial inventory has been completed with the current contract (INRMP Phase I). This section of the Optional Alternatives Report (Phase I, Task 2) will describe optional methods to identify the habitat areas that are to be protected, and habitat areas that have been removed.

1.2 General Plan Context

The following text is presented verbatim from Subsection A of Policy 7.4.2.8:

A. Habitat Inventory. This part of the INRMP shall inventory and map the following important habitats in El Dorado County:

- 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.

1.3 Background Information

The initial INRMP Habitat Inventory was prepared by the County in March 2008. The Inventory and associated maps were updated in April 2010 as a part of the INRMP Phase I scope of work.

To update the existing Initial Inventory Map, the County gathered additional data, met with the Plant and Wildlife Technical Advisory Committee (PAWTAC) and the INRMP Stakeholders Advisory Committee (ISAC), and revised the map to show the best data that is currently available.

For graphic clarity, each of the five elements was displayed on separate maps. Although they are presented as separate maps, all of the information is part of the same Geographic Information System (GIS) database, which will be important for Phase II analysis and preparation of the INRMP. The process used to create each of the five maps is described below.

1.3.1 Habitats that Support Special-Status Species

The original Initial Inventory Map prepared by the County used the California Natural Diversity Database (CNDDDB) point data, U.S. Fish & Wildlife Service (USFWS) Critical Habitat, and the Pine Hill Preserve area to show special-status species. For the map update, the County utilized the most current versions of these same data sources as well as U. S. Forest Service (USFS), Natural Resource Conservation Service (NRCS), and several other data sources. This includes both the original and the recently proposed changes to the areas of Critical Habitat for the California red-legged frog (*Rana aurora draytoni*) (CRLF) in El Dorado County.

1.3.2 Aquatic Environments including Lakes, Streams, and Rivers

The data source utilized to produce this map is the National Hydrography Dataset from the U.S. Geological Survey (USGS). This data includes a thorough inventory of intermittent and perennial streams, bodies of water, and man-made water conveyance structures (e.g., canals). It shows some ephemeral streams but the list of ephemeral water courses is not comprehensive.

1.3.3 Wetland and Riparian Habitats

The wetland and riparian habitat map update is based on the USFWS National Wetlands Inventory (NWI) database. The USFWS NWI database is derived from 7.5-minute USGS topographic data and aerial photo interpretation. Many seasonal wetlands are not included in this inventory due to the difficulty of mapping these features without extensive ground verification.

1.3.4 Important Habitat for Migratory Deer Herds

Information on migratory deer herds is very limited. The only existing source is the California Department of Fish & Game (CDFG) data produced in 1990 from reports prepared in the 1970s and 1980s. CDFG staff indicated that there have not been any recent updates, although significant land use changes have occurred since those maps were produced. These changes, including increases in human population and traffic, have likely affected the current distribution of migratory deer herds.

1.3.5 Large Expanses of Native Vegetation

A large expanse of native vegetation is dependent upon the vegetation type and the species utilizing the habitat provided by the vegetation type. Therefore, a large expanse of oak woodland is different in size than a large expanse of a vegetation type with relatively limited distribution such as serpentine chaparral. Similarly, a large expanse of native vegetation for a population of mule deer is larger than that required for a population of California horned-lizard. Phase I mapping of the large expanses of native vegetation focused on identifying all areas of vegetation that are relatively undisturbed. Phase II will consider species-specific habitat requirements to determine conservation strategies and potential mitigation.

To show large expanses of undisturbed areas, the County first mapped areas that have extensive land development and/or road networks. The remaining areas were then shown as large expanses of native vegetation using existing vegetation mapping data.

1.4 Optional Approaches

1.4.1 Existing Mapping Technique

The methodology for producing the mapping was accepted by the Board of Supervisors in June 2010. The first option employs this same methodology for future updates.

1.4.2 Identification of Priority Conservation Areas

A second option could be employed that redefines the Large Expanses of Native Vegetation to include only those areas that are to be protected. This strategy could be based on additional GIS Mapping to include land ownership, development agreements, zoning, connectivity analysis, Important Biological Corridors (IBCs), etc.

1.4.3 Additional Data Sources

A third option could be to update the initial inventory maps with new information as new data becomes available. This could include utilization of the United States Army Corps of Engineers' (USACE) forthcoming updates for aquatic environments and wetlands maps. It could also include incorporation of additional data obtained from field research that is done in association with other components of the INRMP (i.e. monitoring) such as radio collaring to track wildlife movement.

Table 1 Summary of Optional Approaches Habitat Inventory

Option Type	Advantages	Disadvantages	Relative Cost
Existing Mapping	<ul style="list-style-type: none"> • Board approved methodology • Database already exists 	<ul style="list-style-type: none"> • Best available data is incomplete 	Low
Identification of Priority Conservation Areas	<ul style="list-style-type: none"> • Eliminate areas that are unlikely candidates for acquisition • Utilize methodology defined by OWMP 	<ul style="list-style-type: none"> • Could reduce areas available • Wildlife habitat • Reduce connectivity • Increase habitat fragmentation 	Moderate
Additional Data Sources	<ul style="list-style-type: none"> • Utilizes new information as it becomes available 	<ul style="list-style-type: none"> • Additional expense to fill in holes in database 	High

2. HABITAT PROTECTION STRATEGY

2.1 Introduction

This section will focus on science-based strategies that can be used to support habitat protection. This protection could be in the form of ordinances related to natural system protection. For example, riparian setbacks and IBCs are strategic ordinances that protect important habitats (e.g., water courses) and wildlife movement. Land-use regulation through caps on subdivision and zonal permissions for land development are inexpensive conservation actions that local governments can take. Protection of habitat values could also be in the form of “payment for ecosystem services” (PES). For example, conservation payments to agricultural land owners to encourage best management practices are sometimes offered. Habitat protection can come about through stewardship training and education programs that encourage habitat-protection behavior in targeted (e.g., riparian land-owners) or broad public audiences. Finally, the protection could be through acquisition of conservation easements or land in fee title. In all cases, an overall assessment and planning using optimization tools would be appropriate for both setting up an efficient habitat protection system and assessing effectiveness of the system.

2.2 General Plan Context

The following text is presented verbatim from Subsection B of Policy 7.4.2.8:

B. 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.

2.3 Background Information

Phase I of the INRMP mapped large expanses of native vegetation (contiguous blocks of important habitat) and identified potential wildlife corridors and areas where wildlife road crossings are needed or can be improved. This section will describe specific strategies for protecting and enhancing these resources.

2.4 Optional Approaches

2.4.1 Local Ordinances

This section will describe the role that county-wide ordinances can play in conservation. Ordinances can help implement conservation priorities without the expense of buying properties. For general ecosystem attributes like connectivity and habitat quality, ordinances are one way to protect what would be difficult to buy across all habitat types.

2.4.2 Land Use Regulation

It is difficult to anticipate and expensive to pay for all of the disparate natural values that contribute to a functioning ecosystem and conservation of biodiversity. Contemporary municipal and county planning is often a balancing act among competing demands that include conservation of natural values and systems. This section will describe how subdivision, zoning, and permitting can play a role in conservation.

2.4.3 Important Biological Corridors

This section will describe how the County's currently identified IBCs were developed and will suggest a methodology to update them. It will also discuss the current and possible changes to regulatory guidelines that are associated with the IBCs.

2.4.4 Payment for Ecosystem Services

Wildlife habitat quality and wildlife movement are valuable ecosystem attributes. An argument can be made that if someone goes out of their way to provide these attributes through actions that are not otherwise required, then payment may be appropriate. This section will describe this concept and when it may be an appropriate type of action

2.4.5 Stewardship & Education

Providing information to the public about local wildlife, habitats, and potential threats to wildlife can foster a sense of stewardship over local resources. Often, people need better access to information to balance the actions that could benefit conservation with their day to day activities. This section will describe the role that fostering stewardship and education can benefit the INRMP.

Other incentive-based methods include tax credits for maintaining wildlife friendly fencing or developing land in a way that is consistent with maintaining wildlife movement.

2.4.6 Easement and Fee Title Acquisition

A traditional conservation practice in the face of development is acquisition of land in fee title or as conservation easements. This practice is common, but presents uncertainties that cannot be ignored. This section will describe the scientific rationale for choosing lands for conservation (also see Section 4. Habitat Acquisition).

2.4.7 Habitat Prioritization

There are many ways that lands can be prioritized for action under the options listed here. For the last decade, conservation biologists have been developing tools to assist in decision-making about potentially effective habitat protection strategies. These include approaches that optimize selection of lands for action based only upon potential conservation value. Others combine cost with conservation value to select sets of lands that cost-effectively provide the values being sought. Still others address uncertainties associated with incomplete knowledge, climate change effects, changes in regulation, and changing costs and availability of funds. This section will describe optional conceptual and computational modeling approaches for supporting habitat protection strategies. This section will also set goals for habitat prioritization based on ranking of habitat quality. The ranking system will be established using GIS based modeling or other methods (see Section 4). The habitat prioritization system can further be utilized in

recommending appropriate mitigation measures (see Section 3). Less mitigation, for example, would be required for impacts to lower quality habitat. Results of habitat prioritization can also be used for purposes of determining what land to acquire (see Section 4. Habitat Acquisition).

2.4.8 Williamson Act

Another option for temporary habitat protection could be accomplished by entering into Williamson Act contracts with land owners. This offers the benefit of tax relief to the property owner while the land remains less developed. This option will describe how lands may enter and leave Williamson Act designations so long as total acreages of habitat to be protected are maintained.

Table 2 Summary of Optional Approaches for Habitat Protection

Option Type	Advantages	Disadvantages	Relative Cost
Local ordinance	<ul style="list-style-type: none"> Predictable landscape outputs 	<ul style="list-style-type: none"> County responsible for full implementation 	Low
Land use regulation	<ul style="list-style-type: none"> Can plan for ecological patterns and processes that cross parcel boundaries 	<ul style="list-style-type: none"> Less owner control of process requires county action 	Low
Redo Important Biological Corridors	<ul style="list-style-type: none"> Current adopted IBCs were developed for the environmentally constrained General Plan Alternative, which was not adopted in its entirety Current IBCs were not scientifically developed 	<ul style="list-style-type: none"> Would require a General Plan Amendment 	Moderate
Payment for ecosystem services	<ul style="list-style-type: none"> Politically popular because of funding to landowners 	<ul style="list-style-type: none"> Can be expensive has unpredictable outputs 	Potentially high
Stewardship & education	<ul style="list-style-type: none"> Politically popular and palatable 	<ul style="list-style-type: none"> Effectiveness highly variable and hard to measure 	Moderate
Easement and fee title acquisition	<ul style="list-style-type: none"> Politically popular because of funding to landowners 	<ul style="list-style-type: none"> Likely to be expensive has unpredictable outputs 	Potentially high

Habitat prioritization	<ul style="list-style-type: none"> • Rationale for investment of funds, conservation-based 	<ul style="list-style-type: none"> • Hard to implement because of reliance on willing sellers 	Low
Williamson Act	<ul style="list-style-type: none"> • Can offer relatively quick protection from development 	<ul style="list-style-type: none"> • Temporary – property can be taken out of contract 	Low

3. MITIGATION ASSISTANCE

3.1 Introduction

The purpose of this section is to define options available to mitigate for unavoidable impacts to areas identified as important habitat. These are impacts that are the result of development activities for which a discretionary permit is issued. Not everything can be protected, so priority for inclusion in the acquisition portion of the INRMP (Section 4) must be established to optimize cost and effectiveness of the program and to capture key opportunities. This section will describe strategies for mitigation of impacts on important habitats and wildlife corridors.

3.2 General Plan Context

The following text is presented verbatim from Subsection C of Policy 7.4.2.8:

C. 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 INMRP.

3.3 Background Information

The County currently has two mitigation programs in place: the Ecological Preserve and the Oak Woodland Management Plan. The INRMP could adopt or modify strategies developed in one of these plans to identify areas to conserve and set priorities of lands to be acquired or for which a different instrument (Memorandum of Understanding (MOU), lease, easement) may be appropriate.

- Ecological Preserve Plan
 - Ranks three types of lands that require varying degrees of mitigation for impacts.
 - Identified an ecological preserve area; impact fees collected are used to acquire parcels from willing sellers in that area.
- Oak Woodland Management Plan
 - Identified Priority Conservation Areas where parcels from willing sellers should be acquired or conservation easements could be obtained in perpetuity.
 - Options for developers include replacement of oak trees on-site as mitigation for loss of oak canopy.

These programs have established priorities for acquisition identified and for the OWMP, mitigation ratios have been established. This section will serve to determine ratios for mitigation of impacted habitats.

3.4 Optional Approaches

3.4.1 On-Site Mitigation Banks

Create mitigation banks within the INRMP study areas by acquiring easements in perpetuity or by purchasing land in desired areas or delineating areas for inclusion in a preservation area. In-lieu fees collected from developers would reimburse the County for the acquisition of these lands. This option could be expensive, but would keep money spent by the County within the INRMP study area. If the bank is large enough, the County could cooperate with adjacent jurisdictions to provide mitigation lands and share the cost of acquisition.

3.4.2 Off-Site Mitigation Banks

Participate in regional, private, mitigation banks or non-profit land trusts that have identified willing sellers of desirable habitats, such as American River Conservancy, Cosumnes River Preserve, and Sierra Nevada Conservancy (SNC). The advantage of this option is that it is a pay-as-you-go system. The disadvantage is that money from the County could go to acquiring habitat in another area.

3.4.3 In-Lieu Fees

In-lieu fees collected from developers used to construct capital improvement projects to improve wildlife conditions.

3.4.4 Options for Property Owners and Developers

- Restoration of degraded habitat or high fire-risk/excessive fuels habitat, either on-site or off-site.
- Credits for preserving corridors or important habitat on-site by effective clustering or avoidance of key habitat areas.
- Credit for participating in other mitigation programs (preserving wetlands, participation in Ecological Preserve or OWMP).

Table 3 Summary of Optional Approaches for Mitigation Assistance

Option Type	Advantages	Disadvantages	Relative Cost
Mitigation Bank within INRMP study area	<ul style="list-style-type: none"> • Keeps collected fees within INRMP study area • Could provide mitigation opportunities for adjacent jurisdiction and cost sharing for the County 	<ul style="list-style-type: none"> • Cost of administration 	High
Regional or Private Mitigation Banks	<ul style="list-style-type: none"> • Pay as you go system 	<ul style="list-style-type: none"> • Protected habitat may not be within study area 	Moderate

Capital Improvements	<ul style="list-style-type: none"> • Pay as you go System • Provides source of funding to improve existing conditions 	<ul style="list-style-type: none"> • Administrative costs 	Moderate
Restoration by property owner or developer	<ul style="list-style-type: none"> • On site restoration 	<ul style="list-style-type: none"> • Need to monitor to evaluate success 	Moderate
Credit for wildlife sensitive design	<ul style="list-style-type: none"> • Lessens impacts 	<ul style="list-style-type: none"> • Hard to measure 	Low
Credit for participation in other mitigation programs	<ul style="list-style-type: none"> • Other programs already established 	<ul style="list-style-type: none"> • Not all habitat types are currently represented by other programs 	Low

4. HABITAT ACQUISITION

4.1 Introduction

This component of the INRMP will describe specific strategies to acquire land that supports high value habitat so that it can be protected from development. Land will be acquired through easements or fee title from willing sellers only and may include habitat that supports special status species, habitat that provides important linkages or improves connectivity, or habitat that has been identified to support biodiversity or other INRMP goals.

4.2 General Plan Context

The following text is presented verbatim from Subsection D of Policy 7.4.2.8:

D. 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.

4.3 Background Information

Phase I of the INRMP generated much of the material required to identify habitats and wildlife corridors which should be part of the final INRMP. Task 1a of Phase I identified important habitat by habitat type within the County. Lands targeted for acquisition will be a part of the identified important habitat areas that fall within the Large Expanses of Native Vegetation. These lands could also be further identified by the Habitat Prioritization task proposed as a part of Section 2. Habitat Protection Strategy.

Task 1c of Phase I developed a list of indicator species and included mapping their distribution within the County. Indicator Species can be used to provide insights to the larger ecological systems (habitat types) with which they are associated. Again, lands targeted for acquisition, and identified by habitat type, should be land that has been identified to support the associated indicator species.

Finally Task 1d of Phase I identified the need for wildlife movement and corridors. Land targeted for acquisition should also be of value from this perspective.

4.4 Optional Approaches

Prior to commencing acquisition activities, lists need to be developed that identify the land that should be acquired. Numerous factors would be used to determine priority for acquisition including, results of habitat prioritization studies (see Section 2, Habitat Protection Strategy), parcels that offer the largest contiguous pieces of habitat, parcels that are strategically located in areas needed for wildlife crossings or corridors, and parcels that offer the best conservation value in terms of their cost. Below are four optional methods for generating the list of prioritized lands.

4.4.1 Acquisition by Habitat Type

The background material that was developed in Phase I is available in a GIS database. GIS modeling and other techniques can be employed to overlay information obtained in Phase I and identify parcels that meet the identified criteria. This task would also serve to develop appropriate ratios of habitat to protect by habitat type (number of acres to protect/ number of acres identified as important habitat).

4.4.2 Lands at Risk of Conversion

Another approach to determining what to acquire would be to identify parcels of land that have been identified as important habitat but that are currently at risk of conversion to some other land use. This could either be a stand-alone study or a continuation of the first option. Utilizing GIS or other methods, parcel lists can be further refined, identified or prioritized based on the introduction of additional GIS layers such as Zoning, General Plan Designation, or Development Agreements.

4.4.3 Survey to Identify Willing Sellers

A third option may be as simple as sending queries to property owners whose parcels are located within areas of important habitat. The query letter could include relative background information about the INRMP and include a survey to be sent back by the property owner (postcard format) that identifies their willingness to participate.

4.4.4 Targeted Properties

A fourth option for land acquisition would be to target specific parcels previously identified. These could include parcels ranking high in habitat prioritization or parcels that may have strategic importance such as parcels adjacent to major roadways where wildlife crossings are desired.

As indicated in General Plan Policy 7.4.2.8, acquiring land for the purposes of habitat protection or restoration does not necessarily involve gaining fee title to the subject property. There are numerous other property rights strategies that could be employed and for which inquiries and options could be made to property owners. Those strategies are described below.

1. **Fee Title.** This is the acquisition of most or all of the rights to a tract of land. There is a transfer of property rights with the formal conveyance of a title. While a fee title acquisition involves most rights to a property, certain rights may be reserved or not purchased.
2. **License or Permit.** This type of agreement is an acquired authorization for a specific activity on land of another party. They are temporary in nature, and no property rights are acquired. Their advantages are simplicity and ease to negotiate. An example would be a license or permit to conduct a wildlife inventory.
3. **Cooperative Agreement, MOU, and Memorandum of Agreement.** This is a simple habitat protection action, and no property rights are acquired. An agreement is usually long term but can be modified by either party. They are most effective in establishing multiple uses for management of land. An MOU is a document describing a bilateral or multilateral agreement between parties. It expresses a convergence of will between the parties, indicating an intended common line of action. It is often used in cases where parties either do not imply a legal commitment or in situations where the parties cannot create a legally enforceable agreement.
4. **Easement.** This is the acquisition of a limited right(s) (less-than-fee). The right to control access, grazing, timber harvest, hunting, and development of the property are some typical examples of rights acquired in easements. A conservation easement is legally binding, whether the property is sold or passed on to heirs. Because use is permanently restricted, land subject to a conservation easement may be worth less on the open market than comparable unrestricted and developable parcels.
5. **Use Reservation.** It is sometimes desirable to acquire fee title to land, but the existing owner is permitted to continue to live on or use the land. This is called "extended use" or "use reservation." An example is a property with a residence that would not interfere with project management if allowed to remain. A use reservation may be reserved by the owner for a specified period of time or for the remainder of his/her life. Many types of use reservations can be negotiated.
6. **Agency Mitigation.** Land could also be acquired and added to the ecological preserve from state and federal jurisdictional agencies as part of existing mitigation requirements for INRMP issues such as wetlands (money could be directed at the INRMP program for acquisition purposes instead of offsite mitigation)
7. **Lease.** A lease is a contract calling for the lessee (user) to pay the lessor (owner) for use of an asset.

Table 4 Summary of Property Rights Strategies

Acquisition Type	Advantages	Disadvantages	Relative Cost
Fee Title	<ul style="list-style-type: none"> • Total transfer of property rights • Property rights can be transferred to another agency for management 	<ul style="list-style-type: none"> • Cost • Need for management and maintenance of the acquired lands 	High
License or Permit	<ul style="list-style-type: none"> • Low initial cost 	<ul style="list-style-type: none"> • Temporary 	Low
MOU	<ul style="list-style-type: none"> • Low cost 	<ul style="list-style-type: none"> • Temporary 	Moderate

		<ul style="list-style-type: none"> • May not be legally binding 	
Easement	<ul style="list-style-type: none"> • Achieves goal without cost of ownership 	<ul style="list-style-type: none"> • Usually only applies to a portion of the property 	Low
Use Reservation	<ul style="list-style-type: none"> • Retains property rights • Accommodates existing land owners 	<ul style="list-style-type: none"> • Possible incompatible land uses • Property access 	Low
Agency Mitigation	<ul style="list-style-type: none"> • Utilizes programs already in place 	<ul style="list-style-type: none"> • Need for management and maintenance of the acquired lands 	Low
Lease	<ul style="list-style-type: none"> • Purchase not required 	<ul style="list-style-type: none"> • Temporary 	Moderate

4.5 Potential Partnerships

Acquisition of land suited for the INRMP should not be the sole responsibility of the County. Acquisition may be by state or federal land management agencies, private land trusts, mitigation banks, or other public or private organizations. The County could assist in the initial acquisition and then turn the management and ownership over to another agency or entity.

Potential Partners:

- Federal
 - Bureau of Land Management (BLM)
 - Bureau of Reclamation
 - Environmental Protection Agency (EPA)
 - Federal Highway Administration
 - Farm Service Agency
 - USFWS
 - USFS
 - National Center for Recreation and Conservation
 - National Resources Conservation Service
- State
 - California Conservation Corps
 - California Department of Conservation
 - CDFG
 - California Department of Forestry and Fire Protection (CDF)
 - California Department of Parks and Recreation
 - California Department of Transportation
 - California Resources Agency
 - California Wildlife Conservation Board

- Special Districts
 - Georgetown Divide Resource Conservation District (GDRCD)
 - El Dorado County Resource Conservation District (EDCRCD)
 - El Dorado Irrigation District (EID)
 - Georgetown Divide Public Utility District (GDPUD)
 - Other special districts
- Private
 - Mitigation banks
 - SNC
 - American River Conservancy
 - The Nature Conservancy
 - Other private organizations

Table 5 Summary of Optional Approaches for Habitat Acquisition

Option Type	Advantages	Disadvantages	Relative Cost
Acquisition by Habitat Type	<ul style="list-style-type: none"> • Takes advantage of previously performed work 	<ul style="list-style-type: none"> • Requires specific software 	Moderate
Lands at Risk of Conversion	<ul style="list-style-type: none"> • Development agreements may already be in place • Density requirements may already be in place and other areas that could accommodate those densities would need to be identified and changed 	<ul style="list-style-type: none"> • Ignores biology of what is existing ‘on the ground’ • Leaves little room for negotiation 	High
Survey to Identify Willing Sellers	<ul style="list-style-type: none"> • Available parcels may be fragmented 	<ul style="list-style-type: none"> • Not everyone will respond to the survey • Willingness may change over time • Property ownership may change 	Low
Targeted Properties	<ul style="list-style-type: none"> • Critical properties can be identified based on previous studies 	<ul style="list-style-type: none"> • Identified properties may not have willing sellers 	Low

5. HABITAT MANAGEMENT

5.1 Introduction

After property or easements have been acquired, lands need to be properly managed in order to provide optimal wildlife value. In the event that property rights are not acquired, agreements can be made with property owners so that they can provide management activity. This section will describe optional approaches to habitat management. A key component will be the identification of responsible parties (who does what). It is closely related to Section 4, Habitat Acquisition and Section 6, Habitat Monitoring.

5.2 General Plan Context

The following text is presented verbatim from Subsection E of Policy 7.4.2.8:

E. 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.

5.3 Background Information

Phase I of the INRMP identified important habitats within the study area by habitat type. Each habitat type may require different management strategies. This section will describe those strategies.

5.4 Optional Approaches

5.4.1 Design

Develop specific habitat management plan for each major habitat type.

Each major vegetation type will require specific management considerations and actions tailored to their characteristics.

Design Guidelines

While new infrastructure construction impacts existing ecological features such as wildlife connectivity, it also provides the opportunity to account for wildlife needs in the early phases of design and construction. New road alignments or alternatives for other types of projects could be selected to minimize the expected effects on wildlife connectivity. Suitable wildlife crossings and corridors could be explicitly included in designs for new projects. Design guidelines that

benefit wildlife movement can be developed and included in the County's Design Standards Improvement Manual.

Interchange Replacements-to Include Concepts That Benefit Wildlife

Implementation of road projects, such as interchange replacement, provides an opportunity to retrofit existing transportation infrastructure for enhancement of wildlife connectivity. Interchange upgrades are unique opportunities in that these locations often already include cross-highway movement potential, albeit for motor vehicles. Options to be considered could include possible means of integrating wildlife movement into the interchange infrastructure. Landscape-scale patterns should be used to identify the potential for individual species to use interchanges in their movement patterns.

Considerations of Wildlife Movement for Road and Construction Projects

Non-interchange infrastructure projects also provide opportunities for incorporation of wildlife movement needs into designs and planning. Wildlife movement needs could be used to help identify route alternatives with the lowest impact to wildlife and landscape connectivity. Specific design considerations could be included at locations of highest probability of crossing by animals. Improved roadway designs (e.g. medians that allow crossing by many species) could be incorporated in all infrastructure projects in the INRMP planning area. This section could also serve to identify which specific roads within the County constitute major roadways that are in need of wildlife considerations, and would prioritize proposed improvements based on cost effectiveness.

Best Management Practices on Improved Parcels to Preserve Habitat, Prevent Degradation

Best Management Practices (BMPs) could be established for management activities both within conservation areas and for projects in the vicinity of conservation areas.

5.4.2 Infrastructure Improvements/Construction

Vegetated Underpasses

Many animal species have been shown to utilize vegetated under-crossings if they are designed in species-appropriate ways. Considerations in design of underpasses include the amount and spatial arrangement of vegetation as well as the width, height, and length dimensions of the under-crossing. These parameters generally vary between species, so landscape-scale analyses could be used to identify the species most likely to be present at the location of any particular under-crossing. If new underpasses are being considered, the landscape analyses could be used for placement.

Culvert replacements

There are a number of design options for upgrading culverts for use by wildlife. Simple within-culvert additions can be used to facilitate use by smaller species. Larger species may require enlargement of existing culverts. Consideration should also be given to the spatial configuration of the entrance and exit points.

Fence Design and Location

Proper fencing keeps animals from crossing at unsafe locations and directing them to crossing structures. The length of fencing required will depend on landscape characteristics and the

probability of wildlife crossing in locations away from crossing structures. Other fencing considerations include designs that allow for escape by animals that have managed to get into the right-of-way area.

Traffic calming

Roads can be designed to decrease vehicle speeds through such techniques as narrowing or tighter turns. Speed bumps or other grade changes can be used to reduce speeds as well. Caution signs warning motorists of wildlife hazards can be effective, especially if coupled with warning lights or posted vehicle speeds. Reduced traffic speeds can be used to enable ease of crossing for wildlife in discrete road segments of concern.

Other structural retrofits (improve existing impediments)

Other potential structures for enabling wildlife road crossings include vegetated overpasses. While these are relatively expensive infrastructure features, they have been shown to be effective for animal species that are unlikely to use under-crossings. Successful overcrossings generally include vegetation and solid barriers that prevent animals from seeing traffic below.

5.4.3 Coordinating Management

Identification of Responsibilities

The Habitat Management component will describe not only what needs to be done, but also how it will be done and who the responsible parties will be. Management options could include: no management; county management (i.e., existing county staff or new department); shared management between the County and some outside agency (BLM, CDF, USFS, etc.); full management by outside agency; private management supported by County, et al.)

Monitoring and Controlling Invasion of Weeds

Invasive weeds are a major management issue in California. Without a specific plan for monitoring and controlling weeds, there is a likelihood of loss of native biodiversity from protected areas. Techniques for controlling invasion include: seasonally-appropriate prescribed fire, grazing regimes, biological agents, and control by hand. Various combinations of these methods could successfully reduce the ecological threat posed by invasive species.

Availability of Water

Seasonal water availability can be an important management issue in areas where water diversion takes place. If ecosystems in conservation areas are being negatively affected by lack of water, solutions could include acquisition of water rights from willing sellers, drilling wells, or even trucking water in for stocking small ponds or other features.

Coordinate Effort with Vegetation Management for Fire Control

Fire is an ecosystem process that plays a large role in many disturbance regimes. Different ecosystems react to this process in different ways. While some are highly sensitive to fire disturbance, many Mediterranean ecosystems (such as those found in the INRMP planning area) are fire adapted. Management of these ecosystems requires fire or similar disturbance to maintain ecosystem health. These ecosystem needs may also have to be balanced with safety concerns for

nearby residents however. Management plans could include prescribed fire, grazing, logging, or other actions to account for fire presence and management.

Table 6 Summary of Optional Approaches for Habitat Management

Option Type	Advantages	Disadvantages	Relative Cost
Design	<ul style="list-style-type: none"> • Habitat wildlife considerations planned prior to construction 	<ul style="list-style-type: none"> • Fee structure needs to be in place to pay for improvements • May require updates to County policies, manuals, and regulations • Requires coordination of multiple agencies 	Low
Infrastructure Improvements/Construction	<ul style="list-style-type: none"> • Most likely to reduce effects of roads and other infrastructure • able to plan for most large-scale patterns and processes 	<ul style="list-style-type: none"> • Requires a large amount of county involvement and outside resources 	High (but potentially offset)
Coordinated Management	<ul style="list-style-type: none"> • Can plan for ecological patterns and processes that cross parcel boundaries 	<ul style="list-style-type: none"> • Less owner control of process • requires county action 	Moderate

6. MONITORING

6.1 Introduction

Once investments are made under the INRMP, then monitoring the effectiveness of the investments is prudent. This can take several forms and provides feedback information to stakeholders that could lead the County to modify its program over time (e.g., adaptive management).

6.2 General Plan Context

The following text is presented verbatim from Subsection F of Policy 7.4.2.8:

F. 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 CNDDDB. Monitoring results shall be compiled into an annual report to be presented to the Board of Supervisors.

6.3 Background Information

What is monitored?

This section will describe the various habitat and species attributes that could contribute to understanding successes and failures in the INRMP implementation, so that effective investments are continually made. Monitoring can include indicator species, and identifying habitat values and landscape attributes such as connectivity that can be used in periodic programmatic understanding of the INRMP strategies.

Where is it monitored?

This section will describe where in the system monitoring could take place, including the spatial scale, in order to understand INRMP effects and effectiveness. Typically, monitoring would take place on lands controlled under the INRMP. However, not all values will be located only on these lands, or be best measured on these lands (e.g., downstream effects). The scale of monitoring could vary from sites (location on the ground) to stream reaches to habitat types.

When is it monitored?

This section will describe the potential timing, frequency, and longevity required of monitoring to understand how things are changing in response to INRMP implementation. Time of year is important in measuring certain ecosystem attributes. Frequency is important and determined by the goal of monitoring and the ecosystem attribute of concern.

Why is it monitored?

This section will describe the types of questions that monitoring could address and the importance of having a goal for monitoring to make the information meaningful.

Who monitors and uses the information?

This section will describe how the County could take advantage of existing monitoring in the County by other agencies, encourage new monitoring programs by other agencies, pursue grant opportunities to improve County monitoring, and cost-effectively develop its own monitoring as needed. There are existing and proposed monitoring actions in the INRMP area that the County could use as sources of information. This section will also describe options for sharing information with other parties and stakeholders so that conservation investors, including the public, can measure the effectiveness of the overall program.

Types of monitoring

There are several types of monitoring that could be conducted to measure conservation return on investments. They range from outputs measures (acres affected by program) to outcome measures (wildlife population health, community satisfaction).

6.4 Optional Approaches

6.4.1 Program Actions

Two common and related measures of program activity are the amount of money spent and the acres of habitat partially or completely protected. The INRMP needs to identify projected revenue to determine the extent of the program.

6.4.2 Indicator Species Presence/Absence

Monitoring the indicator species described in the Indicator Species report could be an appropriate way to measure ecological performance under the INRMP. This would include monitoring across landscapes under different levels of protection.

6.4.3 Habitat condition

Habitat fragmentation, exotic species invasion, loss of animal species, changes in natural processes, and climate change can all affect habitat condition. Although presence of indicator species is one indication of habitat health, other species specific conditions may exist that could be assessed through monitoring of habitat characteristics over time.

6.4.4 Indicator species population health

The presence or absence of indicator species, or condition of their habitat, could be moderately useful performance measures of conservation investment. Usually, monitoring is conducted on desired ecological outcomes of a program. In this case, the well-being of populations of plants and animals, including indicator species, would be a major desired outcome.

6.4.5 Community satisfaction

The INRMP is a program to mitigate for impacts resulting from development in western El Dorado County as the 2004 General Plan is implemented. Satisfaction with the program will be important so that stakeholders (e.g., landowners, regulatory agencies, conservation organizations, developers) and the general public understand how funds are invested, what county actions are taken, and the benefit received from the investment.

Table 7 Summary of Optional Approaches for Monitoring

Option Type	Advantages	Disadvantages	Relative Cost
Program actions	<ul style="list-style-type: none"> • Inexpensive 	<ul style="list-style-type: none"> • Low information content about program performance 	Low
Indicator species	<ul style="list-style-type: none"> • Broad information about ecological benefits 	<ul style="list-style-type: none"> • Generally low information content about each species 	Moderate
Habitat condition	<ul style="list-style-type: none"> • Broad information about potential ecological benefits 	<ul style="list-style-type: none"> • Wildlife benefits unknown 	Moderate
Indicator species population health	<ul style="list-style-type: none"> • Broad and deep information about potential ecological benefits 	<ul style="list-style-type: none"> • Expensive 	High
Community satisfaction	<ul style="list-style-type: none"> • Provides meaningful connection to stakeholders and public 	<ul style="list-style-type: none"> • Relates only to perception of program performance 	Moderate

7. PUBLIC PARTICIPATION

7.1 Introduction

Public awareness and acceptance of the concepts and policies that will be presented in the INRMP will be a key component to program success. This section will describe various public participation options that could facilitate to maximize stakeholder involvement.

7.2 General Plan Context

The following text is presented verbatim from Subsection G of Policy 7.4.2.8:

G. 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.

7.3 Background Information

Currently there are two separate County committees that are specifically devoted to development of the INRMP: PAWTAC and ISAC. Both committees serve to advise the Board of Supervisors in the decision making process. Both committees are extensively involved in the preparation of Phase I of the INRMP. This section will describe the public participation options for reaching out to members of the community.

7.4 Optional Approaches

7.4.1 Maintain Current Organization

Maintain current organization utilizing the PAWTAC, ISAC and informing the public through the INRMP website and optional notification of updates and meetings via email.

7.4.2 Increase Public Involvement

Encourage more public involvement with workshops and enhance participation of both local and regional stakeholders.

- Public involvement
 - Continue to engage general public through website postings and email lists to keep citizens apprised of the INRMP process.
 - Public workshops could be scheduled to inform the public at large and provide opportunity for comments. The INRMP has seven sections (7.4.2.8 A-F, H) which the public can review at the draft and the final stages. Workshops could be held to increase public review time for all sections.
 - Provide worksheets to attendees that to encourage written input and ranking of components of the plan by importance.

- Involve local, state and federal agencies having jurisdiction over natural resources within the County.
 - This could be achieved by creating an agency stakeholders group which meets regularly to comment on the INRMP development. Members of this group could represent the broad range of interests in the County, and could include agencies that may be involved in funding, habitat acquisition and habitat monitoring.
 - The agency stakeholder group could be organized so that a small subset of the group reports to the Board of Supervisors to keep them informed of the progress of the INRMP.
 - In addition to the agency stakeholder group, a technical advisory group (e.g., PAWTAC) which reviews the INRMP on strictly technical issues could be formed. Members of the agency stakeholder group could also participate in the technical group, but separation of those duties should be maintained.
 - Suggested List of Agency Stakeholder Committee members:
 - Local Representatives
 - El Dorado County Planning Department
 - El Dorado County Water Agency (EDCWA)
 - EID
 - City of Placerville
 - El Dorado County Department of Transportation (EDCDOT)
 - Local Community Service Districts
 - GDPUD
 - Resource Conservation Districts
 - California State Representatives:
 - CDFG
 - California EPA
 - Caltrans
 - US Government Representatives
 - USFWS
 - US Bureau of Reclamation
 - ESFS
 - BLM

7.4.3 Property Owner Survey

Conduct survey (telephone or postcard) to solicit specific information from property owners within the study area in order to identify and address concerns and interests regarding the INRMP.

7.4.4 Individual Stakeholders Meetings

Invite stakeholders (property owners, developers, environmentalists) to individual meetings that specifically address their concerns.

Table 8 Summary of Optional Approaches for Public Participation

Option Type	Advantages	Disadvantages
Maintain Current Organization	<ul style="list-style-type: none"> • No action required by Board or County Staff 	<ul style="list-style-type: none"> • Fewer opportunities for public involvement • Narrow range of interested or affected groups participate in the process
Encourage Public involvement and Enhanced stakeholder participation	<ul style="list-style-type: none"> • Improves public awareness and appreciation for transparency of the process • Engages stakeholders that are involved or could be involved in other elements of the INRMP such as funding, acquisition, monitoring 	<ul style="list-style-type: none"> • Must identify and enlist new members for the committees • Additional staff time for workshops/outreach
Surveys	<ul style="list-style-type: none"> • Avoids excessive input from a vocal minority 	<ul style="list-style-type: none"> • Cost
Individual Stakeholder Meetings	<ul style="list-style-type: none"> • Site specific information can be incorporated into the plan 	<ul style="list-style-type: none"> • Possibility of too many or too few meetings

8. FUNDING

8.1 Introduction

Funding for implementation of the INRMP is expected to come from a variety of sources that could include mitigation fees (see Section 3), state/federal grants, and/or the County General Fund. Mitigation fees are to be established to account for the full cost of mitigation including acquisition, monitoring and management. Grants and General Fund contributions could be used establish, supplement and strengthen the program

8.2 General Plan Context

The following text is presented verbatim from Subsection H of Policy 7.4.2.8:

H. 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.

8.3 Background Information

One possible methodology for establishment of a conservation fund in-lieu fee was previously established and accepted by the Board of Supervisors for the OWMP. This section of the Optional Approaches could identify a similar methodology applicable to other important habitat types covered by Policy 7.4.2.8 of the INRMP.

8.4 Optional Approaches

8.4.1 Grants

Federal Grant Sources

United States Army Corps of Engineers

Although the USACE does not offer grants, it can provide assistance through cost share arrangements. The following programs are offered by the Corps:

- Section 1135 - Restoration and acquisition of wetlands previously affected by a USACE project
- Section 206 – Restoration of aquatic ecosystems structure and function, No relationship to an existing USACE project is required.

Bureau of Land Management

The BLM can provide assistance for projects that contain areas of critical environmental concern. They also provide partnerships for local governments for purposes such as land acquisition and environmental education.

Bureau of Reclamation

Through the Central Valley Conservation Program, the Bureau of Reclamation can fund projects for the purchase of land and easements, habitat protection, restoration and enhancement and providing educational information. Projects must benefit listed species or species of special concern.

Environmental Protection Agency

The EPA can provide assistance for projects that provide comprehensive wetlands monitoring.

Federal Highway Administration

- Conservation Lands Program - The purpose of this program is acquisition of scenic lands, historic sites and wildlife corridors of statewide interest and priority along transportation corridors where those lands also have a high value for conservation habitat.
- Transportation Enhancement Activities - This program can fund projects that enhance the travel experience including projects that provide environmental mitigation to address water pollution from highway runoff or to reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.

U.S. Fish and Wildlife Service

- Central Valley Project Improvement Act Habitat Restoration Program Section 3406(b)(1)
- North American Wetlands Conservation Act Grants Program
- Partners for Fish and Wildlife Program

National Center for Recreation and Conservation

- Land and Water Conservation Fund (LWCF) - Provides grants for acquisition or development of neighborhood, community or regional parks.
- Rivers, Trails and Conservation Assistance Program (RTCA) - RTCA works with local and state government to conserve rivers, provide open space and develop trails and greenways.
- Federal Lands to Parks Program - This program helps communities create new parks and recreation areas by transferring surplus federal land to state and local governments.

Natural Resources Conservation Service

- Farm Security and Rural Investment Act of 2002
- Grasslands Reserve Program - This program offers landowners opportunity to protect, restore and enhance grasslands on their property
- Resource Conservation and Development - This program seeks to accelerate the conservation, development and utilization of natural resources, improve the general level of economic activity and to enhance the environment and standard of living in designated areas.
- Wildlife Habitat Incentives Program - This program provides technical assistance and cost sharing to help develop a wildlife habitat development plan.

State of California Grant Sources

Sierra Nevada Conservancy

The SNC supports the Sierra Nevada Region in many tangible ways: from providing funding for local projects to offering technical assistance and other support for collaborative projects in partnership with local government, non-profit organizations and Tribal entities. Activities supported will contribute to the following program objectives:

- provide increased opportunity for tourism and recreation in the Region;
- protect, conserve and restore the Region’s physical, cultural, archaeological, historical and living resources;
- aid in the preservation of working landscapes;
- reduce the risk of natural disasters, such as wildfire;
- protect and improve water and air quality; and
- enhance public use and enjoyment of lands owned by the public.

California Department of Fish and Game

- Land Owner Incentive Program – helps to protect habitat for special status species

California Department of Forestry and Fire Protection

- California Forest Stewardship Program - This program seeks to improve the economic value and environmental quality of forestlands. Financial assistance is available to help rebuild forest and wildlife resources to maintain a healthy environment and productive forests.

California Department of Parks and Recreation, Office of Grants and Local Services

- Habitat Conservation Fund - can be used for acquisition of wildlife habitat and wildlife corridors, the enhancement and restoration of wetlands, riparian and aquatic habitat, and the acquisition and construction of trails that attract and educate people to and about local wildlife resources. Six project categories are eligible for funding:
 - Habitat for rare and endangered, threatened, or fully protected species
 - Wildlife corridors and urban trails
 - Aquatic habitat
 - Deer and lion habitat, including oak woodlands
 - Riparian habitat
 - Wetlands

California Resources Agency

- Environmental Enhancement Mitigation - Resource Lands Program- projects involve the acquisition of real property in fee title or through a conservation easement and may include the restoration or enhancement of resource lands to mitigate the loss of, or detriment to resource lands lying within the right-of-way acquired for proposed transportation projects.

California Wildlife Conservation Board

The three main functions of the California Wildlife Conservation Board (WCB) are land acquisition, habitat restoration and development of wildlife oriented public facilities. Programs include:

- California Riparian Habitat Conservation Program
- Habitat Enhancement and Restoration Program
- Inland Wetlands Conservation Program
- Land Acquisition Program
- Oak Woodlands Conservation Program
- Public Access Program
- Rangeland, Grazing Land and Grassland Protection Program

Private Foundations

The following list of private foundations also offer grant opportunities, many of which are available to private property owners.

- California State Wildlife Foundation
- Conservation Fund
- Doris Duke Charitable Foundation
- Ducks Unlimited
- William and Flora Hewlett Foundation
- James Irvine Foundation
- Andrew W. Mellon Foundation
- National Fish and Wildlife Foundation
- National Geographic Education Foundation
- National Tree Trust

Table 9 Summary of Grant Opportunities

Grant Source	Habitat Inventory	Habitat Protection	Mitigation Assistance	Habitat Acquisition	Habitat Management	Habitat Monitoring	Public Education
Federal Grant Sources							
Army Corps of Engineers	✓	✓			✓		
Bureau of Land Management	✓	✓				✓	✓
Bureau of Reclamation	✓	✓		✓	✓		✓
Environmental Protection Agency	✓	✓		✓	✓		✓
Federal Highway Administration		✓		✓			✓
Fish and Wildlife Service	✓	✓		✓	✓	✓	✓
National Center for Recreation and Conservation	✓	✓		✓	✓		✓
Natural Resources Conservation Service	✓	✓		✓	✓		✓
State of California Grant Resources							
CA Dept. of Fish and Game	✓	✓			✓	✓	
CA Dept. of Forestry and Fire Protection	✓	✓		✓	✓		✓
CA Dept. of Parks and Recreation		✓		✓	✓		✓
CA Resources Agency		✓		✓	✓		
California Wildlife Conservation Board		✓		✓	✓	✓	✓
Foundations							
California Wildlife Foundation					✓		✓
Conservation Fund	✓	✓		✓	✓		
Duke Foundation	✓			✓	✓		✓
Ducks Unlimited		✓		✓	✓		✓
Hewlett Foundation	✓			✓	✓		✓
Irvine Foundation	✓			✓	✓		✓
Mellon Foundation	✓			✓	✓		✓
National Fish and Wildlife Foundation	✓				✓	✓	✓
National Geographic Society Education Foundation					✓		✓
National Tree Trust	✓				✓		✓

8.4.1 Mitigation Fees

Conservation in-lieu fees can be established for projects that cannot provide their own on-site mitigation. In lieu fees could then be used for acquisition or for funding specific capital improvement projects.

8.4.2 Permitting Fees

Permitting Fees could also be established and associated with project development.

8.4.3 Assessment Districts

Special assessments districts or financing options could be set up so that funding for wildlife protection measures could be paid for by the developer or future occupants of the development.

8.4.4 County General Fund

County could contribute financially to the INRMP during years when excess funds are available.

Table 10 Summary of Optional Approaches for Funding

Option Type	Advantages	Disadvantages	Relative Cost
Grants	<ul style="list-style-type: none"> • Many sources available • Could benefit property owners as well as County 	<ul style="list-style-type: none"> • Many grants require matches • Requires staff time to prepare grant application 	Low
Mitigation Fees	<ul style="list-style-type: none"> • Can pay for capital improvements or habitat acquisition 	<ul style="list-style-type: none"> • Requires staff time to monitor fee implementation and management of funds 	Moderate
Permit Fees	<ul style="list-style-type: none"> • Funds raised prior to construction impacts 	<ul style="list-style-type: none"> • Existing development fees are already high – more fees could drive away potential developers 	Moderate
Assessment Districts	<ul style="list-style-type: none"> • Puts responsibility on property owner 	<ul style="list-style-type: none"> • Payment could be postponed • Taxes are politically and socially unpopular 	Low (to County)
County General Fund	<ul style="list-style-type: none"> • Funding can be used for whatever component of the INRMP needs it most 	<ul style="list-style-type: none"> • County limitations on unallocated funds • Lag time for County to allocate funds during the budget cycle 	High

9. ACRONYMS

BLM	Bureau of Land Management
BMPs	Best Management Practices
CDF	California Department of Forestry and Fire Protection
CDFG	California Department of Fish & Game
CNDDB	California Natural Diversity Database
CRLF	California red-legged frog
EDCDOT	El Dorado County Department of Transportation
EDCRCD	El Dorado County Resource Conservation District
EDCWA	El Dorado County Water Agency
EID	El Dorado Irrigation District
EPA	Environmental Protection Agency
GDPUD	Georgetown Divide Public Utility District
GDRCD	Georgetown Divide Resource Conservation District
GIS	Geographic Information System
HCPs	Habitat Conservation Plans
IBCs	Important Biological Corridors
INRMP	Integrated Natural Resources Management Plan
ISAC	INRMP Stakeholders Advisory Committee
LWCF	Land and Water Conservation Fund
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
OWMP	Oak Woodland Management Plan
PAWTAC	Plant and Wildlife Technical Advisory Committee
PCAs	Oak Woodland Priority Conservation Areas
PES	payment for ecosystem services
RTCA	Rivers, Trails and Conservation Assistance Program
SNC	Sierra Nevada Conservancy
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish & Wildlife Service
USFS	U. S. Forest Service
USGS	U.S. Geological Survey
WCB	California Wildlife Conservation Board

APPENDIX A: OTHER JURISDICTION PROGRAMS

As part of the preparation effort for this report, the SEA Team researched other jurisdiction programs that are designed to protect wildlife habitats. The following table depicts agencies whose stated goals for the plans are similar to those of the INRMP. All of these plans, however, are Habitat Conservation Plans (HCPs) which serve primarily to protect endangered or threatened species. No plans were identified that encompass biodiversity as a whole, as is the case with the INRMP.

Jurisdiction/ Website	Monitoring and Oversight Responsibility for Plan	Approximate Size (Acres)	No. of Species Monitored	Funding
Placer County http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/PCCP.aspx	Implementing authority (county)	60,000	34	County and partners through fees; state and federal agencies, conservation groups,
San Diego County http://www.sdcounty.ca.gov/dplu/mscp/	SD County Parks and Recreation; funding assistance from the State	582,000	85	Development fees, local, state, federal funding, transportation tax, SANDAG,
Butte County (Draft form) http://www.buttehcp.com/	Implementing authority (JPA), working with other agencies	564,000	41 species covered	Fees, grants, state and federal funding
Metropolitan Bakersfield/Kern County http://www.co.kern.ca.us/planning/pdfs/vfhcp_dec06.pdf	Implementing authority (county)	1,900,000	25 Total 14 plant, 11 animal	Grading fees, building permit fees,
Santa Clara Valley http://scv-habitatplan.org/	Implementing authority (Members of the JPA)	520,000	24 species, 8 "no-take" species	Development, TIM fees
East Contra Costa County http://www.co.contra-costa.ca.us/depart/cd/water/hcp/	Implementing authority (Members of the JPA)	175,000	28	Building fees, wetland impact fees, federal and state grants for conservation, private grant opportunities
Yolo County Natural Heritage Plan http://www.yoloconservationplan.org/	Implementing authority (Members of the JPA)	653,629	64	Building fees, wetland impact fees, federal and state grants for conservation, private grant opportunities