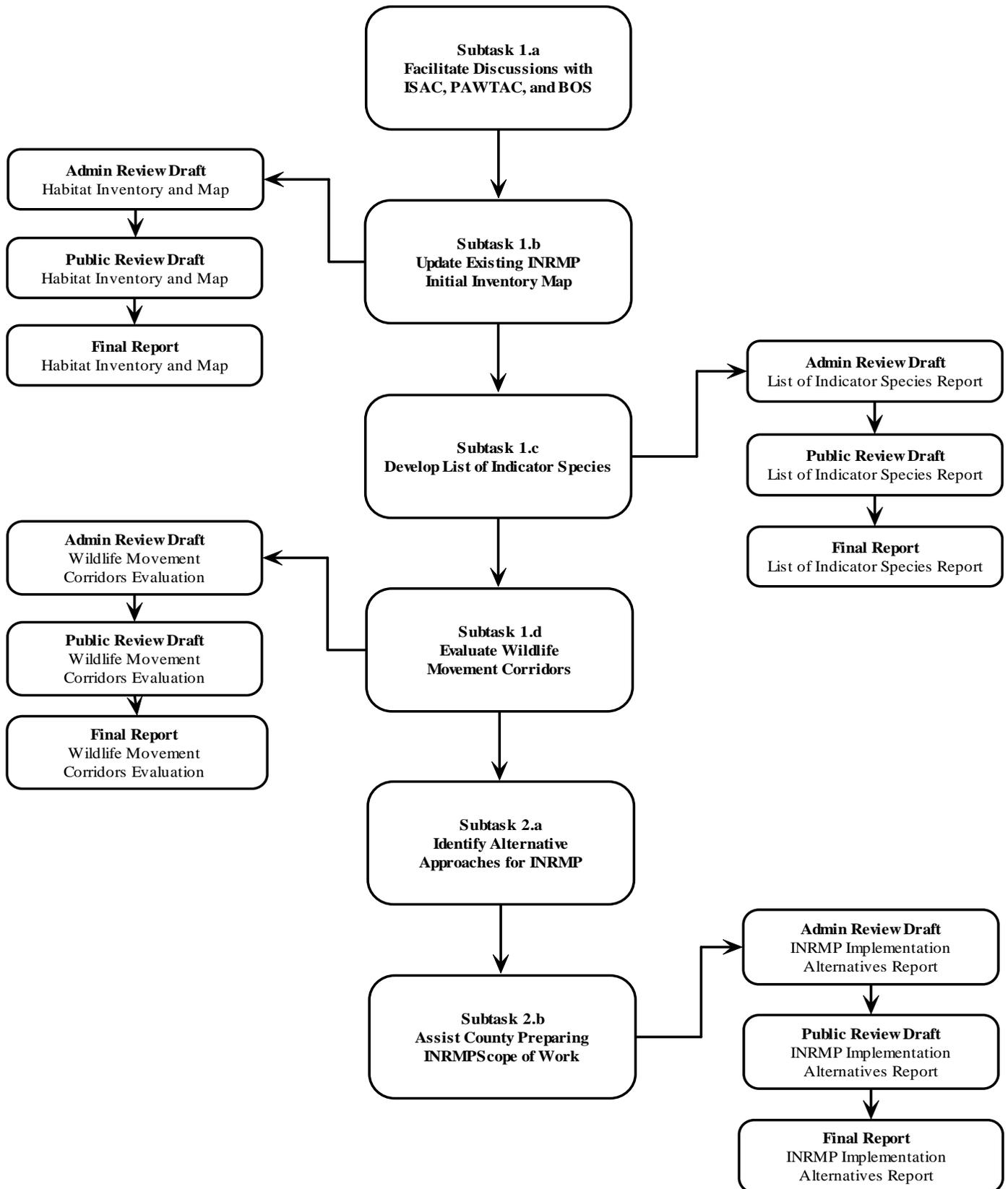


E. WORK PLAN

In 2004, the County adopted its General Plan. Mitigation measures included in the General Plan Environmental Impact Report (EIR) include Policy 7.4.2.8 and Implementation Measure CO-M, which are intended to protect natural resources and are the focus of this proposal. Other policies from the General Plan which are relevant to the effort to protect natural resources include 7.4.2.9 and Measure CO-U. The County is directed to identify important habitat and to establish a program for habitat preservation, effective management, monitoring and mitigation (i.e., an INRMP) within five years of the General Plan approval. This includes developing land conservation strategies that conserve and restore habitat connectivity to offset the effects of increased habitat loss and fragmentation elsewhere in the County. It also includes identifying habitat preservation areas, with preference for large continuous blocks of habitat and where possible, corridors to facilitate species movement among these blocks. These areas will then form a network of priority preservation lands in the County to provide proactive preservation planning at a landscape level so as to reduce future endangered species listings, human-wildlife conflicts, and make the County better equipped to deal with expected land-use and global climate change.

The tasks identified as being necessary to develop the INRMP in the May 8, 2009 Request for Proposals are listed below and Figure 2 identifies SEA's proposed work plan in flowchart form.

Figure 2: Proposed Work Plan



TASK 1 MAP IMPORTANT HABITAT AND CONNECTIVITY

According to General Plan Policy 7.4.2.8 (A), this part of the INRMP shall inventory and map the following important habitats in the County:

- a. Habitats that support special-status species;
- b. Aquatic environments including streams, rivers, and lakes;
- c. Wetland and riparian habitat;
- d. Important habitat for migratory deer herds; and
- e. Large expanses of native vegetation.

In addition, the Policy states that 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 two County oversight groups, the PAWTAC and ISAC. Additional help will be sought from the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS). The inventory shall be maintained and updated by the County Planning Department and shall be publicly accessible.

Subtask 1.a Facilitate Discussions with PAWTAC, ISAC & Board of Supervisors

Project Team members will attend and facilitate discussions at monthly meetings with the PAWTAC and ISAC. These discussions will include efforts to define “Important Habitat”, “Large Expanses”, and “Native Vegetation” as used in General Plan Policy 7.4.2.8. Team members will also attend public meetings, as necessary, with the County Board of Supervisors, the Agricultural Commission, the Planning Commission and the Parks and Recreation Commission, to include them in the discussions and update them in the project findings and schedule. For budgetary purposes, a total of 36 meetings have been included as a part of this proposal. Any additional meetings will be charged on a Time and Materials basis.

SEA will coordinate with staff to develop a protocol for communication between ISAC, PAWTAC, staff, and the Board of Supervisors to provide timely progress reports and to ensure the INRMP work program remains consistent with Board direction.

Subtask 1.b Update Existing INRMP Initial Inventory Map

The existing INRMP Initial Inventory map for El Dorado County displays information on existing important wildlife habitats for the entire County (March 26, 2008). The study area for the INRMP is now defined as the west side of the County below the 4,000-foot elevation contour. The map will be updated to reflect the study area as it is now defined.

The existing map displays the following data:

1. Special-status species point locations (California Natural Diversity Database (CNDDDB))
2. Aquatic environments (El Dorado County)
3. Wetland and riparian habitat (U.S. Fish and Wildlife Service [USFWS] – National Wetlands Inventory)
4. Important deer habitat (CDFG)
5. California Red-legged frog critical habitat (USFWS)
6. Pine Hill Preserve areas (Bureau of Land Management)
7. Priority Conservation Areas from the Oak Woodland Management Plan (OWMP, EN2 Resources, Inc.)

8. Important Biological Corridors identified in the 2004 General Plan
9. Valley Oak Woodland (FRAP 2002)
10. Lands that are publicly owned, subject to conservation easements and designated Open Space or Natural Resource in the 2004 General Plan

General Plan Policy 7.4.2.8 specifically calls for the mapping of five types of habitats and environments for the Habitat Inventory (7.4.2.8). SEA will update the initial inventory map from the 2004 General Plan using the most current data available, including the CNDDDB. In addition, we will modify the map to display the data in the most effective way to convey the extent of habitats in the study area.

Several additional data-sets may be used to more accurately display the range of habitat types in the study area. The latest vegetation data from the California Land Cover Mapping and Monitoring Program (LCMMP) provides vegetation data obtained from remotely sensed data, which is classified according to the California Wildlife Habitat Relationship (CWHR). This information is useful in determining where there are large expanses of native vegetation as required by the 2004 General Plan. SEA also is aware of recently-developed maps of historic vegetation types, possible future vegetation distributions (with climate change), and historic wildlife occurrences. In addition, to more accurately map where special-status plant species are likely to occur, Natural Resources Conservation Service (NRCS) soil data can be used to show the location of gabbro- and serpentine-derived soil types. Many rare plants are associated with these soil types. SEA will research and evaluate additional existing data, including the 1991 EIP Rare Plant Study, the OWMP, and County GIS data, to include on the map as necessary.

Subtask 1.c Develop List of Indicator Species

The Project Team will develop a recommended list of Indicator Species to be utilized in identification of potential core habitat areas, corridors and linkages. For each Indicator Species, the Team will identify habitat relationships and discuss relevant characteristics such as distribution, status, dispersal and home range requirements.

Indicator species can represent particular structural and functional values of habitat, they can be species of particular management or regulatory concern (e.g., endangered species), or they can exert substantial influence on an ecosystem (e.g., mule deer). SEA will describe a combination of indicator species suitable for analyzing habitat quality, extent of usable habitat, connectivity, and habitat conservation. Because there can be a reciprocal relationship between choosing indicator species and finding sufficient data to evaluate their distribution and status, SEA will develop both a list of “best indicator species” and a list of “available indicator species”.

Habitat Relationships

Wildlife occupy specific habitat types, often indicated by particular assemblages of plant types. For each indicator species, SEA will describe the essential habitat relationships, including the ranked habitat preferences and the caveats and accuracy of these relationships. SEA will use the California Wildlife Habitat Relations (CWHR) model, which was developed by CDFG and other biologists. This model provides habitat associations for each vertebrate species in California, ranks habitats for their utility for species, and includes accuracy for the model’s predictions. The primary output will be a map of the highest quality habitat areas for each species.

Distribution/Status/Dispersal

Major vegetation types in the County have been mapped. SEA will use this information in conjunction with wildlife records collected for development, restoration, and other projects to assist with identifying presence/absence of certain species. SEA will also collect as much information as is available for the indicator species regarding their biological, legal, and local status. For each indicator species, SEA will describe their basic dispersal needs, local and regional barriers to dispersal, and information about their actual dispersal and potential dispersal pathways.

Home Range Requirements

Habitat type and quality can determine the actual use of individuals and pairs of wildlife species of the landscape. The size of the home range depends on a combination of the species, individual's reproductive stage, habitat quality, habitat type, and disturbances. The most probable home range size is known for many species occurring in El Dorado County, allowing for modeling the likely extent on the landscape of potential home range areas. Actual home range areas can be determined by tracking the movements of individual animals. SEA will describe the home range sizes, potential distributions in the County, and threats to home ranges for all major mammal species and certain birds of legal concern (e.g., spotted owl). For other taxonomic groups, there may not be enough known to discuss home range size.

Subtask 1.d Evaluate Wildlife Movement Corridors

The SEA Team will evaluate the need for north-south wildlife movement corridors and linkages, including identification of species with north-south migration patterns. The Team will analyze the barrier effect of Highway 50 and other major roadways in the project area (i.e., Motherlode Road). The Team will identify existing locations along Highway 50 that allow safe passage for terrestrial mammals. The Team will examine and discuss issues involved with retrofitting existing drainage structures and undercrossings to provide for discrete wildlife crossings, including an approximation of the cost, to allow the County to assess the feasibility of such an approach. Prior research studies, such as the 2002 Saving & Greenwood report and initial oak-corridor mapping conducted for the OWMP by EN2 Resources, Inc., will also be analyzed. Alternative locations for wildlife movement across Highway 50 (such as Weber Creek and areas east of Placerville), will be identified and examined as to the relative feasibility of those locations. General Plan Policy 7.4.2.8 (A) and the Oak Woodland Management Plan will be considered as part of this task.

The Team will investigate the likelihood that wildlife can cross Highway 50 from the western County line to the 4,000 foot elevation on the eastern project area boundary. We will do this in two ways: 1) use existing maps and knowledge of habitat areas near or adjacent to the highway to map areas of likely concern and 2) field a small crew of UC Davis student-scientists to map (GPS) and describe (dimensions) all potential pathways for wildlife to opportunistically cross the Highway 50 right-of-way. We will also describe the factors that may constrain or enable wildlife crossing of major roads and Highway 50, in order to allow for a more general understanding of barriers and opportunities for crossing.

We will describe how and where various types of crossing enhancement strategies could be used for major roads and highways in the County. We will include cost-ranges for the strategies, based upon costs elsewhere in California or the US.

SEA will evaluate the various Highway 50 crossing alternatives, starting at the western County line and extending to elevation 4,000 feet to the east. We will characterize each potential crossing's relative importance and feasibility for enhancement and maintenance.

Subtask 1.e Deliverables

- *Administrative Draft Important Habitat Inventory Report and Map*
- *Public Review Draft Important Habitat Inventory Report and Map*
- *Final Important Habitat Inventory Report and Map*

- *Administrative Draft Indicator Species Report*
- *Public Review Draft Indicator Species Report*
- *Final Indicator Species Report*

- *Administrative Draft Analysis of North-South Wildlife Movement Corridors Report*
- *Public Review Draft Analysis of North-South Wildlife Movement Corridors Report*
- *Final Analysis of North-South Wildlife Movement Corridors Report*

TASK 2 IDENTIFY ALTERNATIVE APPROACHES FOR PREPARATION OF THE INRMP

The purpose of the INRMP is to identify important habitat in the County and establish a program for effective habitat preservation and management. The policy goes on to state that the INRMP shall include the following components:

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

Subtask 2.a Identify Range of Alternatives for INRMP

The Project Team will identify a range of alternative approaches available to the County to complete the INRMP. Advantages and disadvantages of each alternative will be discussed along with their probable cost of implementation. This shall include accounts for the implementation cost of mitigation, including acquisition, monitoring, and management. This task shall also include a discussion on the methodology employed in other jurisdictions for similar conservation plans. By way of example, some of the methods to be discussed might include GIS-based computer modeling, a criteria-based program, and a Conceptual Conservation Plan approach.

The Project Team will coordinate with the consultants and staff working on the Pine Hill plant issues to ensure that the Pine Hill plant work will fit into the INRMP, but will not do extensive work on this issue. We will also be prepared to assist the County with evaluating potential policy changes and in preparing a General Plan Amendment, should that become necessary during this process.

Subtask 2.b Assist County Preparing INRMP Scope of Work

The Team will also assist the County in preparation of a revised Scope of Work in compliance with General Plan Policies 7.4.2.8. The revised Scope of Work will be based on the findings from the studies prepared as a result of this proposal and will identify all remaining tasks necessary to complete the INRMP. The INRMP will evaluate the extent to which resources are or can be protected on public lands as a first priority. Costs associated with preparing the Final INRMP shall also be provided.

Subtask 2.c Deliverables

- *Administrative Draft INRMP Implementation Alternatives Report*
- *Public Review Draft INRMP Implementation Alternatives Report*
- *Final INRMP Implementation Alternatives Report*

TASK 3 PROJECT SCHEDULE

A copy of the Project Schedule is included herein. As work progresses, this schedule will be updated on a monthly basis and shared with County staff and PAWTAC and ISAC members.