

CHAPTER 1: PROJECT DESCRIPTION

The following discussion provides a summary of the Auburn Ravine/Coon Creek Ecosystem Restoration Plan (ERP) planning process including a project summary, the established guiding principles, goals, and objectives, and a general description of the major watersheds within the ERP planning area.

Project Summary

Placer County (County), on behalf of the Auburn Ravine/Coon Creek Coordinated Resource Management Plan (CRMP) group, has received a grant from the CALFED Ecosystem Restoration Program to prepare an Ecosystem Restoration Program for watersheds located within northwestern Placer and southeastern Sutter counties (Figure 1-1 and 1-2). An ERP is a document that identifies potential restoration opportunities for an identified area using an ecosystem-based approach. The ERP identifies the goals and objectives of the restoration effort, provides background information and baseline data regarding the project site, and discusses the specific ecosystem restoration goals, opportunities, and requirements for implementation within the ERP planning area.

Three major watersheds, which include Auburn Ravine, Markham Ravine, and Coon Creek, are located within the AR/CC ERP planning area (Figure 1-3). Due to the potential for Auburn Ravine and Coon Creek to satisfy CALFED ERP objectives, this ERP is primarily focused on these two watersheds. Since many of the natural resource issues within the planning area involve stream channel dynamics and riparian corridors, this ERP will focus on the restoration and management of these areas. A complete discussion of the methodology used to prepare this ERP is presented in Chapter 2: Methodology.

Implementation of the ERP for AR/CC will help improve habitat for anadromous fish including steelhead, spring-run chinook salmon, fall-run chinook salmon as well as other native fish species. In addition to improving fish habitat, the restoration of these watersheds will improve habitat conditions for numerous wildlife species that utilize the streams and adjacent riparian and upland habitats. These restoration activities will result in improvements in water quality benefiting downstream water users.

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Insert Fig. 1-2

Insert Fig. 1-3

Guiding Principles

The following is a list of fundamental principles that were followed throughout the ERP planning process. Every restoration strategy and suggested recommendation incorporated into the ERP was designed with these principles in mind.

Property Owner Participation – The program will identify and work with willing property owners. The complete authorization of adjacent property owners is required prior to conducting work within the selected restoration areas. No property owner may be coerced or forced to enter into a restoration agreement.

Placer County General Plan – Amendment of a city or county General Plan land use diagram is not part of this program unless requested by a landowner as part of their voluntary participation.

Zoning – Amendment of a city or county Zoning Map is not part of this program unless requested by a landowner as a part of their voluntary participation.

Scope of Government Interest – Through the implementation of the ERP objectives, the ERP will strive to minimize the level of governmental intervention in private land management decisions.

New Land Use Regulations – The ERP will be developed within the context of the existing local, state, and federal regulatory environment, relying upon existing statutes and General Plan policies for implementation. Furthermore, the program will remain consistent with local, state, and federal regulations as they are amended over time or as new regulations are adopted, independent of the program.

Interagency Coordination – To successfully implement the ERP it will be necessary for a number of local, state, and federal agencies to cooperate. No project is to proceed without the concurrence of and agreement by a stakeholder public agency.

Willing Seller – Where the transfer of fee title occurs or certain property rights are sold, such transactions may only occur where the property owner has identified his/herself as a willing seller.

Goals and Objectives

The primary goal of the ERP is to restore and protect water quality and fisheries habitat. A major emphasis will be on protection and restoration of riparian and aquatic habitats (including anadromous and native resident species), protecting watershed integrity, improving water quality, reducing the risk of catastrophic wildfire, improving wildlife habitat, and improving the ecological functioning of the watersheds.

CALFED Objectives

As part of the CALFED grant agreement, five objectives were established by CALFED and Placer County to ensure that the ERP goal would be accomplished. Table 1-1 identifies the objectives established with CALFED for this planning process.

Table 1-1. CALFED Objectives

Auburn Ravine/Coon Creek Ecosystem Restoration Plan Objectives
#1. Protect and restore riparian and aquatic habitats including habitat for anadromous and native resident species
#2. Protect watershed integrity
#3. Improve water quality by removing harmful pollutants
#4. Improve the ecological functioning of the watersheds including ecological factors such as connectivity with the mainstream Sacramento River.
#5. Remove or reduce the total number of primary stressors identified by CALFED in its Ecosystem Restoration Program Plan. These stressors include: 1) alteration of flows and other effects of water management, 2) floodplain and marshplain changes, 3) channel form changes, 4) water quality, 5) water temperature, and 6) land use.

Auburn Ravine/Coon Creek CRMP Objectives

In addition to the broad program objectives established with CALFED, the Auburn Ravine/Coon Creek CRMP planning group (hereafter referred to as the AR/CC CRMP) has developed a concise list of plan objectives (Table 1-2). The AR/CC CRMP is comprised of members of the public interested in being involved with the management of the Auburn Ravine/Coon Creek watersheds. CRMP involvement and input is a critical component of the ERP planning process and was instrumental in establishing the plan objectives listed below. These plan objectives were adopted by the AR/CC CRMP in

July of 1999 to guide the preparation of the ERP and the subsequent implementation of the ERP through individual restoration and monitoring efforts.

Table 1-2. Auburn Ravine/Coon Creek CRMP Objectives

Ecosystem Restoration Plan Objectives Adopted by the Auburn Ravine/Coon Creek CRMP	
#1	<p>The overall intent of this Ecosystem Restoration Plan are:</p> <ul style="list-style-type: none">• To develop an inter-jurisdictional, public/private, long term view of aquatic and riverine habitats, water quality and ecosystem conditions;• To identify achievable ecological restoration projects;• To identify restoration projects that conform to the Plan Objectives;• To develop channel, stream corridor, and watershed management recommendations necessary to maintain and/or achieve desired habitat/ecosystem conditions;• To maintain consistency with the planning and management objectives of the public/private entities of the Study Area;• To develop an ecosystem restoration approach through a consensus building process with the public/private entities of the Study Area, and• To develop an ecosystem restoration strategy to implement the Ecosystem Restoration Plan.
#2	<p>The Study Area for the Ecosystem Restoration Plan will include all tributaries and watershed areas of Auburn Ravine, Markham Ravine, and Coon Creek within Placer County herein called, the “Watershed Portion,” and those portions of the East Side Canal and the Cross Canal that form the hydraulic connection of the Watershed Portion with the confluence with the Sacramento River herein called the “Connective Channel Portion.”</p>
#3	<p>The Ecosystem Restoration Plan will recognize the importance of existing and future water supply, flood control, wastewater disposal operations, and the interests of other public entities, and the existing and future interests of private landowner and practices. The Ecosystem Restoration Plan will not adversely impact the objectives of these public/private entities and will depend on the willing participation of these entities for the implementation of restoration projects and watershed management recommendations.</p>

Table 1-2. Auburn Ravine/Coon Creek CRMP Objectives

Ecosystem Restoration Plan Objectives Adopted by the Auburn Ravine/Coon Creek CRMP	
#4	The Plan will focus on the channel and riverine conditions of streams, riverine areas, and those elements of the watershed area with influence on streamflow, sediment, and water quality, etc. This will include specific species, riparian and aquatic habitat elements, channel integrity, short and long term land use/stream corridor interfaces, and other resource values that may be identified through the assessment and planning process.
#5	Restoration projects and management recommendations may be developed for streams, riverine corridors, and watershed areas of the Study Area. Streams will include those streams delineated on the USGS 7.5" 1:24,000 quadrangle maps (or their equivalent). Riverine corridor areas include corridors along stream segments and associated areas influenced by active channels, areas subject to bank erosion, channel enlargement, channel migration regular overflow areas, floodplain areas, and nearby existing or potential habitat which are associated with stream processes. Watershed areas include the remainder of the Watershed Portion of the Study Area.
#6	Specific key resources associated with the stream and riverine corridor areas of the Study Area will be selected as the basis of developing restoration project proposals and management recommendations.
#7	The criteria for selecting key resources will include listed and potentially listed species and their associated necessary habitat components, unlisted species and habitat components that have recognized community or regional values as may be developed through objective criteria, and resource management goals/objectives of public agencies.
#8	Management recommendations and specific restoration project proposals will be based on a long term view of watershed and stream channel dynamics and be tailored to conform to both immediate restoration needs and resilience to extreme events and changing conditions.
#9	The long term view of the Ecosystem Restoration Plan will consider the buildout condition of the Study Area represented by all current City and County General Plans and the expected evolution of stream/riverine process within the Study Area.

Table 1-2. Auburn Ravine/Coon Creek CRMP Objectives

Ecosystem Restoration Plan Objectives Adopted by the Auburn Ravine/Coon Creek CRMP	
#10	<p>The guiding principles to be used in the assessment to develop specific restoration project proposals or management recommendations are as follows:</p> <ul style="list-style-type: none">• Conformance with long term watershed and channel evolutionary processes;• Conformance with short term dynamic equilibrium of channel conditions;• Emphasis on “cause” factors rather than “symptom” factors;• Consideration of facility modification and restoration based upon short and long term Plan Objectives when “cause” is determined to be an instream or corridor facility,• Low maintenance requirements and resilience to normal dynamics, extreme events, and changing conditions,• Developing “success” criteria for selected key-resources elements,• Use of best available science and resource assessment where practicable, and• Use of defensible science and resource assessment in developing restoration projects and management recommendations.
#11	<p>The Ecosystem Restoration Plan will include a strategy for ecosystem restoration to include:</p> <ul style="list-style-type: none">• Identification of restoration projects;• Prioritization of restoration projects based on objective criteria,• Identification of possible funding sources for restoration projects,• A mechanism to advertise, solicit, and/or accept restoration project proposals; and to screen and make proposed project approval recommendations,• A monitoring process to review management recommendations and restoration projects to determine degree of success, and• A mechanism to modify restoration project approaches and management recommendations based on results of the monitoring process.
#12	<p>Additional assessments or research on channel, riverine corridor, and watershed processes may be accomplished through alternative funding source.</p>
#13	<p>The Ecosystem Restoration Plan will be conducted on behalf of the Auburn Ravine/Coon Creek CRMP and will be designed and executed through a consensus building process by the CRMP participants. This may include a formal approval process by the involved public agencies.</p>

General Watershed Descriptions

This ERP focuses on the restoration of three major watersheds, which include Auburn Ravine, Markham Ravine, and Coon Creek. Doty Ravine, a tributary of Coon Creek, and associated tributaries are located within the Coon Creek watershed (Figure 1-4). These four watersheds covered by the ERP are located north of the American River watershed and northeast of Sacramento, California (Figure 1-1). The headwaters of Auburn Ravine and Coon Creek are located in the western Sierra Nevada foothills near the Town of Auburn, California. Doty Ravine originates just west of the Town of Auburn. Markham Ravine, which is located between Auburn Ravine (south) and Coon Creek (north), originates just east of the City of Lincoln. Auburn Ravine, Markham Ravine, and Coon Creek all discharge flows into the East Side Canal in southeastern Sutter County. The East Side Canal then flows into the Cross Canal, which discharges into the Sacramento River near Verona (Figure 1-1). General descriptions of the four watersheds located within the ERP planning area as well as the East Side and Cross Canals are provided in the following discussion. Detailed descriptions of these watersheds are provided in the Watershed Assessment Report, Chapters 3-9 of this document.

Auburn Ravine

Auburn Ravine originates on the north side of the City of Auburn (Figure 1-3). At its confluence with East Side Canal, Auburn Ravine drains approximately 79 square miles. The elevation of the basin ranges from 1,600 to 30 feet above mean sea level (msl). The stream flows through the middle of Auburn, where it is channelized, contained in a highly restricted natural channel, or passes through a variety of culverts. The land adjacent to this portion of the watershed is highly urbanized. Immediately west of the City of Auburn, the character of the channel changes, adjacent land uses change, and water from various sources (discussed in Chapter 4: Water Resources Management) is added to the channel. From the western edge of the town of Auburn to west of Lozanos Road, the channel is high gradient, incised in a narrow canyon, and consists of a number of cascades and pool riffle complexes. The geology is a combination of basalt and granite bedrock. Adjacent land use is generally rural residential with minimal encroachment by development on the channel and floodplain. Just east of Gold Hill Road, the channel gradient decreases to approximately 2% and the channel becomes dominated by pools, runs, and riffles. Channel substrate is dominated by various sized gravels and coarse sediment. These habitats continue downstream into the City of Lincoln. Within the city limits of Lincoln, the channel transitions from a pool/riffle channel with high levels of sediment to a sand-bottomed, low gradient stream. The stream retains this channel type downstream to its confluence with the East Side Canal. In this reach, the channel varies from unconfined with full access to the floodplain to tightly constrained between immediately adjacent levees.

Insert Fig 1-4

Markham Ravine

Markham Ravine originates in low elevation hills northeast of the City of Lincoln (Figure 1-3). Land uses in this area include rural residential with large parcels (>5 acres) and mixed farming and ranching uses. The channel is poorly defined and, due to runoff from irrigation and seasonal flows, supports a predominance of wetland vegetation. Near SR 65, the channel becomes more distinct and passes through industrial, light industrial, and rapidly urbanizing areas located in the western side of Lincoln. West of the City of Lincoln, the channel passes through a mixture of farms and ranches, including pastures used for grazing as well as rice and other grain farming. In this reach of Markham Ravine, the channel generally has no flow, but does support water from irrigation return flows and seasonal surface runoff from floods and rainfall. Riparian and wetland vegetation are associated with the channel. Markham Ravine empties into the East Side Canal approximately one mile north of Auburn Ravine.

Coon Creek

The Coon Creek watershed originates in the foothills north and east of the City of Auburn, near Clipper Gap (Figure 1-3). The watershed east of SR 49 is primarily composed of two intermittent tributaries, Dry Creek and Orr Creek, which eventually merge approximately one mile west of SR 49 to form Coon Creek. Downstream of this juncture, Coon Creek has continuous flow because discharge from Placer County's wastewater treatment plant on Joeger Road flows into Rock Creek and then into Dry Creek. Over the next six to eight miles, the creek then flows westward through a rural residential area into a steep, undeveloped canyon crossing through large parcels of ranch land. The adjacent land is used for grazing and supports minimal infrastructure development. Vegetation associated with this reach of Coon Creek consists of a combination of oak and riparian woodlands and some open wetland floodplain terraces. The stream channel is dominated by basalt and granite bedrock and large cobble. Waterfalls in the canyon area currently limit upstream passage of anadromous fish passage. Near McCourtney Road, the character of the stream changes as it moves into the valley floor. The stream passes through a variety of meadows with erosive banks composed primarily of sand sized particles and becomes low gradient. In this reach, vegetation within the adjacent riparian corridor ranges from complete canopy coverage and vegetatively stabilized banks to locations devoid of vegetation. In the area west of Gladding Road, for a distance of approximately five miles, the channel and riparian corridor are heavily impacted by livestock grazing. As a result, water quality within this reach of the stream deteriorates precipitously. The remainder of the stream channel, down to its confluence with the East Side Canal, is narrow, generally shallowly incised, and meanders through intensively farmed adjacent floodplains. High flow events are not contained within the channel and extensive overland flow occurs. The defined channel supports a closed canopy riparian corridor.

Doty Ravine

Doty Ravine, which flows into Coon Creek just east of SR 65, originates just west of the town of Auburn (Figure 1-4). The stream flows westerly off the foothills through an oak

dominated woodland and supports extensive riparian vegetation until about Gladding Road. Adjacent land use is primarily rural residential and ranching, with no intensive agricultural impacts. The stream channel is generally comprised of gravel and cobble substrate, with some larger granitic boulders. Sediment in the channel bottom is generally extensive. From Gladding Road westerly to the stream's confluence with Coon Creek just east of SR 65, the channel flows through intensive ranching areas and is heavily disturbed.

East Side Canal

The East Side Canal is oriented north/south in southeastern Sutter County (Figure 1-1). It intercepts all of the watersheds north of the community of Pleasant Grove in Sutter County, including Coon Creek, Markham Ravine, and Auburn Ravine. This 4.5-mile canal funnels flood waters, natural flows, and agricultural return flows, which historically flowed individually into the Sacramento River or southward into the Cross Canal and, ultimately, into to the Sacramento River. The East Side Canal serves as a flood management structure with a major levee on the west side of the canal. The channel is characterized as low gradient with many standing pools. Riparian vegetation is generally absent due to periodic levee maintenance and herbicide applications on adjacent farmlands. However, the channel does have a variety of rooted aquatic vegetation, such as cattails, and riparian shrubs including willows. The area provides a variety of habitats for fish and numerous other wildlife species.

Cross Canal

The Cross Canal is the outlet channel for all of the watersheds intercepted by the East Side Canal and those from the south, including Curry Creek, and Pleasant Grove Creek (Figure 1-1). The Cross Canal discharges the water from western Placer and southeastern Sutter counties into the Sacramento River near Verona. The Cross Canal is a straight channel approximately five miles in length and is lined with high levees on both sides. These levees are rigorously maintained and generally devoid of vegetation. However, the channel between the levees is wide enough to accommodate flood flows and, as a result, a small, confined floodplain supporting associated riparian vegetation is present. This area is subject to periodic backwatering when flow elevations in the Sacramento River rise. In addition, the flooded vegetation provides habitat suitable for the Sacramento splittail, a native fish species listed as threatened under the auspices of the federal Endangered Species Act (ESA).