

SUPPLEMENTAL  
MITIGATED NEGATIVE DECLARATION  
FOR THE  
Scott River Bioengineered Streambank Enhancement  
State Clearinghouse# 2014052061



*Aerial Photograph of the Scott River at River Mile 42, oriented in a southerly direction (upstream).*

Prepared By:

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This Report Has Been Prepared Pursuant to the  
California Environmental Quality Act of 1970

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- A. Final Construction Plans
- B. Revegetation Plan
- C. Botanical Survey
- D. Avian Resources Report
- E. Dewatering Plan and Turbidity Control Measures

## **California Environmental Quality Act Checklist**

### **1. Project Title:**

Scott River Bioengineered Streambank Enhancement Project (subsequently named the Scott River Stream Restoration and Sediment Reduction Program).

### **2. Lead Agency Name and Address**

Siskiyou Resource Conservation District  
P.O. Box 268  
Etna, CA 96027  
(530) 467-3975

### **4. Project Location**

The proposed activities are to be performed in Siskiyou County on the Scott River, a tributary to the Klamath River. The Scott River Bioengineered Streambank Enhancement Project involves the bioengineered stabilization of two eroding streambanks located at River Mile 42 and River Mile 53. The River Mile 53 site was implemented in 2014. This Supplemental Mitigated Negative Declaration applies to the site at River Mile 42 (River Kilometer 67) on the Rancho del Sol property (PLSS Township 42 N, Range 09 W, Section 14). The geospatial coordinates are N 41° 29' 37.19" W 122° 50' 50.24".

### **5. Project Sponsor's Name and Address**

North Coast Regional Water Quality Control Board  
5550 Skylane Blvd Ste A  
Santa Rosa, CA 95403-1072

U.S. Fish and Wildlife Service  
1829 South Oregon Street  
Yreka, CA 96097

### **6. General Plan Designation(s)**

Agricultural Cropland and Grazing (A-cg)

### **7. Zoning:**

Agriculture

### **8. Description of Project**

Under section 303 (d) of the Clean Water Act, the U.S. Environmental Protection Agency included the Scott River in the list of impaired waters for excessive levels of suspended sediment and elevated water temperature in 1992 and 1998, respectively. While water temperature is one of the most limiting parameters for salmonid habitat suitability, excessive sedimentation and stream

aggradation can negatively impact habitat quality and carrying capacity throughout freshwater life stages. The Action Plan for the Scott River Total Maximum Daily Loads (TMDLs), adopted by the North Coast Regional Water Quality Control Board in 2005, identified “Small Discrete Streamside Features, Other” (including stream bank failures not associated with harvest or mining) as the principal source of anthropogenic sediment loads and increased solar radiation from the reduction of shade provided by riparian vegetation as the primary cause of elevated water temperatures (NCRWQCB, 2005). Completion of the streambank stabilization and revegetation activities described here will directly address the primary anthropogenic sources of both sediment and temperature contributions to the Scott River, thereby supporting water quality standards, identified beneficial uses, and anadromous fish populations.

The *Scott River Bioengineered Streambank Enhancement Project* (now part of the *Scott River Stream Restoration and Sediment Reduction Program*) was established to continue the planning, development and implementation of stream and riparian restoration activities. The objectives of this work are as follows:

- Restore natural stream processes within the Scott River to improve channel morphology, reduce sediment loads and protect adjacent agricultural lands
- Improve the extent, stability and condition of the riparian corridor
- Improve the quantity and quality of instream salmonid habitat

This 2018 Supplemental Mitigated Negative Declaration (MND) applies only to the project site at River Mile 42 (River Kilometer 67), also referred to as the Rancho del Sol project site. The study area encompasses a 15-acre section of the floodplain from a private bridge downstream to the property line (Figure 1). Within this area, the Siskiyou Resource Conservation District (SRCD) will be working to restore natural stream processes through the treatment of approximately 815 feet of the western bank, 50 feet of the eastern bank and the revegetation of approximately 2 acres.

The Scott River at River Mile 42 is characterized by an entrenched channel with a moderate to high width/depth ratio. The river has some sinuosity with a slope of less than 2%. The dominant substrate is gravel and sand, with little instream complexity from woody debris. The western bank is nearly vertical in most locations and composed of prime agricultural soils with clay. There are sparse riparian shrubs at the toe of the bank, no vegetation on the top of the bank providing canopy cover and patches of invasive weed species. The eastern bank was protected with rock rip-rap in 1977 which is now failing, however, there exists a moderate density of riparian species along the slope with well-established canopy cover. This section of the Scott River provides spawning habitat for Chinook salmon and migratory habitat for other anadromous species, including coho salmon.

The western bank is degrading as evidenced by active erosion and continued impacts to the extent and diversity of riparian species. The top of the bank has migrated by approximately 100 feet over the past 5 years (Figure 1). The eastern bank is recovering with vegetation maturity, density and canopy coverage improving; however, failing of the rock rip-rap has introduced vulnerability. Existing conditions at the Rancho del Sol project site suggest continued erosion of the western

streambank thereby increasing pressure on compromised portion of the eastern streambank, which may result in a mass wasting event.

Stream restoration at Rancho del Sol aims to address nonpoint source impairments to the Scott River by stabilizing erosional streambanks and initiating the establishment of an integrated riparian corridor. The Final Construction Plans (Attachment A) and Revegetation Plan (Attachment B) have been included with this Supplemental MND for public review. The site plan consists of bioengineered structures, recontouring of the western terrace and riparian planting that together are intended to realign the stream processes of this reach with adjacent reaches. The treatment concepts are described here beginning at the top of the project site and moving downstream.

The introductory section of the western bank will be stabilized with alternating rootwads and ballast boulders (engineered log jam (ELJ) Type C) to protect the area where erosional forces begin to interface with the bank and to support any potential slumping that occurs in the future. This will be followed by three ELJs (Type B) designed to deflect the thalweg off the bend and reduce water velocities near the bank. In order to reduce the subsequent meander curvature and improve flood conveyance, the SRCD plans to recontour the terrace and floodplain below this point. This will involve 1) excavating a portion of the lower terrace to an elevation similar to the opposite bar 2) enhancing existing flow channels through the floodplain to allow for more frequent access and 3) removing the tip of the gravel bar to provide additional space for flow in the main channel. Extracting material that is promoting the abrupt transition of the channel from the west to the east (and is positioned for continued erosion) is necessary to initiate stream processes that will reduce pressure (flow, velocity and sheer stress) against the banks. Excavation has been designed to work with existing topography and minimize disturbance to riparian vegetation. Willow clumps will be salvaged from this area for placement elsewhere. The eastern bank will be treated with two consecutive ELJs (a Type A, “apex jam” followed by a Type B) to deflect impinging flows away from the bank. The ELJs installed on both the western and eastern banks will provide cover to

Rancho del Sol - Scott River RKM 67 - Streambank Stabilization Project  
Top of Bank - 2013 and 2017

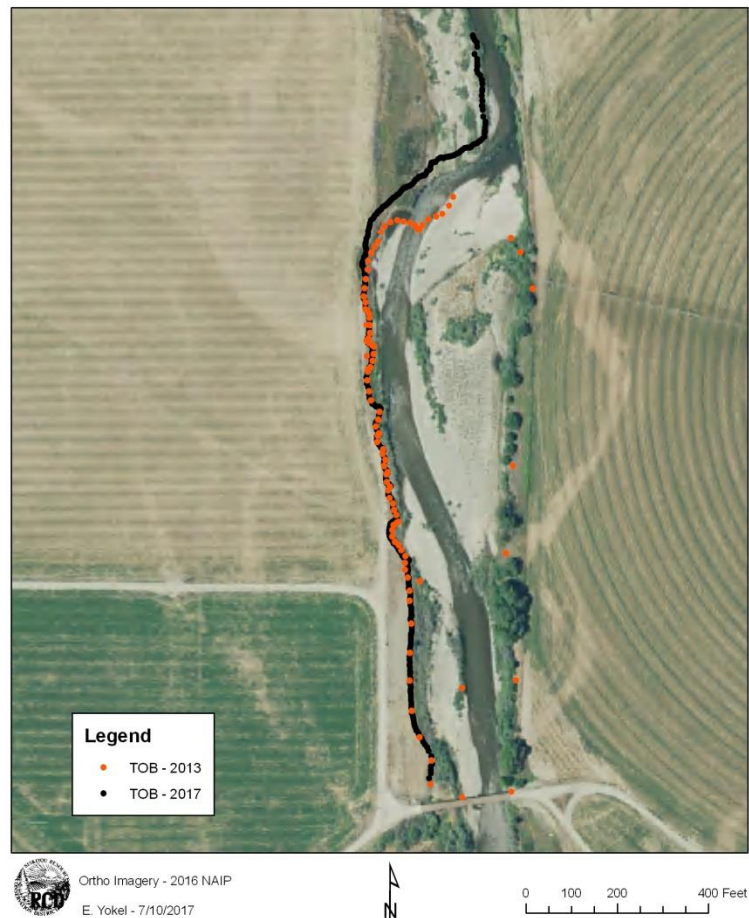


Figure 1. Rancho del Sol study area and comparison of western top of bank (TOB) from 2013 -2017.



aquatic species, sort spawning gravels and aid natural vegetation recruitment. Finally, revegetation efforts will occur across excavated and re-graded areas (including where the newly excavated overflow channels reenter the main channel), along the constructed toe, in the ELJs, and through the bank, floodplain and terraces. The purpose of these plantings is to initiate the establishment of native riparian vegetation communities, improve soil cohesion and provide shade. Planting within the ELJs and through the instream bank zones will be implemented during the construction phase of the project and will only involve native plant species, primarily willow. Floodplain and terrace plantings will occur during late winter or early spring.

### Construction Methods

The SRCD will be utilizing appropriate protection measures to avoid and minimize adverse impacts to the environment during project implementation. A licensed, insured and bonded Construction Subcontractor with detailed experience completing in-stream and riparian habitat construction will be secured to complete the work. All construction will be completed within the seasonal streambed alteration work window (July 15<sup>th</sup> through October 15<sup>th</sup>) and is planned to occur between September 15<sup>th</sup> and October 15<sup>th</sup>, when the stream is at base-flow conditions. In the instance that work needs to be completed past October 15<sup>th</sup>, the SRCD will request approval from the California Department of Fish and Wildlife (CDFW) before moving forward.

There is an existing road around the agricultural field adjacent to the river that will be used to access the project site. The terrace and agricultural field will be employed as the staging, storage, and re-fueling area for all machinery, equipment and materials, as identified in the Construction Plans on Sheet 2. During project implementation, the Contractor will only be clearing vegetation where necessary for the installation of the project. This is anticipated to involve primarily willow bushes but may include small riparian trees. Whenever possible, immediately impacted vegetation will be relocated. In areas requiring excavation the contractor will grub and remove material to a depth necessary to complete excavation. All excavation, filling, and backfilling will be done to the lines and grades indicated on the Construction Plans and will maintain benchmarks and reference points.

The Project Coordinator will be present during procurement and installation of the large woody debris features to ensure that materials are appropriate, and the best techniques are utilized. Trees, such as juniper, pine or other approved species, will be acquired from the property (outside the boundaries of the project site) using heavy equipment so that the root mass and trunk are intact. Approximately 98 pieces of large wood will be obtained for use in-stream. The rootwads will consist of stout roots (a minimum of 2 inches in diameter) and will be in good condition, free from rot, damage such as fractures, and washed to remove soil. The ELJs will be constructed according to their type (A, B or C), with the general procedure involving the excavation of the structure footprint, installation of the base member, placement of key members (in layers where necessary), driving of batter piles and placement of ballast boulders. Ballast rock will be angular to sub-rounded in shape and used in the quantities specified in the Construction Plans to secure the structure and prevent it from mobilizing during high flow events. Rootwad and ballast rock placement will be inspected by the Engineer or Project Coordinator. Lastly, the structures will be

backfilled with gravel and slash will be added for in-stream habitat complexity. All fill material for embankment construction will be sourced onsite unless otherwise specified by the Engineer.

All areas disturbed by the contractor during construction operations will be bladed smooth, shaped, and compacted. The construction footprint is anticipated to be 5.24 acres. All SRCD staff and project subcontractors will be familiar with and retain on site, a copy of all environmental compliance documents

Materials to be utilized as part of implementation include tree trunks with intact rootwads, boulders, cobble, galvanized steel cable, vegetative cuttings (cottonwood and willow species), straw and native grass seed. Materials will be staged in the adjacent agricultural field or terrace, as identified in the Construction Plans on Sheet 2. Any excess materials remaining after implementation will be transported to a yard selected by the SRCD for use at another project site.

Excavated spoils will consist of alluvial material sourced from the stream bed, bank and/or floodplain. All spoils will be transported to the western terrace just upstream of the project site, as identified in the Construction Plans on Sheet 2. The spoils will be piled against an existing berm that is removed from the active channel and flood zone, and a straw buffer will be placed around the piles to protect from runoff. In addition, all disturbed areas will be seeded with a native grass mix and mulched with weed-free straw to prevent erosion into waterways.

Riparian planting will be completed in conjunction with the ELJs utilizing willow clumps, bundles and poles as well as cottonwood poles, and if applicable pine plugs. Existing willow within the floodplain will be used as the source of vegetative material, cottonwood and pine will be sourced off-site. Willow bushes that need to be removed as part of the normal course of construction will be relocated where possible. They will be acquired with the roots intact (clumps) using an excavator and re-planted into the toe of the bank. Willow stems will also be harvested, bundled and buried within the ELJs, along the toe of the bank and where the overflow channels re-enter the main channel. Revegetation will only involve native plant species. There will be additional plantings through the floodplain and terrace as detailed in the Revegetation Plan (Attachment B).

The project has been designed, and will be constructed, to prevent and minimize adverse impacts to the environment. Joey Howard of Cascade Stream Solutions has developed the Final Construction Plans in coordination with the SRCD, CDFW, and the U.S. Fish and Wildlife Service (US FWS). Project designs utilize techniques detailed in the *Streambank Soil Bioengineering Field Guide for Low Precipitation Areas* (Hoag and Fripp, 2002) as well as the *California Salmonid Stream Habitat Restoration Manual* (Flosi et al, 2010). The improvement of stream channel morphology and anadromous fish habitat through the installation of in-stream large woody debris features, bank stabilization efforts, and riparian vegetation restoration is recommended in two of the most important recovery strategies for coho salmon in California: *Recovery Strategy for California Coho Salmon*, California Department of Fish and Game, 2004 and *Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant Unit of Coho Salmon*, National Oceanic and Atmospheric Administration, 2014.

Maintenance

The SRCD will be performing maintenance of the project site as needed over the 5-year term of the Streambed Alteration Agreement. Maintenance will involve hand labor where applicable but may require heavy equipment to repair damaged or underperforming aspects of the project. Depending upon the stream response, maintenance activities may include, but are not limited to modifying/installing large woody debris features, riparian planting, rock protection or weed management. The SRCD will coordinate with CDFW if maintenance is planned to involve heavy equipment and organize pre-construction biological surveys for work between February 1<sup>st</sup> and August 31<sup>st</sup>.

## 9. Surrounding Land Uses and Setting:

The project site is located within the Scott River mainstem and will involve work within the lower terrace, floodplain and active channel. Land use adjacent to the project site includes irrigated alfalfa and grass fields.

## 10. Other Public Agencies Whose Approval is Required:

- California Department of Fish and Wildlife – Streambed Alteration Agreement
- State Water Resources Control Board – Water Quality Certification
- Army Corp of Engineers – Permit pursuant to Clean Water Act Section 404
- National Marine Fisheries Service – Endangered Species Act Consultation

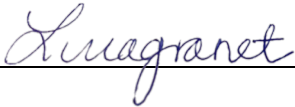
## Environmental Factors Potentially Affected

Environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist below.					
	Aesthetics		Agriculture Resources		Air Quality
X	Biological Resources		Cultural Resources		Geology /Soils
	Hazards & Hazardous Materials		Hydrology / Water Quality		Land Use / Planning
	Green House Gas Emissions		Transportation/Traffic		Population / Housing
	Mineral Resources		Noise		
	Public Services		Recreation		
	Utilities / Service Systems	X	Mandatory Findings of Significance		

**Determination:** Based on this initial evaluation

I find that the proposed Project <b>COULD NOT</b> have a significant effect on the environment, and a <b>NEGATIVE DECLARATION</b> will be prepared.
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<b>X</b>	I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this situation because Project Proponent made revisions. A <b>MITIGATED NEGATIVE DECLARATION</b> will be prepared.	
	I find that the proposed Project <b>MAY</b> have a significant effect on the environment, and an <b>ENVIRONMENTAL IMPACT REPORT</b> is required.	
	I find that the proposed Project <b>MAY</b> have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. <b>An ENVIRONMENTAL IMPACT REPORT</b> is required, but it must analyze only effects that remain to be addressed.	
	I find that although Project could have a significant effect on the environment, because all potentially significant effects: (1) have been analyzed adequately in an earlier <b>EIR</b> or <b>NEGATIVE DECLARATION</b> pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier <b>EIR</b> or <b>NEGATIVE DECLARATION</b> , including revisions or mitigation measures imposed upon proposed Project, nothing further is required.	
Signature 		Date 8-16-2018
Printed Name Lindsay Magranet, Acting District Manager		

### Evaluation of Environmental Impacts

A Mitigated Negative Declaration for the *Scott River Bioengineered Streambank Enhancement* was approved in 2014 (SCH# 2014052061). This 2018 Supplemental Mitigated Negative Declaration serves to address conditions and impacts that have changed and come to the attention of the SRCD since 2014. Environmental impact disclosure and discussion will only be completed for areas of interest that have changed since 2014 (Biological Resources and Mandatory Findings of Significance). Discussion of all other environmental factors potentially affected can be found in the 2014 CEQA document.

### IV. Biological Resources

IV. BIOLOGICAL RESOURCES - Would project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or Service?		<b>X</b>		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or Service?			<b>X</b>	
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				<b>X</b>
d. Interfere substantially with movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		<b>X</b>		
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				<b>X</b>
f. Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				<b>X</b>

## Discussion:

### No Impact (c, e, f)

c. The project will not have any impact on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct fill/removal, hydrological interruption, or other means. The SRCD consulted the National Wetlands Inventory developed by the US FWS as a starting point for determining areas of potential impacts (US FWS, 2018a). The database indicated that there was the possibility of Freshwater Emergent Wetlands (herbaceous marsh, fen, swale, or wet meadow) to exist through a portion of

the river left (western) terrace. However, field review completed by the SRCD and the US FWS established that there are no wetlands present and that the site is not suitable for the development of these wetland habitats. Therefore, project implementation will have no short or long-term impacts on wetlands.

e. The project does not conflict with any local policies or ordinances protecting biological resources (i.e. tree preservation policy or ordinance, etc.). All activities will conform to federal and state regulatory requirements such as the Endangered Species Act, and the Clean Water Act and CDFW regulations. To the best of our knowledge there are not any stronger applicable local policies or ordinances protecting biological resources.

f. The project does not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plans; rather, this project complements strategic objectives of both federal and state coho salmon recovery plans.

### **Less Than Significant Impact (b)**

b. The project will have a less than significant adverse effect on any riparian habitat or other sensitive natural vegetation community identified in local or regional plans, policies, and regulations or by the CDFW or US FWS. The SRCD organized botanical surveys of the project site and surrounding area, which determined that there are not any special status plant species requiring consideration. The project has been designed to have minimal, short-term impacts to existing riparian vegetation and is intended to improve the stability, extent and condition of the riparian zone over the long-term. As such, impacts to riparian habitat are considered less than significant and will not require mitigation.

### **Less Than Significant Impact with Mitigation Incorporated (a, b, d)**

a. The project will potentially have a significant adverse effect, through habitat modifications, on species identified as a candidate, sensitive, or special status species; however, this effect is temporary and will be less than significant with the avoidance, minimization and mitigation measures for bank swallows as described below.

d. The project could potentially interfere significantly with movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors; however, this effect will be temporary and will be less than significant with the avoidance, minimization and mitigation measures for bank swallows as described below.

## **Biological Resources Description and Mitigation**

### **Special Status Plants and Animals**

Special status plants and animal species with the potential to be found in the project area, due to habitat type and/or migration patterns, can be found in Table 1 (US FWS, 2018b and CDFW, 2018). Additional special status species (invertebrates, amphibians, mammals) occur within the watershed; however, it has been determined that they do not exist within project site as there is no appropriate habitat.

Table 1. Special status species potentially occurring in the study area.

Common Name <i>Scientific Name</i>	Current Status	General Habitat Description	Comments	Likelihood of Occurrence
S. Oregon/N. California Coho Salmon  <i>Oncorhynchus kisutch</i>	Federally Threatened, State Threatened	Spawning occurs in heads of riffles or tails of pools with beds of loose gravel (< 15 cm average diameter) and deep pools, undercut banks, or logs nearby.	Spawning can occur in Scott River corridor.	High
Golden Eagle  <i>Aquila chrysaetos</i>	California Fully Protected	Golden Eagles nest on cliffs and steep escarpments in grassland, chaparral, shrubland, forest, and other vegetated areas.	Hunts in the Scott River corridor.	Low
Ferruginous Hawk  <i>Buteo regalis</i>	None	Arid and semi-arid grasslands. One requisite of the habitat is perches such as poles, lone trees, knolls, rocky outcrops or large boulders	Potentially occur in trees in riparian corridor adjacent to project site.	Low
Bald Eagle  <i>Leucocephalus</i>	California Endangered	The bald eagle typically requires old-growth and mature stands of coniferous or hardwood trees for perching, roosting, and nesting.	Project site does not provide habitat	Low
Prairie Falcon  <i>Falco mexicanus</i>	None	Grasslands, shrub-steppe, deserts, and other open areas of the West up to about 10,000 feet elevation	May reside in cultivated fields during winter.	Low
Bank Swallow  <i>Riparia riparia</i>	California Threatened	Found primarily in riparian and other lowland habitats west of the deserts during the spring fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes.	Bank Swallow nest within the Scott River corridor.	High
Willow Flycatcher <sup>1</sup>  <i>Empidonax trailii</i>	California Threatened	Broad, open river valleys or large mountain meadows with high foliage volume willows. Riparian habitats commonly occur in wider riparian zones with large patches of high density willows.	Project site provides habitat	High
Wooly Balsamroot  <i>Balsamorhiza lanata</i>	California Rare Plant Rank 1B.2	Perennial herb found in rocky and/or volcanic cismontane woodlands from 800 to 1,895 meters (CNPS, 2013).	Project site does not provide habitat	Low
Scott Valley phacelia  <i>Phacelia greenei</i>	California Rare Plant Rank 1B.2	Annual herb found in serpentinite closed-cone, lower montane, subalpine, and upper montane coniferous forests from 800 to 2,440 meters	Project site does not provide habitat	Low
Coast sidalcea  <i>Sidalcea oregano ssp. eximia</i>	California Rare Plant Rank 1B.2	Freshwater-marsh	Project site does not provide habitat	Low

Mountain Lady's Slipper  <i>Cypripedium montanum</i>	California Rare Plant Rank 4.2	Open mixed conifer or mixed conifer hardwood forests, forest openings, shrub thickets and alpine meadows. Elevation ranges 500 to 2100 meters. Associated tree species include Douglas-fir, various species of fir, lodgepole pine, Ponderosa pine, quaking aspen, and oak.	Project site does not provide habitat	Low
Scott Valley Buckwheat  <i>Eriogonum umbellatum</i> var. <i>lautum</i>	California Rare Plant Rank 1B.1	Perennial herb found in sandy to gravelly flats of cismontane woodlands and lower montane coniferous forests from 800 to 900 meters (CNPS, 2013).	Project site does not provide habitat	Low

### **Special Status Plant Presence and associated Avoidance, Minimization and Mitigation:**

A Rare Plant Survey was completed for the project site by Whipple Botanical Consulting on July 18, 2017 (refer to the Botanical Survey, Attachment C). It was determined that most of the plants present in the project area, including the river bottom, are non-native. No special status plant species were observed in the project area or the immediate vicinity, therefore no species specific avoidance, minimization of mitigation measures are required. Best Management Practices will be followed to prevent the spread of noxious weeds. Equipment will be inspected at a designated staging area and, if necessary, decontaminated by physical removal methods (eg. brushing or high-powered washing) prior to entering the work site and before leaving the work site. The SRCD will be utilizing weed-free erosion control materials and monitoring the site for additional noxious weed infestations post-construction.

Direct Impacts: Some components of project implementation, particularly re-grading through the floodplain and terrace, will involve disturbances and removal of riparian vegetation (primarily sandbar willow and pacific willow), however, other components of the project will involve the planting of native riparian species. As such, the SRCD has determined that adverse impacts to vegetation will be less than significant on riparian habitat quality. Wherever possible, impacted willows will be salvaged and replanted within the project reach. Some willow bushes (primarily sandbar willow and pacific willow), will be removed and/or thinned for use as planting stock for bare areas within the floodplain and terrace, but the SRCD will oversee that removal will not involve more than one-third of existing willow stands. These practices will minimize overall disturbances to riparian vegetation, and in combination with the proposed Revegetation Plan are intended to result in a net increase in the distribution of vegetation communities through the project area.

Indirect Impacts: Over the long-term, project implementation is intended to improve the extent, stability and condition of the riparian corridor through the treatment of erosional banks, which are currently impacting vegetation longevity, and the maturation of plantings.

Revegetation efforts throughout the treatment area are integral to insuring long-term stability of the streambanks and to the development of a functional riparian corridor through the project reach. Planting efforts will occur across excavated and re-graded areas (including where the newly excavated overflow channels reenter the main channel), along the constructed toe, within the ELJs, and through the bank, floodplain and terraces. Refer to the Revegetation Plan for details on the proposed planting methods, plots, maintenance and monitoring (Attachment B).

**Special Status Bird Presence and associated Avoidance, Minimization and Mitigation:**

The SRCD coordinated with the US FWS to evaluate and address impacts to various types of avian species (refer to the Avian Resources Report, Attachment D). Note that the SRCD will be organizing a pre-construction survey no more than one week prior to equipment mobilization to verify that no bird species listed as endangered, threatened, proposed, candidate, fully protected, species of special concern or classified as migratory birds or birds-of-prey are present at the project site in preparation for construction. Should any of these avian species be present, a non-disturbance buffer of 200 feet will be established around the birds, and they shall be monitored by the SRCD to ensure no impacts occur. No vegetation removal or construction activities will be allowed within this non-disturbance buffer until the birds have dispersed as verified by a professional biologist. Results of the pre-construction survey will be sent to CDFW at: California Department of Fish and Wildlife, Attn: Janae Scruggs, 601 Locust Street, Redding, CA, 96001. Some additional information for the bird species listed in Table 1 as having a likelihood of occurrence at the project site:

**Raptors:** The SRCD has determined that project implementation is unlikely to have any direct or indirect adverse impact on raptor species or their habitat due to their mobility, their ability to disperse of their own volition, and the habitat factors described below:

- Golden Eagles hunt through the Scott River corridor, however, there is extensive hunting ground available beyond the project site.
- Bald Eagles may pass over the project site, however, it is unlikely as there is not habitat within or near the project site that would lead them to hunt through this portion of the Scott River corridor.
- Ferruginous Hawks may reside in trees within the riparian corridor adjacent to or nearby the project site. However, trees are limited through this area of the Scott River, and construction is not anticipated to disturb any trees (only bushes). In fact, the project includes riparian tree plantings (cottonwood and/or pine) that may improve Ferruginous Hawk habitat over time.
- Prairie Falcons may reside in the cultivated fields adjacent to the project site particularly during winter months. Equipment will be temporarily staging in the alfalfa field after the last cutting, however, construction is not anticipated to disturb any ecological values of the field. It is possible that Prairie Falcon habitat will be preserved by protecting these agricultural fields from further erosion.

Due to the fact that raptor species could be present within the project area the SRCD will be employing the following avoidance measures (minimization and mitigation measures are not necessary as there will not be direct or indirect impacts to habitat):

- Avoiding raptor individuals:
  - The nesting season for raptor species (including post-fledge dependency) is generally concluded by August 31<sup>st</sup>. Project implementation is planned for completion between September 15<sup>th</sup> and October 15<sup>th</sup>. However, raptor species could be foraging through the project site during this timeframe.
  - To determine if raptors are present, a professional biologist will do a pre-construction survey no more than one week prior to equipment mobilization. The results of the pre-construction survey will be sent to the CDFW at: California Department of Fish and Wildlife, Attn: Janae Scruggs, 601 Locust Street, Redding, CA, 96001
  - Should raptor species be present, a non-disturbance buffer of 200 feet will be established around the birds, and they shall be monitored by the SRCD to ensure no impacts occur. No vegetation removal or construction activities will be allowed within this non-disturbance buffer until the raptors have dispersed as verified by the professional biologist.

**Bank Swallows:** According to the US FWS Avian Resources Report, bank swallow habitat requirements and life history are described as follows:

*Bank Swallows are migratory birds that predominantly winter in South America. They return to their breeding grounds in California beginning in late March and early April. They vacate their breeding grounds as soon as the juveniles begin to disperse from the colonies around late June or early July and breeding areas are typically devoid of bank swallows by early August.*

*Bank Swallows nest in colonies and the size of the colonies are dependent upon the amount of suitable nesting habitat. Bank Swallow nests consist of a burrow with a nest cavity at the terminal end of the borrow. Nests are typically built in vertical banks with friable soils along streams, rivers, and ocean coasts. In California, the height of the vertical banks at nesting colonies range from 1.3 m to 7.3 m with an average of 3.3 m and most nest burrows are excavated in the top third of the bank. Preferred soil types for nesting include sandy loam, loamy sand, silty sand, loam, and sand while coarse gravelly soils are avoided. Bank Swallows also tend to avoid slopes for nesting that have vegetation or root mass that inhibit burrow excavation and unstable slopes that have slumping faces with aggregate material which increase susceptibility to predators.*

Field reviews performed on June 6<sup>th</sup> and 20<sup>th</sup> 2018 by US FWS Biologist, David Johnson, determined that bank swallow habitat and individuals exists within the boundaries of the project site (refer to the Avian Resources Report, Attachment D).

Direct impacts: Construction of the ELJs will require excavation into the streambank, which will directly impact approximately 175 linear feet. Of these 175 feet, it was determined that approximately 50 feet contain suitable nesting habitat and the remaining 125 feet does not contain suitable nesting habitat. Additionally, grading of the terrace and floodplain will remove the top two feet of the streambank along approximately 145 linear feet. Of these 145 feet, it was determined that approximately 30 feet of vertical bank at the upstream end of the terrace contains suitable nesting habitat and the remaining 115 feet does not contain suitable nesting habitat. Heavy



equipment access to the site, the dewatering process, construction of the apex jam, and deposition of spoils will have no impact on suitable nesting habitat. All project activities that have the potential to disturb individual birds and/or create noise above ambient levels will occur outside of the breeding season, and will have no direct effect on nesting behaviors.

Because the proposed Project will directly impact suitable nesting habitat, the SRCD and US FWS consulted with CDFW (Redding Office) to identify mitigation options to offset these direct impacts to bank swallow habitat.

Indirect impacts: It is anticipated that the ELJs will capture and store sediment, which overtime will promote the establishment of riparian vegetation. This process, along with the proposed plantings along the toe of the banks, could have an indirect impact on suitable nesting habitat between the ELJs as riparian vegetation may prevent or reduce future erosion at these locations. However, uncertainties including the frequency and magnitude of high water events, and how natural fluvial processes will affect the project reach over time, make quantifying these effects problematic. The SRCD, US FWS and CDFW (Redding Office) have determined that no mitigation efforts are necessary for potential indirect impacts.

Due to the presence of bank swallow individuals, nests, and habitat within the project area the SRCD will be employing the following avoidance, minimization and mitigation measures:

- Avoiding bank swallow individuals:
  - Bank swallows migrate south from late June to early July, with most breeding areas devoid of bank swallows by early August. Project implementation is planned for completion between September 15<sup>th</sup> and October 15<sup>th</sup>. For this reason, it is unlikely that any bank swallows will be present during construction.
  - To ensure this, a professional biologist will do a pre-construction survey no more than one week prior to equipment mobilization to verify that bank swallow have dispersed from the site. The results of the pre-construction survey will be sent to the CDFW at: California Department of Fish and Wildlife, Attn: Janae Scruggs, 601 Locust Street, Redding, CA, 96001
  - Should bank swallows be present, a non-disturbance buffer of 200 feet will be established around the colony, and the colony shall be monitored by the SRCD to ensure no impacts occur. No vegetation removal or construction activities will be allowed within this non-disturbance buffer until the young have fledged and the bank swallows have dispersed as verified by the professional biologist.
- Minimizing impacts to habitat
  - The SRCD worked with Cascade Stream Solutions to minimize impacts to bank swallow habitat during the design process. The main consideration involved leaving the streambank vertical between the ELJs instead of re-grading it to a shallower slope.
- Mitigating for loss of habitat
  - The SRCD will mitigate for nesting habitat that will be lost as a result of project implementation
  - The SRCD, in coordination with the US FWS and the landowner, have identified

- an off-channel location to construct new nesting habitat
- The identified site is a berm approximately 10 feet tall located a short distance upstream of the project site. The berm is out of the active river channel and is currently not suitable nesting habitat due to slope and/or the presence of vegetation.
- At a minimum, the SRCD will complete a 1:1 mitigation effort (as measured in linear feet), with the goal of creating a 1:1+ habitat mitigation (dependent on the availability of appropriate berm height).
- Heavy equipment will be utilized to construct a vertical face along the berm. This process will be overseen by the SRCD Project Coordinator and US FWS.
- The SRCD will be responsible for the constructed habitat site through October 2021. Any maintenance of the berm over this period will be completed by the SRCD in coordination with US FWS and CDFW personnel.
- After October 2021, active management of the site will be complete and the habitat will be allowed to evolve naturally. The landowner confirmed that he has no long-term plans for the general area, and he understands that the site would remain as bank swallow habitat if colonized within three years (by October 2021).

**Willow Flycatchers:** According to the US FWS Avian Resources Report, willow flycatcher habitat requirements and life history are described as follows:

*The Willow Flycatcher winters south from Mexico to Panama and returns to their breeding grounds in California from mid-May to mid-June. Fledging varies but is completed by the end of August and fall migration peaks from mid-August to mid-September.*

*In California, this species most often occurs in broad, open river valleys or large mountain meadows with lush, high-foliage volume willows. Willow Flycatchers typically select willow for nesting but may use other species of shrubs. In riverine habitats, nest sites most commonly occur in wider riparian zones with large patches of high-density willow.*

Field reviews performed on June 6<sup>th</sup> and 20<sup>th</sup> 2018 by US FWS Biologist, David Johnson, determined that willow flycatcher habitat exists within the boundaries of the project site, although, no individuals were observed during the survey (refer to the Avian Resources Report, Attachment D).

Direct impacts: Re-grading through the floodplain and sourcing revegetation stock will involve the removal of individual willow bushes but will not remove more than one-third of existing willow stands. Wherever possible, impacted willows will be salvaged and replanted within the project reach. Some willow patches will be thinned and used as planting stock for bare areas within the floodplain and terrace, but again the SRCD will oversee that removal will not involve more than one-third of existing willow stands. Additionally, all project activities that have the potential to disturb nesting birds and/or create noise above ambient levels will occur outside of the breeding season. Therefore, the SRCD has determined that this project will not have substantial direct effects on willow flycatcher nesting habitat or nesting birds.

Indirect impacts: There are no adverse indirect effects on suitable nesting habitat for willow flycatcher anticipated with this project. In fact, the proposed revegetation efforts should improve

the extent and density of riparian bushes, which may increase suitable nesting habitat for willow flycatcher within the project reach.

Due to the presence of suitable nesting habitat for willow flycatchers within the project area the SRCD will be employing the following avoidance and minimization measures (mitigation measures are not necessary as there will be no net loss in habitat):

- Avoiding willow flycatcher individuals:
  - Willow flycatchers migrate south from mid-August to mid-September. Project implementation is planned for completion between September 15<sup>th</sup> and October 15<sup>th</sup>. For this reason, willow flycatchers are not anticipated to be present during construction.
  - To ensure this, a professional biologist will do a pre-construction survey no more than one week prior to equipment mobilization to verify that willow flycatchers have dispersed from the site. The results of the pre-construction survey will be sent to the CDFW at: California Department of Fish and Wildlife, Attn: Janae Scruggs, 601 Locust Street, Redding, CA, 96001
  - Should willow flycatchers be present, a non-disturbance buffer of 200 feet will be established around the birds, and they shall be monitored by the SRCD to ensure no impacts occur. No vegetation removal or construction activities will be allowed within this non-disturbance buffer until the young have fledged and the willow flycatchers have dispersed as verified by the professional biologist.
- Minimizing impacts to habitat
  - The SRCD worked with Cascade Stream Solutions to minimize impacts to riparian habitat during the design process. The main consideration involved routing the overflow channels through existing pathways between vegetation.
  - The SRCD will oversee that vegetation removal will not involve more than one-third of existing willow stands.

### **Special Status Fish Presence and associated Avoidance, Minimization and Mitigation:**

The Scott River mainstem supports several fish species, including salmonids (coho salmon, Chinook salmon, steelhead trout), speckled dace, Klamath smallscale suckerfish, and three-spined stickleback. Of these, only coho salmon are considered a special status species (State and Federally Threatened). The following discussion on avoidance and minimization measures is focused on coho salmon but will work to protect other fish species.

**Coho salmon:** Coho salmon migrate through the Scott River watershed at various points in their life history. Adults generally return to the Scott River and spawn in the tributaries from early November to mid-January. Under unusual circumstances, such as the drought of 2014, spawning can occur through areas of the Scott River mainstem including the project reach. Coho eggs incubate in the gravels from about November through April, at which point they hatch and newly emerged alevins remain in the gravel. During this time, they are extremely vulnerable to adverse conditions including siltation and gravel disturbance. These juveniles emerge from the gravel as fry somewhere between March and July, at which point they can freely disperse. Coho salmon

generally rear for one full year in freshwater before out-migrating to the ocean. Rearing habitats utilized by juvenile coho salmon often include pools formed by large woody debris.

Direct Impact: The proposed activities will directly impact fish species and available habitat although these impacts will be temporary and less than significant. Because the project is planned for installation between September 15<sup>th</sup> and October 15<sup>th</sup> construction will not directly impact the vulnerable spawning, incubation, and alevian stages, all of which would experience significant adverse effects were water quality to be compromised. The presence of fish in other life stages through the project area is anticipated to be limited in the early fall due to low flow and high water temperatures. The SRCD will be temporarily diverting water around the work area to protect fish and water quality from being impacted by construction activities. This process will involve the relocation of fish by CDFW personnel, the transfer of the stream into excavated trenches and the installation of cofferdams with turbidity barriers. For additional detail refer to the Dewatering Plan and Turbidity Control Measures (Attachment E). The movement of equipment around the work area, installation of the ELJs and revegetation efforts along the toe of the bank will involve disturbances and alteration to the streambed, however, fish will not be present at this time and the purpose of these activities is to improve the quantity and quality of salmonid habitat. As such, substantial impacts to fish species will be avoided and prevented by the proposed dewatering and water quality protection measures.

Indirect Impact: No adverse indirect impacts to coho salmon are anticipated with this project. Overtime, the stabilization of the streambanks will protect water quality through reduced sedimentation and greater, more stable riparian cover and shading. The ELJs will also create large woody debris features, which are integral to functional salmon habitat. In the long-term, project implementation is intended to improve aquatic habitat stability and quality.

Due to the presence of suitable salmonid habitat within the project area and the potential presence of coho salmon and other fish species, the SRCD will be employing the following avoidance and minimization measures (mitigation measures are not necessary as there will be no net loss in habitat):

- Avoiding individual fish:
  - All construction activities will be completed within the seasonal low-flow period and are planned to occur between September 15<sup>th</sup> and October 15<sup>th</sup>, when the river is at base-flow conditions. According to discharge stations managed by the SRCD in previous years, flow on the Scott River at the project site is anticipated to be less than 5 cubic feet per second during this time. Furthermore, the SRCD has documented water temperatures in this region of the Scott River exceeding the suitable rearing thresholds for cold-water fish during drought years. For these reasons juvenile salmonids are not anticipated to be present during construction.
  - To ensure this, the SRCD will do a pre-construction survey no more than one week prior to equipment mobilization to verify that juvenile salmonids have dispersed from the site. Results of the pre-construction survey will be sent to CDFW at: California Department of Fish and Wildlife, Attn: Janae Scruggs, 601 Locust Street, Redding, CA, 96001

- The SRCD will coordinate with CDFW Biologists for the capture and relocation of fish and aquatic species prior to construction.
- Minimizing impacts to fish and habitat
  - To protect water quality during project implementation, the SRCD proposes to phase the diversion of water around the work area in accordance with the direction of flow and the construction sequence. All aspects of this procedure, including the movement of large equipment and the placement of spoils, have been designed in order to reduce impacts to water quality. The basis of this dewatering and turbidity control plan has been proposed to CDFW, and the SRCD will continue to coordinate with the Yreka Fisheries Office during the implementation of proposed measures. CDFW will be on site for wetted stream crossings. The specifics of the Dewatering Plan and Turbidity Control Measures can be found in Attachment E.
  - All excess spoils and materials from the work area shall be handled in a manner that will prevent them from re-entering the river and negatively impacting water quality.
  - Where appropriate, soil exposed by project operations shall be mulched and seeded with native grasses to prevent erosion and sediment runoff.
  - The SRCD will cease work and implement erosion control measures when there is a forecast of more than 30% chance of rain, or at the onset of any precipitation. Staging, storage, and re-fueling areas for machinery, equipment, and materials shall be located a minimum of 150 feet from the river. Any equipment or vehicles driven and/or operated within or adjacent to the river channel shall be checked and maintained daily to prevent leaks of materials that, if introduced to the stream, could have negative biological consequences. Absorbent materials designed for spill containment and clean-up activities will be kept onsite for use in an accidental spill.

### **XVIII. Mandatory Findings of Significance**

<b>XVIII. MANDATORY FINDINGS OF SIGNIFICANCE - Would project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation Incorporation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>

a. Does project have the potential to degrade quality of environment, substantially reduce habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b. Does project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and effects of probable future projects)?		X		
c. Does project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?				X

## Discussion:

### No Impact (c)

c. The Project will not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

### Less Than Significant Impact With Mitigation (a, b)

a. The project will potentially degrade the quality of environment or reduce habitat of a fish or wildlife species though only temporarily during the construction phase. Over this one-month time period, potential adverse effects will be managed through the avoidance, minimization and mitigation measures described above (IV. Biological Resources). Ultimately, the activities described here are identified in both State and Federal Plans as important to the protection and restoration of habitat for fish and wildlife. In the long-term, it is the objective of the project to improve habitat quantity and quality for anadromous and riparian species. The project will not cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal. In fact, the project is intended to address strategic recovery actions for threatened coho

salmon. The project will not eliminate important examples of major periods of California history or prehistory.

b. Multiple bank stabilization projects have been completed by the SRCD on the Scott River mainstem. Though these projects have impacts that are individually limited, the cumulative impacts have the potential to be considerable with regards to loss of bank swallow habitat. As such, the SRCD is mitigating for direct impacts to bank swallow habitat by developing an equal length of nesting habitat elsewhere on the Rancho del Sol property.

## **Monitoring and Adaptive Management**

Monitoring will include topographic surveys, photo documentation, direct observation biological surveys and planting survival assessments through October 2020. Monitoring will provide qualitative and quantitative information on the environmental response from the treatment, such as:

- Changes in fluvial form and function of the Scott River
- Efficacy of bank stabilization efforts
- Development of salmonid habitat
- Effectiveness of revegetation methods
- Utilization of mitigation habitat
- Management of noxious weed infestations

An understanding of these outcomes is essential for informing future stream restoration actions.

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