

State of California  
The Resources Agency  
Department of Fish and Game

93122003

Initial Study and Mitigated Negative Declaration

SCOTT RIVER STREAMBANK STABILIZATION PROJECT

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State of California  
The Resources Agency  
Department of Fish and Game

**MITIGATED NEGATIVE DECLARATION  
FOR THE PROPOSED  
SCOTT RIVER STREAMBANK STABILIZATION PROJECT**

**The Project:** The project will stabilize approximately three thousand five hundred (3,500) feet of streambank along the Scott River. The stream banks will be armored with rock and large boulders. Large boulder roughness element structures and vegetation will be incorporated into the armor to break up laminar flows and reduce water velocities along the armored stream banks. The boulder structures will provide resting areas for rearing juveniles and spawning adults.

Livestock exclusion fencing will be installed to along the armored stream banks. The fence will be designed to facilitate deer migration through the project area. The fence will be constructed with four strands of barbed wire and one strand of barbless wire. The maximum height of the fence will not exceed forty-eight inches and the bottom wire will be barbless and will be eighteen inches off the ground.

Willow, alder, poplar and cottonwood will be planted to reestablish riparian vegetation inside the livestock enclosure. The newly planted riparian vegetation will be irrigated to improve project success.

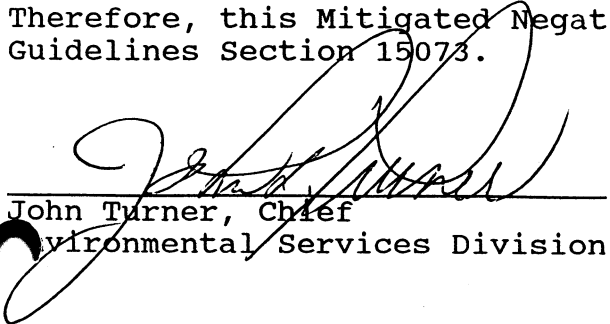
The project objective is to improve salmon and steelhead habitat in the Scott River by stabilizing stream banks and reestablishing a riparian community along the stream banks. A mature riparian community will help stabilize the stream banks and lower water temperatures in the project areas.

**The Finding:** Although the project may have the potential to cause minor short term impacts on soil, vegetation, wildlife, water quality and aquatic life, the mitigation measures that will be incorporated into the project will lessen such impacts to an insignificant level (See Initial Study Environmental Checklist and Biological Opinion).

**Basis for the Finding:** Based on the Initial Study and Biological Opinion, it was determined that there would not be significant adverse environmental effects resulting from implementing the proposed project. The project is expected to achieve a net benefit to the environment by restoring a portion of the lost salmonid spawning and rearing habitat in the Scott River.

The Department of Fish and Game (DFG) finds that implementing the proposed project will have no significant impact on the environment.

Therefore, this Mitigated Negative Declaration is filed pursuant to CEQA Guidelines Section 15073.

  
\_\_\_\_\_  
John Turner, Chief  
Environmental Services Division

11/12/93  
\_\_\_\_\_  
Date

State of California  
The Resources Agency  
Department of Fish and Game

**INITIAL STUDY FOR THE  
SCOTT RIVER STREAMBANK STABILIZATION PROJECT**

**Introduction**

The Department of Fish and Game, through funds provided by Proposition 19, provides grants to various agencies and nonprofit corporations, to do salmon and steelhead habitat restoration projects. These projects take on the form of developing instream spawning and nursery habitat by placing structures to either collect gravel, scour pools, provide overhead escape cover, provide upstream and downstream migration passage where barriers exist or stabilize eroding stream banks.

The Fish and Game Code of California, Chapter 8, Article 2, Section 6901, Legislative findings, paragraph (b) states "The naturally spawning salmon and steelhead trout resources of the state have declined dramatically within the past four decades, primarily as a result of lost stream habitat on many streams in the state." Paragraph (g) states "The protection of, and increase in, the naturally spawning salmon and steelhead trout of the state must be accomplished primarily through the improvement of stream habitat."

Chapter 4.1, Section 1386 of the Fish and Game Code, Legislative findings, paragraph (a) states "California's rivers, wetlands, and waterways and the fisheries and wildlife habitat they provide, are valuable and finite resources that benefit the people of the state and are threatened with deterioration or degeneration that may endanger the natural beauty and productivity of these valuable resources." Paragraph (b) states "The public interest requires the coordinated protection of rivers and riparian resources in order to maintain an equilibrium between the natural endowment of and manmade alterations to, California's river environment, and in order to preserve the scenic beauty of these natural resources and the recreational and economic benefits they provide."

**Project Objective**

The principle objective of this project is to increase the populations of native salmon and steelhead trout in the Scott Valley reach of the Scott River. The project will demonstrate alternative methods of controlling streambank erosion and reestablish shaded riverain aquatic cover which is of high value to fish and wildlife. The land water interface zone will provide highly productive cover that is critically important to a wide range of terrestrial and aquatic species, including salmon and steelhead.

The project will provide stable stream banks with large roughness structures incorporated into the stream banks. The boulder structures will provide rearing cover for salmonids and provide refuge from high water velocities.

**Project Setting**

Scott River is a major tributary to the Klamath River. The watershed covers approximately 650 square miles. Scott River has several major tributaries that provide suitable habitat for salmon and steelhead trout. The East and South Fork drain the north slopes of the Scott Mountains and converge to form the Scott River near Callahan. The river flows through dredger tailings for

about five miles then meanders through the Scott Valley for about 30 miles. The lower 22 miles of the river flows through the Marble Mountains in the Scott River Canyon to its confluence with the Klamath River. The lower 24 miles from Shackleford Creek to the Klamath River is designated as a component of the California Wild and Scenic Rivers System.

Scott Valley has a north-south aspect and is about 20 miles long. There are about 60 square miles of watershed in the valley that includes valley lands and tributaries. The slope of the valley floor is about one percent. Some of the tributary headwaters have a gradient of up to thirty percent. The project area falls entirely in the Scott Valley.

Water supply to the Scott Valley from tributary flow reaches a peak during the spring and early summer snowmelt period and subsides significantly to a base flow in July. The summer base flow is sustained by springs, mountain lakes and agricultural return water. During the summer and fall months surface flow in all tributaries and the Scott river in the Scott Valley is very limited. In some reaches of the river during summer and late fall months, pumping of ground water and diversions for irrigation causes the river to lose surface flow. Below Shackleford Creek, ground water and supplemental contribution from tributaries increase the river flow significantly.

Most of the river channel in the Scott Valley is severely aggraded with a significant buildup of decomposed granitic sand and fine gravel. This material has essentially eliminated spawning habitat in the Scott Valley. The major forces that caused this condition have been mining, logging, road construction and maintenance and water diversions. Disturbance of unstable soils on steep slopes and impaired flows due to irrigation demands have contributed to aggradation and the buildup of sediment in the river channel.

Agriculture in Scott Valley is primarily irrigated hay and pasture with smaller areas of irrigated cropland and dryland pasture. Prior to the advent of farming and ranching in the area Scott River Valley was essentially a series of marshes interconnected by the river and tributary streams. As agriculture developed in the valley, farming and ranching became more intensive. Gradually the marshes were drained and attempts were made to confine the river and its tributaries to well defined waterways. In addition, extensive logging and road building, as well as dredging along the river have acted to further modify the hydrologic character of the watershed.

During the 1930's the U. S. Army Corps of Engineers realigned and confined the Scott River by building levees adjacent to the river throughout most of the valley. Unstable banks exist through much of the Scott Valley. The bank erosion process aggravated by cattle grazing the river banks has adversely impacted much of the shaded riverain aquatic cover along the Scott River. Historically, bank protection projects, such as traditional smooth curve, smooth surface armor has been used to decrease the rate of erosion. The majority of these projects were engineered and funded by the Soil Conservation Service. Most of the outside meander bends in the river are now armored with rock revetment.

Where cattle have been excluded from the stream banks, riparian vegetation has recovered. Where stream banks have been exposed to constant grazing, riparian vegetation and streambank stability has been virtually eliminated. Grazing has exacerbated the decline of the spawning and rearing habitat for salmon and steelhead in the Scott Valley.

## Project Description

The project will protect several eroding stream banks and increase the roughness element and instream cover in the project reach. Several outside river bends will be armored with boulders and smaller rock. A total of approximately 3,500 feet of streambank will be armored (Project Location Map).

Large boulder roughness structures will be incorporated into the armored banks to reduce water velocities along the banks and provide small resting pools for salmon and steelhead trout. These pools will provide much needed rearing habitat for juvenile salmonids. The roughness structures will also provide holding areas for spawning salmon and steelhead. These roughness structures will create irregular substrate and provide a variety of microhabitats for aquatic organisms, and break up the part of the smooth high velocity flows associated with standard rip rap.

Currently riparian vegetation is essentially nonexistent at the project work sites. The project will reestablish riparian vegetation in the project area. Willow cuttings will be placed in the toe trenches and on the banks under the armor. Willow trees will emerge from the rock armor in three to four years.

This procedure has proven to be successful in the Scott Valley to reestablish riparian vegetation and overhead cover on armored banks. Overhead cover refers to the amount of vegetation actually hanging over the water's edge, thus providing shade, woody vegetation, detritus and insect drop into the river.

Bank tops in the project areas will be revegetated with willow, alder, cottonwood and poplar. The revegetated areas will be a minimum of twenty feet wide and will be fenced to exclude livestock.

The fences will be designed to facilitate deer migration through the project areas. The livestock exclusion fences will be constructed with four strands of barbed wire and one strand of barbless wire. The maximum height will not exceed forty-eight inches and the bottom wire will be barbless and will not be less than be eighteen inches off the ground.

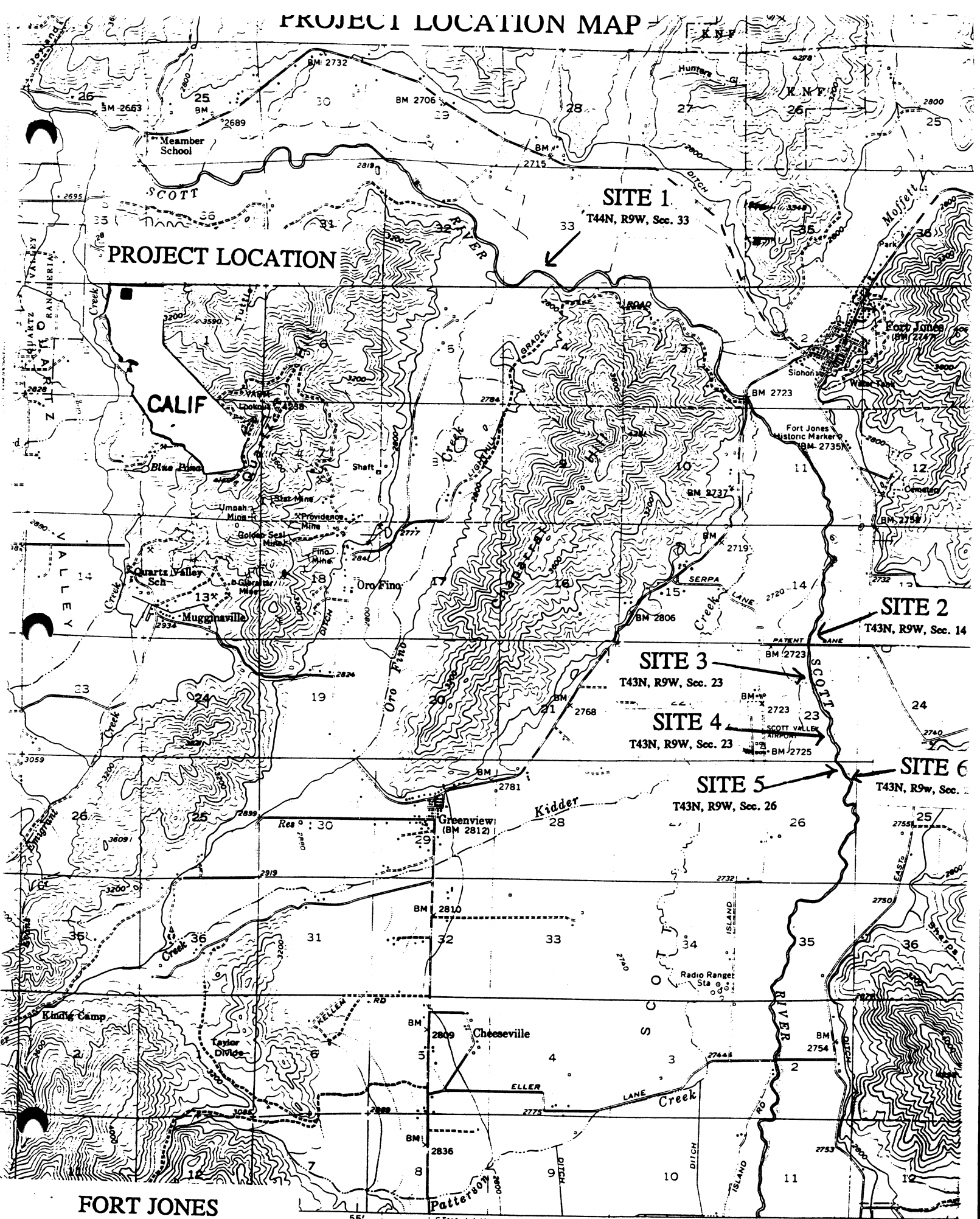
## Method of Construction

Where possible the river will be diverted away from the work site to the opposite side of the river channel. The selected banks will be shaped to approximately a two to one slope where practical. A toe trench, about four feet deep and four feet wide will be excavated at the base of the sloped bank. Willow cuttings will be placed in the toe trench and on the sloped bank. Large quarry rock will be placed in the toe trench. Large quarry rock will be placed against the bank at the base of the slope (Figure 1). The large quarry rock or boulders will range from three to six feet in diameter.

Large boulder roughness structures will be installed approximately every two hundred feet. The structures will be constructed with boulders that range from three to six feet in diameter. The structures will be excavated into the stream bank and stream bottom about two or three feet. Large boulders will be randomly placed on the bank within the rock armor to increase roughness and provide microhabitat (Figure 2).

Bank sloping, toe trench excavation and boulder large boulder placement will be accomplished with a hydraulic excavator. Materials will be delivered by dump trucks to the work site. Existing roads will be used to deliver material to work sites.

# PROJECT LOCATION MAP



# Typical Cross Section Large Boulder Roughness Structure

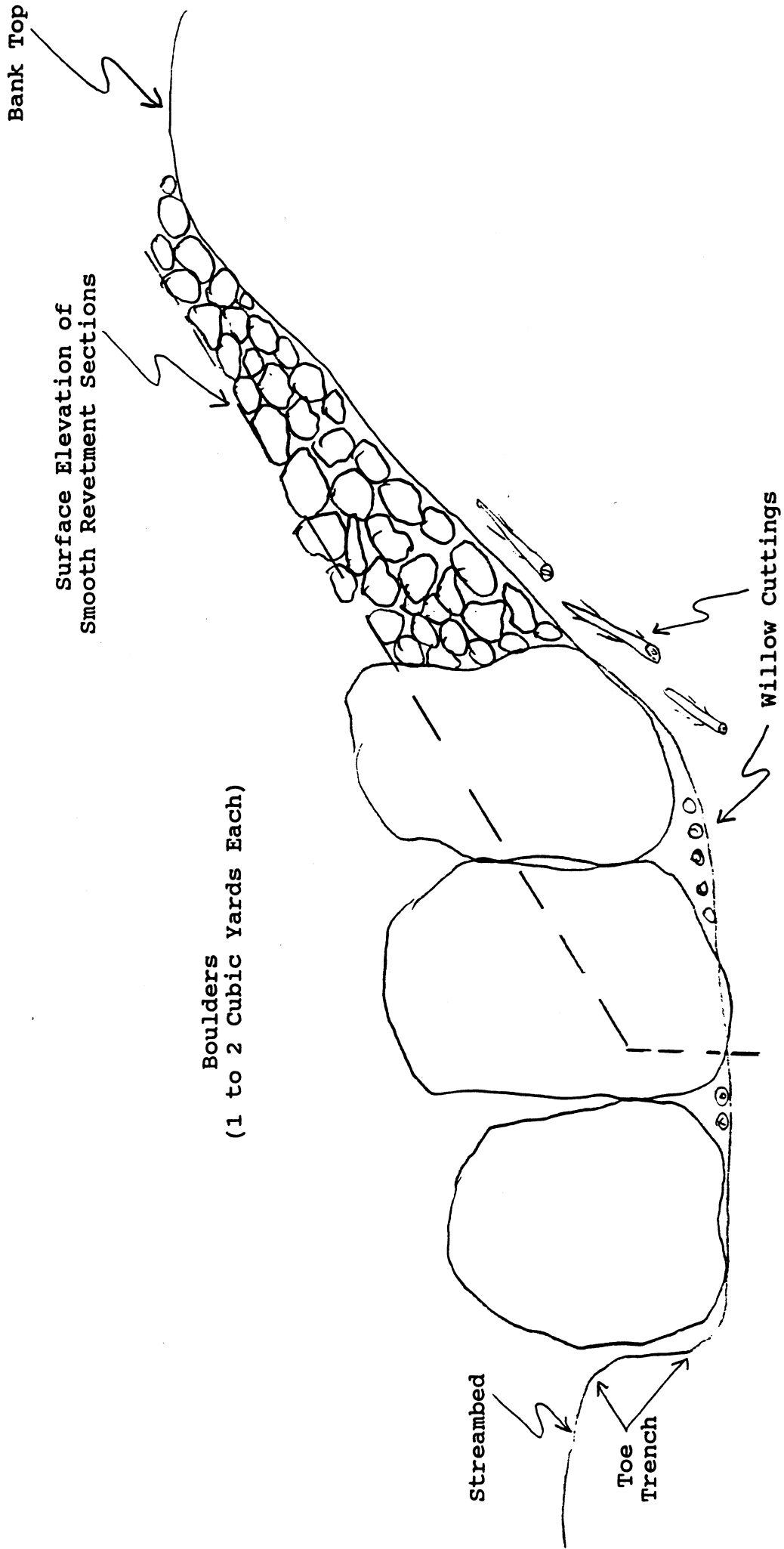


Figure 1

Not to scale



# Typical Plan View Bank Protection With Roughness Structures

Pasture

Livestock Exclusion Fence

Riparian Area

Bank Top

Rock Revetment to  
Cover Entire Bank

Waters Edge

Typical Roughness Structures  
(Approximately 200 ft. Apart)

Flow

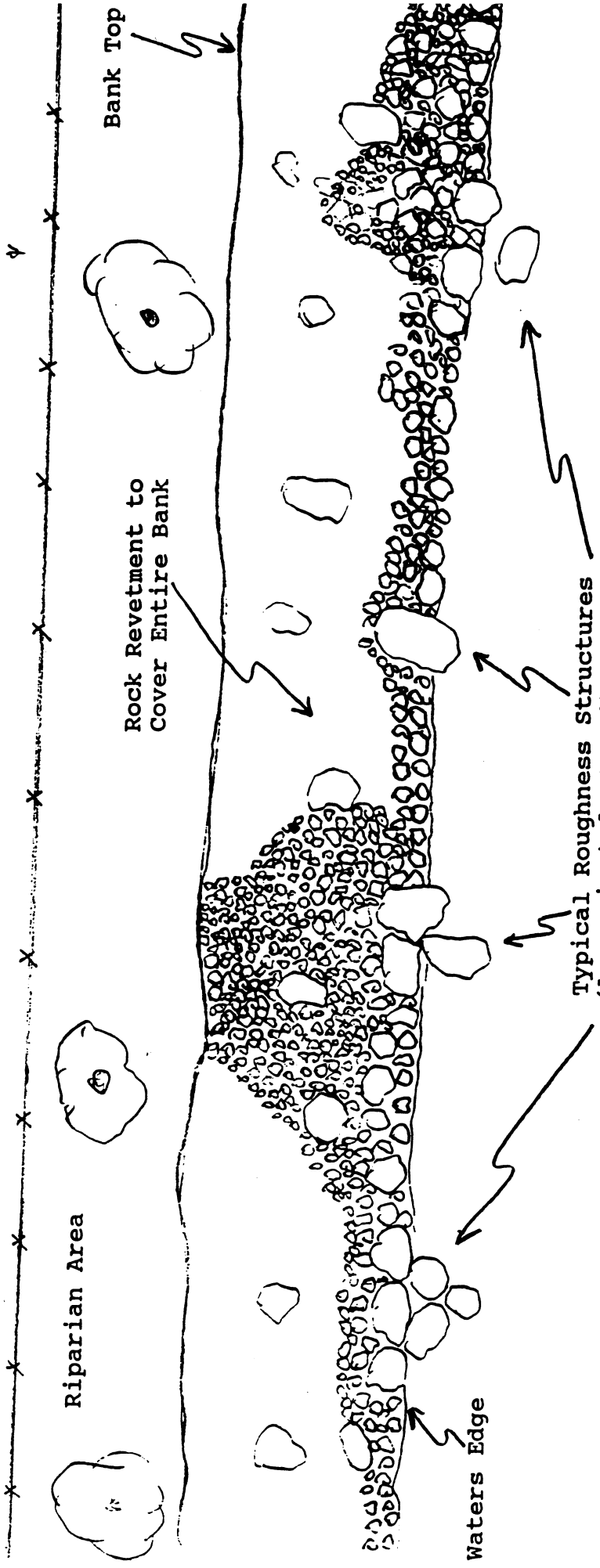


Figure 2

Not to Scale

The heavy equipment portion of the stream restoration efforts will be accomplished during low flow periods and supervised by California Department of Fish and Game. Silt settling fences will be installed immediately below work sites to reduce sedimentation and turbidity in the river during project construction.

Typically the amount of silt stored behind the silt fences resulting from boulder structure placement is insignificant and has no adverse impacts on aquatic resources. Fish and Game will inspect silt fences prior to removal of the fences to assure the potential sediment release will have no adverse impacts on the aquatic resources. If it is determined that adverse impacts might occur resulting from the release of the stored sediment, the stored silt will be pumped out of the stream to a well vegetated site on the flood plain prior to removal of the silt fences. The vegetation will trap most of the sediment and keep it from eroding back into the river. This will help to build good soil for riparian vegetation.

### Potential Project Impacts

Although the project may have the potential to cause some minor short term impacts on soil, water quality, plant life and animal life, mitigation measures will lessen such impacts to an insignificant level. None of the potential minor short term impacts will have cumulative adverse impacts on the quality of the environment, fish and wildlife habitat or fish and wildlife species. These potential project impacts and mitigations are described in detail below, within the Mitigation Measures, Initial Study Environmental Checklist and the Biological Opinion sections of this document.

Some short term increase in turbidity is likely to occur during project construction. Increased turbidity levels will not be at such a level as to adversely effect aquatic plant or animal life. Measures will be taken to adhere to guidelines set by the Regional Water Quality Control Board that meet water quality objectives and protect beneficial uses of water as specified in the Basin Plan for this area. Mitigation measures indicated in this document are in compliance with CEQA Guidelines.

Traditional riprapping of stream banks reduces the physical complexity of the river channel and creates high velocity laminar flows along the stream banks. Typically riparian vegetation is removed, banks are sloped back, river bends are smoothed out and covered with rock. This streambank protection project will increase the physical complexity of the stream banks through the addition of large boulder structures.

Existing riparian vegetation will not be disturbed in the project area. The present conditions of the bank tops are eroded and are nearly void of vegetation. The bank tops are pasture and hay fields. Some grasses will be covered by rock armoring.

The completed project will result in an increase in quality and quantity of habitat available to salmonids in Scott River.

A review of the Department of Fish and Game's (DFG) Natural Diversity Data Base indicated occurrences of the state listed threatened bank swallow (*Riparia riparia*) in the project area (Table 1).

Fish and Game and Soil Conservation personnel conducted a field evaluation of existing and potentially suitable bank swallow habitat on the Scott River. The evaluation was used to develop a basin wide assessment that identified areas of concern for proposed stabilization projects as well as potential areas for mitigation and or habitat improvement. It has been determined, from

Species

Birds

Status

Bank swallow

(Riparia riparia)

ST

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FT = Federal Threatened  
FE = Federal Endangered  
SE = State Endangered  
ST = State Threatened  
CSC = California Species of Concern  
FC = Federal Candidate

the above mentioned assessment, that none of the proposed stabilization work sites occur in existing or potential bank swallow habitat. The proposed project will not have adverse impacts on existing or potential bank swallow habitat.

### Mitigation Measures

Measures will be taken to adhere to guidelines set by the North Coast Regional Water Control Board that meet water quality objectives and protect beneficial uses of water as specified in their Basin Plan. The heavy equipment portion of the stream restoration efforts will be accomplished during summer low flow periods. Most of the heavy equipment work will be accomplished from the stream banks. If it is necessary to operate heavy equipment in the river channel, the flow will be temporarily diverted to the opposite bank during construction. Following construction the river will be returned to its natural low flow channel. All appropriate permits will be secured for the project prior to construction.

The heavy equipment portion of the stream restoration efforts will be accomplished during low flow periods and supervised by California Department of Fish and Game. Silt settling fences will be installed immediately below work sites to reduce sedimentation and turbidity in the river during project construction.

Typically the amount of silt stored behind the silt fences resulting from boulder structure placement is insignificant and has no adverse impacts on aquatic resources. Fish and Game will inspect silt fences prior to removal of the fences to assure the potential sediment release will have no adverse impacts on the aquatic resources. If it is determined that adverse impacts might occur resulting from the release of the stored sediment, the stored silt will be pumped out of the stream to a well vegetated site on the flood plain prior to removal of the silt fences. The vegetation will trap most of the sediment and keep it from eroding back into the river.

Heavy equipment that will be used in the project will be cleaned and inspected for leakage of petroleum products before work is started. The machines will be in good repair and free of oil leaks before they will be used on the project. Petroleum product absorbent materials designed specifically for oil spill containment and clean up will be stored on heavy equipment during project construction for use in case of accident. Heavy equipment operators will be trained in proper use and disposal of the petroleum product absorbent materials.

Willow slips will be placed in the toe trenches of the rock armor. Willow cuttings will be placed in a gravel blanket on the banks under the placed revetment. It usually takes three to four years for the willows to emerge through the rock armor. This technique has been used in the Scott River for thirty years and has shown to be a successful technique to reestablish riparian vegetation and overhead cover.

Livestock exclusion fences will be constructed, at each project site, twenty feet back from the edge of the river bank. The fence will be designed to allow for deer migration through the project area. The exclusion area will be revegetated with willow, cottonwood, poplar and alder.

The project will commence after bank swallows have migrated out of the valley and be completed prior to October 15, 1993, before salmon and steelhead adults are likely arrive in the Scott River to spawn.

The project is designed to improve habitat for salmon and steelhead populations. The project is expected to increase salmon and steelhead production in the Scott River. The small pools created by the boulder roughness structures will provide rearing habitat for juveniles and resting pools for migrating salmon and steelhead.

### **Project Monitoring**

The project will be monitored during construction to ensure the project goals and objectives are being met and mitigation measures are incorporated prior to completion of the project. A monitoring plan will be prepared as required by CEQA (21081.6), that outlines the mitigation measures and how the monitoring will be accomplished.

**INITIAL STUDY  
ENVIRONMENTAL CHECKLIST**

1. NAME OF PROPONENT: Siskiyou Resource Conservation District, Alvin Lewis
2. ADDRESS AND PHONE NUMBER OF PROPONENT: P.O. Box 268  
Etna, CA 96027  
(916) 467-3975
3. DATE OF CHECKLIST SUBMITTAL: July 26, 1993
4. NAME OF PROPOSAL: Scott River Streambank Stabilization Project

|   | <u>Yes</u> | <u>Maybe</u> | <u>No</u> |
|---|------------|--------------|-----------|
| <b>I. EARTH. <i>Will the proposal result in:</i></b>  |            |              |           |
| a. Unstable earth conditions or changes in geological substructures?  | —          | —            | <u>X</u>  |
| b. Disruptions, displacements, compaction or overcovering of the soil?  | <u>X</u>   | —            | —         |
| c. Change in topography or ground surface relief features?  | <u>X</u>   | —            | —         |
| d. The destruction, covering or modification of any unique geologic or physical features?   | —          | —            | <u>X</u>  |
| e. Any increase in wind or water erosion of soils, either on or off the site?   | —          | —            | <u>X</u>  |
| f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake? | <u>X</u>   | —            | —         |
| g. Exposure of people or property to geologic hazards, such as earthquakes, landslides, mudslides, ground failure, or similar hazards?  | —          | —            | <u>X</u>  |
| <b>II. WATER. <i>Will the proposal result in:</i></b>   |            |              |           |
| a. Substantial changes in currents, or the course or direction of water movements, in either marine or fresh waters?  | <u>X</u>   | —            | —         |
| b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?  | —          | —            | <u>X</u>  |
| c. Changes in the amount of surface water in any water body?  | —          | —            | <u>X</u>  |
| d. Discharge into surface waters, or in any alteration of surface water quality, including, but not limited to, temperature, dissolved oxygen, petroleum products or turbidity?                         | <u>X</u>   | —            | —         |

|  | <u>Yes</u> | <u>Maybe</u> | <u>No</u> |
|--|------------|--------------|-----------|
| e. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?                | —          | —            | <u>X</u>  |
| f. Substantial reduction in the amount of water otherwise available for public water supplies?   | —          | —            | <u>X</u>  |
| g. Exposure of people or property to water related hazards such as flooding or tidal waves?  | —          | —            | <u>X</u>  |
| <b>III. PLANT LIFE. Will the proposal result in:</b>   |            |              |           |
| a. Change in the diversity of species, or number of any species, including upland, riparian and aquatic plants?  | <u>X</u>   | —            | —         |
| b. Reduction of the numbers of any unique, rare, or endangered species of plants?  | —          | —            | <u>X</u>  |
| c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?  | —          | —            | <u>X</u>  |
| d. Reduction in acreage of any agricultural crop?  | <u>X</u>   | —            | —         |
| <b>IV. ANIMAL LIFE. Will the proposal result in:</b>   |            |              |           |
| a. Change in the diversity of species, or numbers of any species of animals (birds; land animals, including reptiles; fish and shellfish; benthic organisms or insects)? | <u>X</u>   | —            | —         |
| b. Reduction of the numbers of any unique, rare, or endangered species or animals?   | —          | —            | <u>X</u>  |
| c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?  | —          | —            | <u>X</u>  |
| d. Deterioration to existing fish or wildlife habitat?   | —          | —            | <u>X</u>  |
| e. Result in activities during sensitive life stages, i.e. nesting, spawning, incubation, fry emergence, etc.  | —          | —            | <u>X</u>  |
| <b>V. NOISE. Will the proposal result in:</b>  |            |              |           |
| a. Increases in existing noise levels?   | <u>X</u>   | —            | —         |
| <b>VI. LAND USE. Will the proposal result in:</b>  |            |              |           |
| a. Substantial alteration of, or conflict with, the present or planned land use of an area, i.e. mining or timber harvest?   | —          | —            | <u>X</u>  |
| <b>VII. NATURAL RESOURCES. Will the proposal result in:</b>  |            |              |           |
| a. Increase in the rate of use of any natural resources?   | —          | <u>X</u>     | —         |

VIII. RISK OF UPSET. *Will the proposal involve:*

- a. A risk of an explosion or the release of hazardous substances (including, but not limited to oil, pesticides or chemicals) in the event of an accident or upset conditions?      —      X      —
- b. Possible interference with an emergency response plan or an emergency evacuation plan?      —      —      X

IX. TRANSPORTATION/CIRCULATION. *Will the proposal result in:*

- a. Generation of substantial additional vehicular movement?      X      —      —
- b. Substantial impact upon existing transportation systems?      —      —      X

X. PUBLIC SERVICES. *Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:*

- a. Parks or other recreational facilities?      —      —      X
- b. Maintenance of public facilities, including roads?      —      —      X

XI. HUMAN HEALTH. *Will the proposal result in:*

- a. Exposure of people to potential health hazards?      —      —      X

XII. AESTHETICS. *Will the proposal result in:*

- a. The obstruction of any scenic vista or view open to the public?      —      —      X
- b. The creation of an aesthetically offensive site open to public view?      —      X      —

XIII. RECREATION. *Will the proposal result in:*

- a. Impact upon the quality or quantity of existing recreational opportunities including boating or kayaking?      —      —      X

XIV. CULTURAL RESOURCES. *Will the proposal:*

- a. Result in the alteration of or the destruction of a prehistoric or historic archaeological site?      —      —      X
- b. Result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?      —      —      X
- c. Have the potential to cause a physical change which would affect unique ethnic cultural values?      —      —      X
- d. Restrict existing religious or sacred uses within the potential impact area?      —      —      X



XV. MANDATORY FINDINGS OF SIGNIFICANCE.

- |  | <u>Yes</u> | <u>Maybe</u> | <u>No</u> |
|--|------------|--------------|-----------|
| <p>a. <b>Potential to degrade:</b> Does the project have the potential to degrade the quality of the environment, substantially reduce the 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?</p> | —          | —            | <u>X</u>  |
| <p>b. <b>Short-term:</b> Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time. Long-term impacts will endure well into the future.)</p>  | —          | —            | <u>X</u>  |
| <p>c. <b>Cumulative:</b> Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect on the total of those impacts on the environment is significant.)</p>  | —          | —            | <u>X</u>  |
| <p>d. <b>Substantial adverse:</b> Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>   | —          | —            | <u>X</u>  |

## XVI. DISCUSSION OF ENVIRONMENTAL EVALUATION.

### I. EARTH.

b & c.

Stream banks will be shaped to a 2:1 slope. Material removed from the banks will be spread evenly on bank top and into adjacent fields. Work will be done in the late summer or early fall. Soil compaction will not be a factor.

- f. A hydraulic excavator will be used to slope the banks dig toe trenches and place large boulders. Material from the toe trench will be placed over willow cuttings that will be placed on the banks. Dump trucks will be used to deliver material to the excavator and will dump bank armor material over the sloped banks. Water velocities will be increased around large boulders that are placed in the river channel at the base of the armored banks. The increased velocity around the end of the boulder structures will scour small pools and provide rearing habitat for juvenile salmonids and resting pools for spawning adults.

### II. WATER.

- a. The project will result in substantial changes in currents and the course of direction of water movements. Boulder roughness structures will be constructed at the base of the armored banks. Six to ten feet of the structures will extend into the channel beyond the armored bank. The roughness structures will be constructed with one to five large boulders that average four feet in diameter. Water velocities will be increased at the tips of the roughness structures. The increased water velocity around the boulders will scour and maintain small pools and provide rearing habitat for juvenile salmonids and resting pools for spawning adults. The water velocities at the tip of these structures will be increased. The boulder structures will not reduce the structural integrity of the bank armor.
- d. During excavation of the toe trenches some minor turbidity may occur. Silt catchment fences will be installed across the river immediately down stream of work sites to capture suspended sediment. Silt fences will be removed from the river following completion of the project. The summer low flow will be diverted to the opposite bank prior to toe trench excavation.

Some stream bed scour and deposition will occur during the first rain storm following project completion. This will likely cause some short term minor increase in turbidity as the streambed makes minor adjustments to the modified stream channel.

A hydraulic excavator will be used to place the large boulders. Most all of the rock will be placed from the bank. Only one site will require the excavator to work in the channel. Large boulders will be placed against an eroding bank that is beginning to under cut some mature trees.

Heavy equipment that will be used in the project will be cleaned and inspected for leakage of petroleum products before work is started. The machines will be in good repair and free of oil leaks before they will be used on the project. Petroleum product absorbent materials designed specifically for oil spill containment and clean up will be stored on heavy equipment during project construction for use in case of accident.

### III. PLANT LIFE.

- a. Currently the project areas are sparsely vegetated with grasses. A twenty foot wide riparian zone will be reestablished on the bank top using willow, alder, poplar and cottonwood. A livestock exclusion fence will be constructed to protect the revegetated areas. The project will greatly increase the riparian community in the project areas.
- d. All project sites are adjacent to hay fields or pasture. The landowners will construct livestock exclusion fences to protect the restored riparian areas. In several cases the landowner will be taking a twenty foot wide strip of land out of production by constructing the exclusion fence.

#### IV. ANIMAL LIFE.

- a. The project is designed to stabilize the stream banks. This will result in improved habitat for salmon, steelhead and other aquatic animals and should result in increased number of fishes and other aquatic organisms utilizing the stream. There will also be improved riparian habitat and increased numbers of conifers that may increase numbers of wildlife species dependant upon trees.
- d. Some short term increase in turbidity is likely to occur during project construction. Increased turbidity levels will not be at such a level as to adversely effect aquatic plant or animal life.

#### V. NOISE.

- a. The project will result in some short term noise increase during the construction period. The noise increase will come from the excavator and dump trucks. The project areas are in agriculture zones and are not near housing developments. The increase in noise will be short term and is not expected to have adverse impacts on fish or wildlife in the area.

#### VII. NATURAL RESOURCES.

The project will improve the stream habitat for salmon and steelhead trout. It will also improve riparian and upslope vegetation. Wildlife species dependent on trees in the riparian and hill side trees will also benefit from this project. These newly planted areas are expected to experience an increase in usage by fish and wildlife.

#### VIII. RISK OF UPSET.

- a. Heavy equipment that will be used in the project will be cleaned and inspected for leakage of petroleum products before work is started. The machines will be in good repair and free of oil leaks before they will be used on the project. Petroleum product absorbent materials designed specifically for oil spill containment and clean up will be stored on heavy equipment during project construction for use in case of accident.

#### IX. TRANSPORTATION/CIRCULATION.

- a. Vehicular movement will increase during project construction. The increase in vehicular activity will be short term and will not cause adverse impacts to the existing road systems. All of the project work sites are on private property. The landowners are cooperators on the projects on their property and are aware of the short term increase in vehicular activity.
- XII. The armor may be aesthetically offensive to some people that may view the structures until the willow trees grow through the armor and the riparian vegetation becomes mature. All project sites are on private property and the projects are supported by those landowners.

#### XIV. CULTURAL RESOURCES.

- a-c It is highly unlikely that an archaeological site could exist in the project area. Most of the stream bank work will occur on failed levee banks. The balance of the work will occur in the active channel of the stream. The stream bottom is composed of deep deposits of sand and gravel that are continually being scoured and replaced with new gravel in response to storm events.

If archaeological features are encountered during project construction, all work will be stopped immediately until a cultural resource consultant has evaluated the situation and given authorization to continue the project. Project personnel will not collect cultural resources including, but not limited to, chert or obsidian flakes, projectile points, mortars and pestles, and dark friable soil containing shell and bone dietary debris, heat affected rock or human burials.

XVII. DETERMINATION. (To be completed by the Lead Agency.)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared. \_\_\_\_\_

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.  X

I find the proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required. \_\_\_\_\_

9/29/93

Date

W. Farley

For the California Department of Fish and Game

State of California  
The Resources Agency  
Department of Fish and Game

CALIFORNIA ENDANGERED SPECIES ACT  
BIOLOGICAL OPINION  
(Fish and Game Code Section 2090)

SCOTT RIVER STREAMBANK PROTECTION PROJECT  
(CESA No. 9337)  
SUMMARY

The California Department of Fish and Game, Inland Fisheries Division, proposes to stabilize seven eroding stream banks, in the Scott River, totaling approximately 3,500 feet. The purpose is to arrest streambank erosion, reestablish riparian vegetation and exclude livestock from the project area. Suitable habitat for the state threatened bank swallow (Riparia riparia) exists in the Scott River Valley. Adequate measures to avoid take of these species, including adverse impacts to their habitat, are incorporated into the project design.

PROJECT DESCRIPTION

SETTING

Scott River is a major tributary to the Klamath River. Scott River has several major tributaries that provide suitable habitat for salmon and steelhead trout. The river flows through dredger tailings for about five miles then meanders through the Scott Valley for about 30 miles. The proposed project is located in the Scott River between river miles 23 and 40.

Scott Valley has a north-south aspect and is about 20 miles long. The slope of the valley floor is about two percent. Some of the tributary headwaters have a gradient of up to thirty percent. The project area falls entirely in the Scott Valley. Most of the river channel in the Scott Valley is severely aggraded with a significant buildup of decomposed granitic sand and fine gravel. The major forces that caused this condition have been mining, logging, road construction and maintenance and water diversions.

Agriculture in Scott Valley is primarily irrigated hay and pasture with smaller areas of irrigated cropland and dryland pasture. Extensive logging and road building, as well as dredging along the river have had significant negative effects on the watershed. During the 1930's the U. S. Army Corps of Engineers attempted to restrict flooding of the Scott River by building levees adjacent to the river throughout most of the valley.

Most of the outside meander bends in the river have been armored with rip rap. Where cattle have been excluded, riparian vegetation has recovered. Many of the outside turns of the river that have not been armored have developed into vertical eroding cut banks that continually sluff off into the river. This action has added to the decline of the spawning and rearing habitat for salmon and steelhead in the Scott Valley. This bank erosion process along with cattle grazing on the river banks has destroyed the riparian zone in many reaches of the river.

PROPOSED ACTION

Seven outside river bends will be armored with boulders and smaller rock. A total of approximately 3,500 feet of streambank will be armored. Willow cuttings will be placed in the toe trenches and on the banks under the armor.

Large boulder structures will be incorporated into the armored banks to reduce water velocities along the banks and provide small resting pools for salmon and steelhead trout. These pools will provide much needed rearing habitat for juvenile salmonids. The roughness structures will also provide holding areas for spawning salmon and steelhead.

Bank tops in the project areas will be revegetated with willow, alder, cottonwood and poplar. The revegetated areas will be a minimum of twenty feet wide and will be fenced to exclude livestock.

The fences will be designed to facilitate deer migration through the project areas. The livestock exclusion fences will be constructed with four strands of barbed wire and one strand of barbless wire. The maximum height will not exceed forty-eight inches and the bottom wire will be barbless and will not be less than be eighteen inches off the ground.

Construction would be done during the fall. Material from a local rock quarry would be imported to armor the banks. Access to the project sites would be gained through existing private roads across agricultural fields.

#### LISTED SPECIES: Bank Swallow

The bank swallow (Riparia riparia) requires sandy banks or cliffs which allow for the digging of nesting holes. Nest sites are almost always located near water and are lined with grasses and other plant material. Burrows are 2.5 to 5.5 cm wide and are up to 140 cm deep. A small chamber at the end of the burrow contains the nest. Bank swallows are generally colonial nesters but are sometimes solitary or they may nest near only a few other nests. Nesting occurs from early May through July, with peak activity from mid-May to mid-June. Clutch size is usually four to five but ranges from three to eight. Double broods have been reported. Both adults incubate 12 to 16 days; altricial young, tended by both adults, usually leave the nest at 19 days and breed as one year olds.

Bank swallows forage by hawking insects during long, gliding flights over open riparian areas, but also over brush land, grasslands, and agricultural areas. They arrive in California from South America in early April, with peak arrival in early May. Numbers decline in the summer as migrants pass through and as the few remaining colonies form. Numbers increase during fall migration, and then they are largely gone from the State by mid-September. Winter records are few and all from southern California.

#### Project Effects

Historical records show bank swallows occur in the Scott River. Surveys were conducted for presence of bank swallows in 1992 and again in 1993. Abandoned nesting sites, active and potential bank swallow nesting habitat sites were inventoried. Nesting colonies occur near some of the project sites.

#### Conditions to Avoid Jeopardy

##### Loss of Habitat

Field surveys were conducted in May of 1992 and again in July of 1993 for presence of bank swallow colonies and nesting sites. All active colonies, potential nesting habitat and abandoned nesting sites were inventoried. No existing or potential bank swallow nesting habitat will be modified or impacted as a result of the rip rap projects. Therefore no loss of bank swallow nesting habitat is anticipated to occur as a result from the proposed project.

##### Take of Individuals

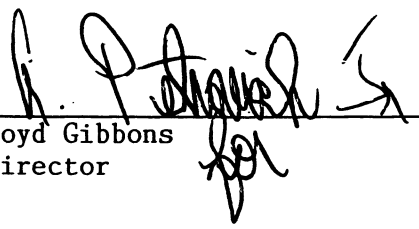
All construction activities will be conducted after August 15th. All bank swallows would have typically migrated out of the Scott Valley by that time. Therefore no take of bank swallow is anticipated as a result from the proposed project.

Project Monitoring

The project will be monitored during construction to ensure the project goals and objectives are being met and mitigation measures are incorporated prior to completion of the project.

Conclusion

If the above conditions are made conditions of certification, are agreed to, and are fully implemented, the Department of Fish and Game has determined that the proposed project would not likely jeopardize the continued existence of the bank swallow.

  
\_\_\_\_\_  
Boyd Gibbons  
Director

NOTICE OF COMPLETION AND ENVIRONMENTAL DOCUMENT TRANSMITTAL FORM

SCH #

93122003

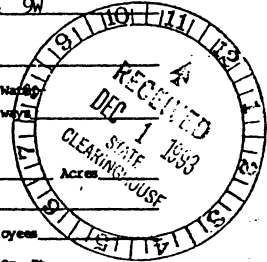
1. Project Title: Scott River Streambank Stabilization Project
2. Lead Agency: Fish and Game
3. Contact Person: Michael Bird
3a. Street Address: 1416 9th St. Inland Fisheries
3b. City: Sacramento
3c. County: Sacramento
3d. Zip: 95814
3e. Phone: (916) 654-5997

PROJECT LOCATION 4. County: Siskiyou
4a. City/Community: N/A
4b. Assessor's Parcel No.
4c. Section 14, 23, 26
4d. Twp. 43N
4e. Range 9W

5a. Cross Streets:
5b. Community:
For Rural, Nearest

6. Within 2 miles: a. State Hwy #
b. Air-ports
c. Rail-ways
d. Major Highways

- 7. DOCUMENT TYPE: CEQA, NEPA, FONSI, etc.
8. LOCAL AGENCY TYPE: General Plan Update, etc.
9. DEVELOPMENT TYPE: Residential, Office, etc.
10. TOTAL ACRES:
11. TOTAL NRS CREATED:
12. PROJECT ISSUES DISCUSSED IN DOCUMENT: Aesthetic/Visual, etc.
13. FUNDING (approx) Federal \$, State \$, Total \$
14. PRESENT LAND USE AND ZONING:
15. PROJECT DESCRIPTION: The project will stabilize approximately 3,500 feet of streambank along the Scott River.



CLEARINGHOUSE CONTACT: MARK GOSS (916) 445-0613

STATE REVIEW BEGAN: 12-2-93
DEPT REV TO AGENCY: 12-24
AGENCY REV TO SCH: 12-29
SCH COMPLIANCE: 12-31

- CMT SMT
Resources
Boating
Coastal Comm
Coastal Conserv
Colorado Rvr Bd
Conservation
Fish & Game
Forestry
Parks & Rec/OHP
Reclamation
BCDC
DWR
Bus Transp Hous
Aeronautics
CHP
Caltrans # 2
Trans Planning
Housing & Devel
Health & Welfare
Drinking H2O
Medical Waste

- CMT SMT
State/Consumer Svcs
General Services
OLA (Schools)
Cal/EPA
ARB
CA Waste Mgmt Bd
SWRCB:--Grants
SWRCB:--Delta
SWRCB:--Wtr Quality
SWRCB:--Wtr Rights
Reg. WQCB # 1
DTSC/CTC
Yth/Adlt Corrections
Corrections
Independent Comm
Energy Comm
NAHC
PUC
Santa Mn Mtns
State Lands Comm
Tahoe Rgl Plan
Other:

PLEASE NOTE SCH NUMBER ON ALL COMMENTS
PLEASE FORWARD LATE COMMENTS DIRECTLY TO THE LEAD AGENCY ONLY

AQMD/APCD: 32 (Resources: 12/4)

10/10