

**RESORT IMPROVEMENT DISTRICT NO. 1
SHELTER COVE – HUMBOLDT COUNTY – CALIFORNIA**

9126 Shelter Cove Road, Whitethorn CA 95589

707-986-7447, Fax: 707-986-7435, info@sheltercove-ca.gov, www.sheltercove-ca.gov

October 31st, 2005

Serena S. McClain
American Rivers
1025 Vermont Ave., NW, Suite 720
Washington, DC 20006
202-347-7550 x-3004

**APPLICATION FOR FINANCIAL SUPPORT FOR THE
TELEGRAPH CREEK FISH PASSAGE IMPROVEMENT PROJECT**

I. APPLICATION INFORMATION

- | | | |
|----|-----------------------------|---|
| A. | Organization: | Shelter Cove Resort Improvement District #1 |
| B. | Address: | 9126 Shelter Cove Road,
Whitethorn, CA 95589 |
| C. | Authorized Grant Signatory: | Richard Culp P.E., General Manager |
| D. | Phone: | (707) 986-7447 |
| E. | Fax: | (707) 986-7435 |
| F. | Email: | info@sheltercove-ca.gov |
| G. | Submission Date: | 10/31/05 |
| H. | Tax Status: | Tax exempt government agency |
| I. | Federal Tax ID#: | 94-1672507 |
| J. | Organization web address: | www.sheltercove-ca.gov |

II. PROJECT CONTACT

- | | | |
|----|---------------------|-------------------------|
| A. | Project officer: | Richard Culp, P.E. |
| B. | Title: | General Manager |
| C. | Address of contact: | As listed above |
| D. | Phone: | (707) 986-7447 Ext. 304 |
| E. | Fax: | (707) 986-7435 |
| F. | Email: | gm@sheltercove-ca.gov |

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G. Contact web page address: www.sheltercove-ca.gov

III. PROJECT INFORMATION

A. Type of Fish Passage: Fish Ladder

B. Design or construction: Design

C. Amount of funding requested: \$44,210

D. Project name: Telegraph Creek Fish Passage Improvement Project

E. Owner of dam: Shelter Cove Resort Improvement District #1

F. Water shed/River affected: Telegraph Creek

G. Project location: Section 10, Township 5 South, Range 1 East, Assessor's Parcel Number: 109-011-01- in Shelter Cove, Humboldt County, California

H. Project start date: April 1, 2006

I. Project end date: July 31, 2006

J. Longitude/latitude (if known): N40 02.88 W124 05.24

K. Congressional District and member name (if known): 1
Mike Thompson
Room 415, Cannon House
Office Building
Washington, DC 20515

L. Name and contact information of elected state government officials:

Governor: Arnold Schwarzenegger
State Capital Building
Sacramento, CA 95814
Phone: (916) 445-2841
Fax: (916) 445-4633

State Senate: Wesley Chesbro
Room 3070,
State Capitol Building
Sacramento, CA 95814
Phone: (916) 445-3375
Fax: (916) 323-6958
or Eureka (707) 445-6508

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State Assembly: Patty Berg
State Capitol
P. O. Box 942849
Sacramento, CA 95814
Phone: (916) 319-2001
Fax: (916) 319-2101
Or Eureka (707) 445-7014

- M. Name and contact information of elected local government official:

Humboldt County Board Supervisor:
Roger Rodoni
Phone: (707) 476-2392

- N. Name and address of local newspaper:

Times Standard
P. O. Box 3580
Eureka, CA 95502

- O. The location and distance in stream miles to all upstream river structures and whether each structure represents an insignificant, partial, or total barrier to fish passage.

A 4-ft high concrete dam is located approximately 1.1 miles upstream from the Pacific Ocean and represents a partial barrier to adult fish passage during winter flows up to 30 cfs and a total barrier to fish passage during the dry season due to low flows of 1.0 cfs. The dam has been in place for over forty years and is used as part of a water treatment plant intake that provides the community of Shelter Cove with 99% of its potable water supply.

Approximately 50-ft upstream from the dam there are three 72-inch metal culverts owned and maintained by the Humboldt County Public Works Department. There is a 2-ft to 3-ft drop from the outlet of the culverts to the water level above the dam. The culverts represent a partial barrier to fish passage at high flow levels and a complete barrier during low flows. According to Humboldt County's Engineer, these culverts are scheduled for fish passage improvement in 2008.

Both of these obstructions can be viewed at:

<http://www.sheltercove-ca.gov/water/water.htm>

- P. The location and distance to all downstream river structures and whether each structure represents an insignificant, partial, or total barrier to fish passage.

Historically, in summer months, the creek does not enter the Pacific Ocean but disappears into sand which acts as a natural barrier to fish movement to and from the ocean.

- Q. Historic natural distribution of anadromous fish within the stream system

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Small populations of juvenile Northern California Steelhead (*Oncorhynchus Mykiss*), up to 9 inches long, have been observed in Telegraph Creek between 1965 and 2004

Specific observed numbers follow:

09/24/65 – CDFG 45 rainbow trout Steelhead juveniles 3” to 9”

5/27/86 – CDFG fish survey found Silver (COHO) Salmon fry in Course Creek less than a half mile above the dam.

10/11/02 – 91 juvenile steelhead

- R. Names and current distribution of anadromous fishes benefiting from project within the stream system

Northern California Steelhead (*Oncorhynchus Mykiss*)
Silver (COHO) Salmon

- S. Names and contact information for project partners

N/A

IV. CONCISE PROJECT SUMMARY

Telegraph Creek is approximately 2 miles long and discharges into the Pacific Ocean along the Lost Coast of California a few miles south of Cape Mendocino. A photograph of the river mouth is available at:

<http://www.californiacoastline.org/cgi-bin/image.cgi?image=200502615&mode=sequential&flags=0&year=2005>

The Resort Improvement District #1 (District) operates a water treatment plant with a water intake and dam structure on Telegraph Creek. The dam has been in place for over 40-years, providing a water diversion that supplies 99% of the water supply needs of Shelter Cove. Shelter Cove is a residential community of approximately 400 homes in a subdivision with 4,000 vacant lots. The dam and water intake structure are critical components of the community water supply and cannot be removed without constructing an alternative intake or water source.

During the summer of 2005 the District completed several projects designed to improve fish passage and protection. The projects included:

- € Removal of metal pipes and catch basins from the dam apron that were remnants of a fish hatchery project.
- € Installation of 3/32” screens over the water intake structure of the water treatment plant.
- € Installation of a temporary metal fish ladder provided by CDFG.
- € Survey data collection for stream cross sections and profiles for use in fish ladder design.

All of this work was completed by the District using its own work force and the assistance of CDFG personnel. More than \$19,000 has been expended by the

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District in 2005 to improve fish passage at the dam. Photographs and completion dates are available at:

<http://www.sheltercove-ca.gov/water/mitigation/mitigation.htm>

copy attached.

This grant application is for the design of a permanent fish ladder that will satisfy NOAA/NMFS criteria. During the installation of the temporary fish ladder, CDFG Fish Habitat Supervisor Calvert Crawford recommended a concrete stairway fish ladder with a switch back spiral design. He stated that such a ladder would meet NOAA criteria and provide a very reasonable solution to fish passage at the dam. Mr. Crawford also suggested that a few large boulders could be placed at the outlet of the county culverts, creating boulder weir jump pools. One or two jump pools in combination with some baffles inside the culverts to reduce velocity, should mitigate all the fish passage obstructions.

This District requests \$44,210 to pay for the following:

- € \$14,910 partial reimbursement for preliminary expenses related to fish passage enhancement already completed by the District.
- € \$4,000 for additional stream survey data collection by LACO & Associates in 2005 for permanent fish ladder design.
- € \$14,800 for bidding services and engineering document preparation by LACO & Associates (see attached proposal).
- € \$5,500 for hydrologic and hydraulic design preparation by Mike Love & Associates
- € \$5,000 for administration and processing permits with USACE, CDFG, and other agencies.

V. PROJECT DESCRIPTION AND NEED

- A. Describe the anticipated project benefits, including how your project will successfully restore any or all of the following: anadromous fish habitat (quantify if possible), access to existing anadromous fish habitat (quantify if possible), and natural riverine functions.

Construction of a permanent fish ladder designed to NOAA criteria will enhance fish access to habitat upstream of the dam and therefore increase the distribution and abundance of steelhead and COHO salmon.

- B. Briefly explain why your approach (dam removal or fishway construction) is the correct approach, based on ecological, social, economic and engineering considerations.

A fish ladder will provide an acceptable and relatively inexpensive solution to fish passage at the dam. Construction of a fish ladder on the downstream side of the dam will not interfere with water treatment plant operations or jeopardize community health through a water shortage as would dam removal or other drastic actions.

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The fish ladder solution also allows the stream bed gradient to remain as it is at the outlet of the county culverts, allowing minor improvements to mitigate fish passage. Dam removal would result in a new stream gradient, increasing the drop from the county culverts and increasing the jump required for fish passage.

- C. Provide a Scope of Work detailing the activities associated with project implementation. (For study applications, provide a Scope of Work describing the study activities to be conducted and anticipated deliverables)

See attached scope of work and design proposal.

- D. Identify any possible short or long-term negative impacts to the river system as a result of your project, and how to minimize them.

No impact during the design phase, but minor impact on stream turbidity is possible during construction of the ladder. Construction will be addressed by a future application that will include mitigation measures limiting negative impacts to the creek.

- E. Describe how the project relates to priority stream or river issues in the local watershed plan (if there is one).

No watershed plan for Telegraph Creek.

- F. Describe community support/attitude about the project and the degree to which they have been involved in decision making.

The community depends on Telegraph Creek. The public is very concerned about anything that would jeopardize their water supply. Many residents are also supportive of any project that protects fish without jeopardizing their access to the water supply.

- G. Describe the opportunities/likelihood for public involvement (e.g. hands on volunteering) and outreach/education offered by the project.

This project does not require a large work force or public involvement. The public has followed the progress of the District in resolving fish passage problems through monthly reports available on the District's web site at: www.sheltercove-ca.gov

The following question applies to design projects only.

- H. Describe the type and amount of preliminary work that has been conducted to prepare for the proposed design study. (e.g. Basic Stream Assessment, etc.)

€ Survey data collection and topo map creation by LACO & Associates October 2005.

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- ∅ Preliminary flow data records collected from various periods.
- ∅ Several hours of preliminary design discussions with NOAA, CDFG and District staff.

The following 3 questions apply to construction projects only.

- I. Identify the type and duration of any long-term management provided for the project (e.g., maintenance for fish passage facilities)

N/A Design only

- J. To assess the impacts and/or effectiveness of the project, provide at least two objective statements related to the project goal; one each for structural and functional elements of the project.

N/A Design only

- K. Describe the monitoring techniques that will be used, as related to the goals and objective statements listed in the previous question.

N/A Design only

VI. REQUIRED PERMITS & ENVIRONMENTAL COMPLIANCE

- A. Permits/Approvals required:

Permit for Fish Passage Enhancement from:
US Army Corp of Engineers
David Ammerman
P. O. Box 4863
Eureka, CA 95502-4863
Phone: (707) 443-0855

Lake and Streambed Alteration Agreement from:
California Department of Fish and Game
Donna Cobb
601 Locust Street
Redding, CA 96001
Phone: (530) 225-2314

Approval from:
National Marine Fisheries Service
Irma Lagomarsino
1655 Heindon Road
Arcata, CA 95521
Phone: (707) 825-5160

Approval from:

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National Oceanic and Atmospheric Administration
B. Hallstead
1125 16th Street, Suite 101
Arcata, CA 95521

- B. Has the State Historic Preservation Officer been consulted on the project?
Provide the contact (name, title, phone) and historical status of the project.

N/A

- C. NEPA Compliance Documentation:

Please provide the following information (if not already documented in the application)

1. Locations, sites, species and habitat to be affected

See above - Section III. PROJECT INFORMATION
2. Possible construction/deconstruction activities

See above - Section IV. CONCISE PROJECT SUMMARY and
Section V. PROJECT DESCRIPTION AND NEED
3. Any environmental concerns that may exist e.g. use/disposal of hazardous chemicals, introduction of non-indigenous species, impacts on endangered/threatened species, and presence of historic structures

N/A

- D. Other relevant government contacts

N/A

VII. BUDGET

- A. Total itemized project budget

See design scope and spread sheet - Attachment F.

- B. AR-NOAA funds requested (Give detailed itemized account of what funds will be specifically used for)

This District requests \$44,210 to pay for the following:

- € \$14,910 reimbursement for preliminary expenses related to fish passage enhancement already completed by the District.
- € \$4,000 for additional stream survey data collection by LACO & Associates for permanent fish ladder design.

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- € \$14,800 for bidding services and engineering document preparation by LACO & Associates (see attached proposal).
- € \$5,500 for hydrologic and hydraulic design preparation by Mike Love & Associates
- € \$5,000 for administration and processing permits with USACE, CDFG, and other agencies.

C. Other federal funds requested and received (Indicate status)

N/A

D. Matching (non-federal) funds requested and received (Indicate status and how much will be committed as match to this grant)

The District has spent more than \$19,000 to date, but we are asking for reimbursement totaling \$14,910 of these expenses.

VIII. ATTACHMENTS

A. Letter from dam owner.

N/A - Applicant owns dam.

B. Maps with project location and other barriers on stream indicated.

C. Photos (Electronic jpg version preferred)

<http://www.sheltercove-ca.gov/water/mitigation/mitigation.htm>

D. Design plans (if completed)

E. Letters of support (optional)

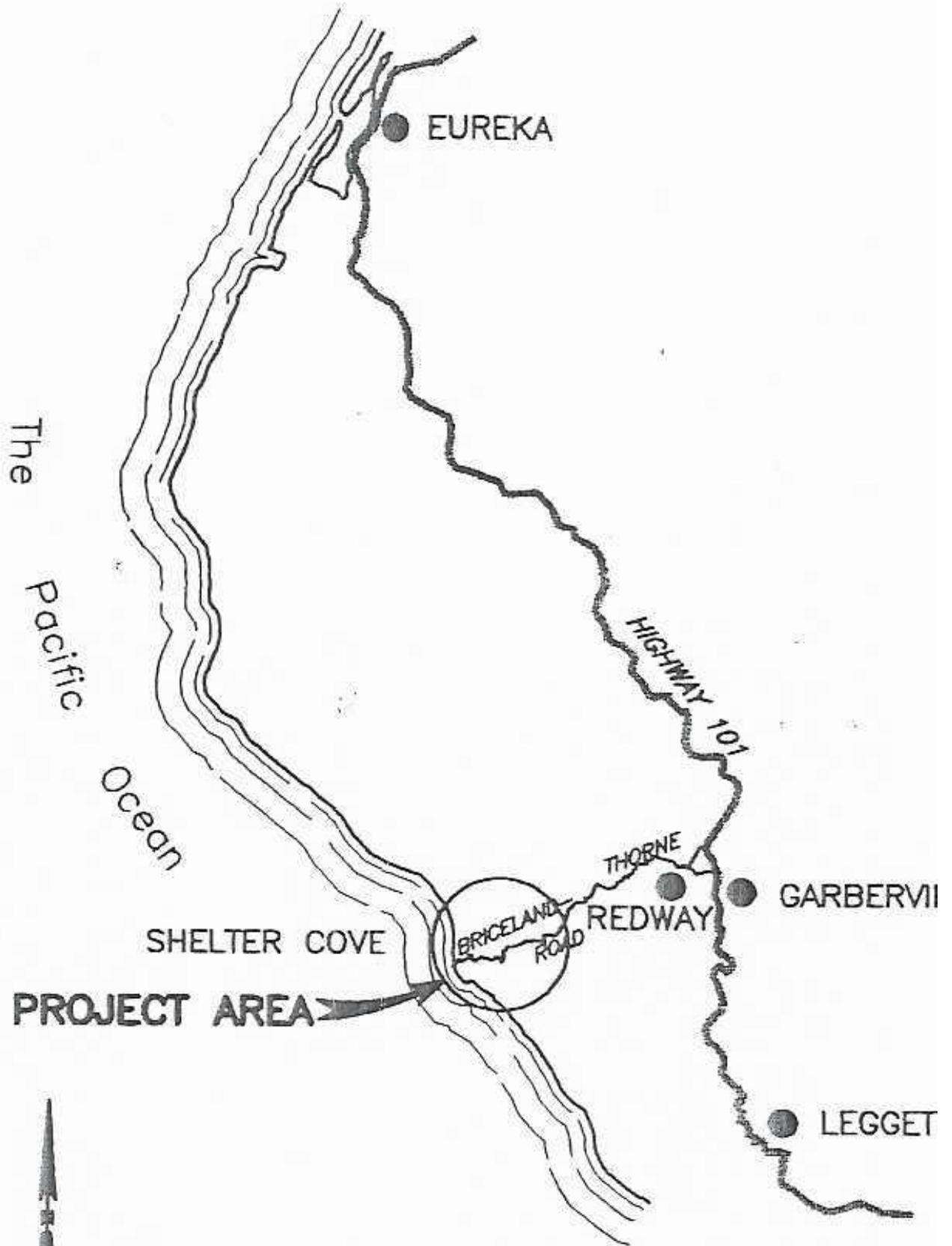
F. Budget Spread Sheet

Sincerely,

SHELTER COVE RESORT IMPROVEMENT DISTRICT #1

Richard Culp, PE
General Manager

ATTACHMENT B



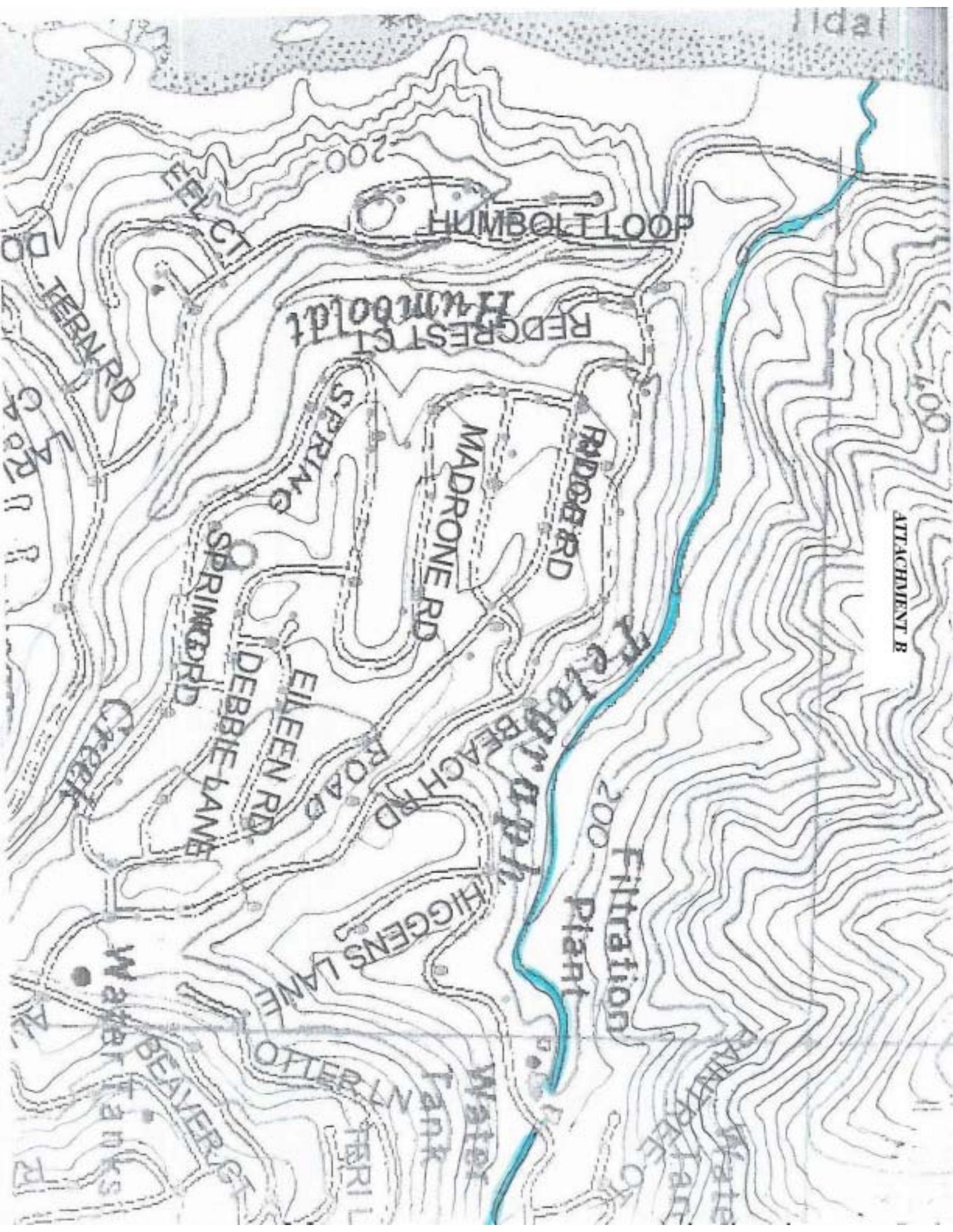
VICINITY MAP

NO SCALE

ATTACHMENT B



LOCATION MAP



ATTACHMENT B

HUMBOLDT LOOP

REDCREST ST

MADRONE RD

RIIDGE RD

SPRUCE

SPRING RD

DEBBIE LANE

EILEEN RD

ROAD

BEACH RD

HIGGINS LANE

OTTER LN

Filtration Plant

Water Tank

Water Tanks

BEAVER ST

FERRIL

RAINYBREEK

400

200

200

DOUGLAS RD

5400 N

N

R

ATTACHMENT B

PROJECT SITE:



Attachment F

Budget Item	Reimbursement to District for Completed Fish Passage Enhancement	Matching (Non federal) funds	Total Design Project Budget	Other federal funds (received)	AR NOAA Requested Funds
CAPITAL EXPENSES					
Fish Ladder Materials	598				598
Equipment Rental	500				500
Contractual Services	2,498		24,300		26,798
Permits	773		5,000		5,773
Temporary Fish Ladder Donation	0				
PERSONNEL COSTS					
Salaries	4,545				4,545
Benefits	4,641				4,641
Administration Costs	1,355				1,355
Total	14,910	0	29,300	0	44,210

**SHELTER COVE RESORT IMPROVEMENT DISTRICT
PROJECT DESIGN SCOPE
FOR THE
TELEGRAPH CREEK FISH LADDER
OCTOBER 28, 2005**

The following represents the scope of engineering services to be provided by LACO ASSOCIATES Consulting Engineers that are necessary for completion of the design phase of the Telegraph Creek Fish Ladder project. The project design team will consist of LACO Associates Consulting Engineers working with Michael Love & Associates as a sub-consultant.

Project Description

The proposed project will consist of the design of a fish ladder that will provide upstream passage over an existing water diversion structure operated by the Shelter Cove Resort Improvement District (RID). The fish ladder will be designed in accordance with NOAA - National Marine Fisheries (NMFS) and California Department of Fish and Game (CDFG) guidelines for the upstream passage of adult and juvenile steelhead trout. The project is anticipated to include the following components:

- ∅ Fish ladder system;
- ∅ High-flow bypass weir structure or improvements to existing diversion dam, if required; and
- ∅ Temporary and permanent erosion control BMP's.

SCOPE OF SERVICES

Hydrologic and Hydraulic Design

The following services will be provided by Michael Love & Associates:

- ∅ Estimation of fish passage design flows;
- ∅ Hydraulic calculations, including development of headwater and tailwater rating curves, estimation of turbulence and proportion of water bypassed around ladder at high flows for determination of attraction flows;
- ∅ Schematic plan, profile and section to convey layout of fish ladder to be constructed in the existing stream channel and diversion dam;
- ∅ Communication with NMFS and CDFG staff to ensure that design will satisfy their requirements;
- ∅ Hydrology and hydraulics report for use in agency review and permitting, addressing and summarizing site constraints, hydrology and fish passage hydraulics; and
- ∅ Construction drawing review prior to finalization for bid.

Hydrologic and Hydraulic Design Estimated fee = \$5,500

Design Engineering

Design engineering will include preparation and assembly of required computations, drawings and documents involved in facility hydraulic analysis, structural analysis, materials estimates, project construction plans, specifications, construction cost estimate and bid documents.

Plans

The Plans are anticipated to consist of detailed drawings necessary for project completion:

- ∅ Cover sheet w/title, maps, index and project notes;
- ∅ Project notes, legend and abbreviations;
- ∅ Site Plan sheet showing project layout and grading;
- ∅ Profile and Section sheets showing longitudinal profiles and cross sections of the fish ladder;
- ∅ Detail sheets showing general and structural details of fish ladder and bypass features and miscellaneous site appurtenances;
- ∅ Erosion Control Plan as needed showing all temporary and permanent Best Management Practices (BMP's) in order for the District to remain compliant with any existing National Pollutant Discharge Elimination System (NPDES) requirements.

Specifications

The Specifications are anticipated to consist of applicable notes on the Plan sheets.

Engineer's Cost Estimate

Development of the Engineer's estimate of construction costs based on present and/or recent, experienced costs of materials and services as well as costs generated from construction estimation literature.

Bid Documents

Bid documents will be adapted and submitted in form and format in accordance with the requirements of the project's funding agency.

Project Management

Project management provided by LACO will consist of the following activities to ensure timely completion of all stages of design process:

- ∅ Attend up to two coordination meetings with RID and/or agency officials;
- ∅ Coordinate sub-consultant work and other design engineering services listed above;
- ∅ Respond to and address relevant agency and RID review comments;

Design Engineering Estimated Fee = \$11,000

Bidding Services

Bidding services provided by LACO will consist of the following activities that will ensure timely progress of the competitive bidding process from Bid Advertisement through Contract Award:

- € Draft Bid Advertisement and submit to RID for publication;
- € Assist RID in bid process by answering bidder inquiries and issuing addenda as needed;
- € Arrange and attend Pre-Bid Conference;
- € Contract award consultation.

Bidding Services Estimated Fee = \$3,800

Deliverables

The following items will be submitted to the RID and as required for agency review:

- € Hydrology and Hydraulics Report (Michael Love and Associates)
- € Construction Plan Set
- € Engineer's Cost Estimate
- € Bid Documents
- € Structural Calculations

Submittals

Submittal of the Plans, Estimate and Bid Documents are anticipated to occur in the following stages or as required by funding agency guidelines and requirements and will be submitted by the RID to the involved funding and permitting agencies:

- € Initial Design Submittal (50%) – Agency review of project Plans for facility design integrity, hydraulic characteristics and basic project layout. Funding Agency will issue bid package boilerplate and construction contract requirements.
- € Final Design Submittal (95%) – Agency review of Final Plans including bid documents, detailed cost and quantity estimates on all bid items. Comments will be incorporated into 95% submittal.

Special Conditions and Assumptions

- € RID will obtain all necessary planning, grading and building permits.
- € RID will provide all necessary site utilities information, and site topography for design.
- € “Boilerplate” contract documents will be provided by funding agency.

USACE PERMIT APPLICATION
TELEGRAPH CREEK FISH PASSAGE IMPROVEMENT PROJECT
Prepared by Resort Improvement District #1
September 16, 2005

BACKGROUND:

The Resort Improvement District #1 (District) is a public utility district providing water, wastewater, electric, emergency medical, fire protection and recreation services to the community of Shelter Cove on the Lost Coast of California. <http://www.sheltercove-ca.gov/>

The District operates a water treatment plant with an intake structure and flashboard dam on Telegraph Creek.

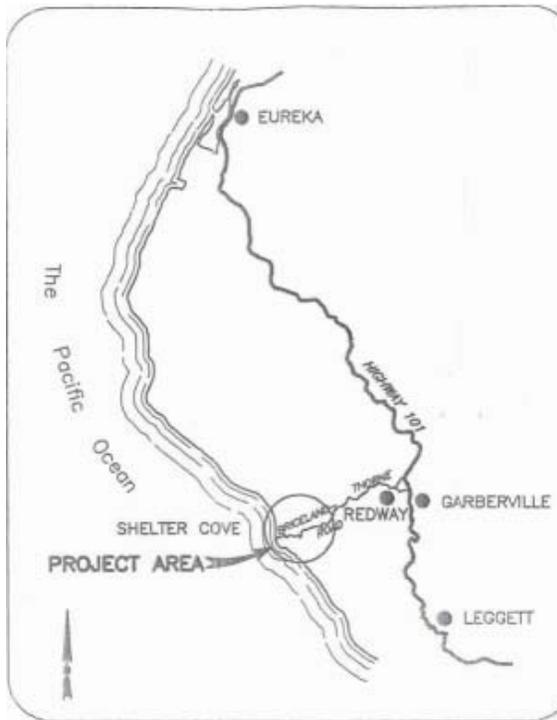
In a letter dated February 9, 2005, the District received a notice of violation from NOAA for alleged violation of the Endangered Species Act. Case # SW040243A. A \$20,000 fine was demanded. The claim stated: "As a result of flashboards for this dam, Northern California steelhead were unable to travel downstream and were therefore "taken" under the ESA."



PROJECT LOCATION MAP:



VICINITY MAP:



**TELEGRAPH CREEK FISH PASSAGE IMPROVEMENT PROJECT
USACE PERMIT APPLICATION
SEPTEMBER 2, 2005
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SITE MAP:



PROJECT SITE PLAN:



**TELEGRAPH CREEK FISH PASSAGE IMPROVEMENT PROJECT
USACE PERMIT APPLICATION
SEPTEMBER 2, 2005
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Proposed Fish Ladder Installation:

- € On September 13, 2005, CDFG representatives conducted a pre-installation site visit to determine the feasibility of installing a Denil fishway, 2-ft high, 1.5-ft wide, and 20-ft long. Details of the installation were coordinated with District staff and scheduled for September 20th and 21st. CDFG personnel will install the ladder with the assistance of District staff.
- € District staff will fabricate a steel transition channel for installation in the north end flash board channel of the dam. The transition channel will be fitted with adjustable flash board slots and provide a solid connection point for the fish ladder.
- € Sediment and loose gravel will be removed from the stream channel at the bottom of the ladder to create a jump pool.
- € An existing boulder weir will be enhanced using loose rocks in the jump pool area to enhance the perimeter of the jump pool.
- € No fill or imported material will be placed in the stream.
- € A backhoe will be used to lift the fish ladder into place and assist with the removal of sediment from the jump pool. Sediment removed from the jump pool will be exported to a gravel pile adjacent the District's water plant over 50-ft from the bank of the stream channel.
- € The District has a current CDFG Streambed Alteration Permit and the deadline was extended to December 31, 2005.
- € The following photographs show the proposed installation. *(Note: In accordance with CDFG recommendations, the ladder will be installed in the north end channel of the dam rather the south channel shown below.)*





DAM



COUNTY CULVERTS



DAM



WATER INTAKE



WATER TREATMENT



SHELTER COVE



BEFORE CLEANUP



AFTER CLEANUP



DEBRIS REMOVED FROM DAM



FISH LADDER INSTALLATION 9/20/2005