

Malibu Creek Ecosystem Restoration Study Los Angeles and Ventura Counties, California Appendix A

Agency Coordination and Public Involvement



U.S. Army Corps of Engineers
Los Angeles District





January 2017

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Appendix A – Agency Coordination and Public Involvement

Public Scoping Report

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3	Malibu Creek Ecosystem Restoration Study
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5	State Clearinghouse # 2002051135
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10	SINCE 6864 P P P P P P P P P P P P P P P P P P P
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12	CEQA Lead Agency:
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14	California Department of Parks and Recreation
15	1925 Las Virgenes Road
16	Calabasas, CA 91302
17	
18	NEPA Lead Agency:
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20	U.S. Army Corps of Engineers
21	Los Angeles District
22	P.O. Box 532711
23	Los Angeles, CA 90053-2325
24	

1 Introduction

The environmental assessment of the Malibu Creek Ecosystem Restoration Study is being conducted in accordance with state and federal regulations. The California Department of Parks and Recreation (CDPR) is acting as lead agency for purposes of compliance with the California Environmental Quality Act (CEQA). The United States Army Corps of Engineers, Los Angeles District, and (USACE) is the lead agency for purposes of compliance with the National Environmental Policy Act (NEPA). The public scoping requirements for each of these regulations differs slightly; however, the intent of each process remains the same — to initiate public scoping to assist in the preparation of the Environmental Impact Statement/Environmental Impact Report (EIS/EIR) by providing information about the Proposed Project to, and solicit information that will be helpful in the environmental review process from the public.

The public involvement for this study began in the prior reconnaissance phase with a public workshop held on January 28, 1998 at the Malibu Bluffs Park with about 100 members of the community present. A public scoping meeting and workshop was held on May 29, 2002 for the feasibility phase of the study. These meetings and comments received afterwards are summarized in the public concerns, and have been used to identify problems and opportunities. **Appendix A1** includes a transcript of May 2002 public workshop and associated public comments. A notice of Intent to Prepare an EIS for the study was published in the Federal Register (vol. 67, no. 109) on Thursday, June 6, 2002.

Meetings have continued throughout the years with two primary groups meeting consistently in support of this feasibility study: the Project Delivery Team (PDT) and the Technical Advisory Committee (TAC). The PDT is comprised of USACE management and technical staff, the CDPR and other partners that have contributed funding to the non-Federal share of study costs, including the California State Coastal Conservancy (SCC), the Santa Monica Bay Restoration Commission (SMBRC), Regional Water Quality Control Board (RWQCB) the Los Angeles County Department of Beaches and Harbors (LACDBH), California Department of Fish and Wildlife (CDFW) and Mountains Restoration Trust (MRT). The TAC is a diverse group of individuals and agency representatives that includes the USACE, CDPR, SCC, SMBRC, CDFW, California Coastal Commission (CCC), California Trout, the U.S. Fish and Wildlife Service (USFWS), NOAA-National Marine Fisheries Service (NFMS), the National Park Service Santa Monica Mountain National Recreation Area (SMMNRA), the Resources Conservation District of the Santa Monica Mountains (RCD), Los Angeles Waterkeeper, Heal the Bay, the California Regional Water Quality Control Board (RWQCB), the U.S. Geological Survey (USGS), California Department of Transportation (Caltrans), the University of California Cooperative Extension, the Las Virgenes Municipal Water District (LVMWD), consultants, Serra Canyon Property Owners, Surfrider Foundation, Malibu Surfing Association and other public interests. These groups have met at irregular intervals, but as often as every month when discussing risk-informed decisions, next steps and while developing or reviewing major work products.

TAC members have by default become part of the expanded PDT in recent years. The USACE and the CDPR have relied on the active participation of the TAC members in the planning process, particularly when establishing baseline conditions and more recently for the formulation, comparison and evaluation of alternative plans. The intent of the study leads is to have more consistent and regularly scheduled meetings with the TAC for the duration of the feasibility study and a formal public meeting.

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1.1 Public Involvement Program

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A Public Outreach Group was established for the feasibility study, comprised of representatives from the CDPR, the USACE, Malibu Creek Watershed Council, and other interested parties. This group worked closely together to develop a Public Involvement Plan for the feasibility study. Activities include:

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A website is currently being constructed to provide information on the study status, updates, meeting schedules and summaries. Development of a public outreach informational presentation.

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Identifying opportunities to meet with interested parties and members of the public to present study information and provide vehicles for administering public outreach.

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1.2 Public Workshop

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A co-chaired public workshop was held in January 1998 to inform the public of the feasibility study and to solicit public input. Additionally, an overview of the NEPA/CEQA compliance regulations was presented. In May of 2002 a public scoping meeting was held. The intent of the scoping process was to encourage participation in the environmental review process from public agencies, special interest groups and the general public in the identification of the key issues and concerns relevant to the scope of the Integrated Report. The response from the general public who attended the session was generally positive. Many of the participants voiced support for efforts to remove the dam, though there were also some concerns and questions. Public concerns are summarized in Section 1 of the Integrated Report. Various participants provided proposals for modifications to the dam that would allow for sediment delivery downstream.

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1.3 **Public Review of Draft Integrated Feasibility Report**

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Public review of the Draft Integrated Feasibility Report (IFR) will be conducted along with a public meeting to present the findings of the Draft IFR and to provide the public an opportunity to express their views on the results and recommendations of the Draft IFR.

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Institutional Involvement 1.4

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1.4.1 Study Team

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1.4.2 Agency Participation

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45 46 During the feasibility study, coordination with the USFWS was conducted in accordance with the Fish and Wildlife Coordination Act. The USFWS prepared a draft Coordination Act Report (CAR) which included their views on the Tentatively Selected Plan (TSP), which the USACE received in May of 2013. The CAR provided information on ecosystem conditions including types of species and habitats, threatened and endangered species, related to the study area. The report also included a preliminary evaluation of potential impacts associated with the alternative plans considered in the study. The USACE will continue coordination with USFWS during development of the final CAR, as well as during formal or informal consultation under the ESA, if required.

The USACE has coordinated with the NMFS throughout the study, to include discussions of benefits and impacts to steelhead, as well as potential impacts to Essential Fish Habitat (EFH). During the public review period, the draft IFR will be circulated to NMFS for review, and to meet the consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The USACE will complete formal consultation prior to construction, pursuant to the ESA.

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Both the NMFS and USFWS, as described below, are participants in the Malibu TAC.

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The USACE has initiated consultation with the California State Historic Preservation Officer (SHPO) via letter and telephone regarding study compliance with Section 106 of the National Historic Preservation Act (36 CFR 800). The SHPO will be provided with the Draft IFR during the public review period and may provide comments. The SHPO also understands that compliance with Section 106 is not being conducted through the NEPA process, but based on Section 106, resolution of adverse effects to historic properties, would occur during the next phase of the study through implementation of a memorandum of agreement (MOA) or programmatic agreement (PA). If required, the MOA or PA will be executed prior to signature of the Record of Decision (ROD).

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1.4.3 Additional Coordination

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27 28 The Draft IFR results and recommendations will be formally coordinated with a number of Federal and State agencies as required by Federal and state laws and policies. A Coastal Consistency Determination will be submitted to the CCC for their concurrence in the findings. The Final IFR will also be submitted to the RWQCB for their approval related to the Clean Water Act as well as regional Air Quality Control offices. The Final IFR and proposed recommendations will be provided to the SHPO for their approval on the impacts and recommendations associated with cultural and historic resources. Other Federal and State agencies that will receive copies of the Draft IFR for their review and approval include Federal and State Environmental Protection Agencies, the State Clearinghouse, and other agency interests.

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1.4.4 Study Participants

Study Sponsors

- California Department of Parks and Recreation
- U.S. Army Corps of Engineers

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Study Funders

- California Department of Parks and Recreation
- California Department of Fish and Wildlife
- **Mountains Restoration Trust**
- Regional Water Quality Control Board 40
- 41 California State Coastal Conservancy
- 42 Santa Monica Bay Restoration Commission
- 43 U.S. Army Corps of Engineers

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1.4.5 Members of the Technical Advisory Group

The organizations listed below have participated in some or all of the stakeholder meetings held by USACE and CDPR in order to help develop the Draft IFR and address specific technical issues.

- California Department of Fish and Wildlife formerly Fish and Game
- California Department of Parks and Recreation
- 7 CALTROUT
- 8 CCC

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- 9 City of Calabasas
- 10 City of Malibu
- 11 E-Surveyors
- 12 Heal the Bay
- 13 Las Virgenes Municipal Water District
- 14 Los Angeles County
- 15 o Department of Beaches and Harbors
- 16 o 3"District Supervisor Sheila Kuehl's Office
- 17 o Sanitation Districts
- o Department of Public Works, Roads Department
- 19 o Department of Public Works, Flood Control District
- 20 o Los Angeles Waterkeeper was Santa Monica Baykeeper
- Malibou Lake HOA
- Malibu Surfing Association
- Matilija Coalition
- Mountains Restoration Trust
- National Park Service-Santa Monica Mountains National Recreation Area
- National Oceanic and Atmospheric Administration
- 27 National Marine Fisheries Service
- Regional Water Quality Control Board. Los Angeles Region
- Resource Conservation District of the Santa Monica Mountains
- Santa Monica Bay Restoration Commission
- Santa Monica Bay Restoration Foundation
- 32 Santa Monica Mountains Conservancy
- Santa Monica Mountains National Recreation Area
- Serra Retreat HOA
- 35 Sierra Club
- Southern California Coastal Water Research Project
- State Coastal Conservancy
- 38 Surfrider Foundation
- University California Berkeley
- University California Cooperative Extension, LA and Ventura County Natural Resources
- United States Army Corps of Engineers
- United States Fish and Wildlife Service
- 43 Official Study Supporters
- 44 Caltrout
- 45 Mountains Restoration Trust
- Santa Monica Bay Restoration Commission
- Sierra Pacific Flyfishers
- Southwest Council Federation of Fly Fishers

1.5 Report Recipients

 An interim feasibility report was provided to TAC members and other interests prior to 2009. The USACE and CDPR have worked with local, State, and federal agencies and involved the public during the feasibility study. No significant public controversy regarding the National Environmental Restoration (NER) Plan has emerged to date. A number of agencies and organizations expressed their support of the NER - Alternative 2d1. Many concerns were expressed regarding risk of increased flood risk in downstream reaches. These concerns were considered in the final array of alternatives.

Public review and comments received as a result of the Draft IFR and responses thereto will be provided in the Final IFR and considered in the final decision process.

1.6 Public Review of Draft Report

Public review of the Draft IFR will be conducted along with a public meeting to present the findings of the feasibility study and to provide the public an opportunity to express their views on the results and recommendations of the feasibility study.

2 Next Steps in EIS/EIR Process

2.1 **EIS/EIR Events and Documents**

CDPR and USACE will provide opportunities for additional public input when the Draft IFR is released and during the public meetings for the Draft IFR. **Table 2.1-1** presents the proposed schedule for the EIS/EIR and identifies where in the process the public and agencies can provide additional input in the environmental review process.

Table 2.1-1 EIS/EIR Events and Documents

Event/Document		Purpose	Approximate Date
	Co	mpleted Events and Documents	
Notice of Preparation (NOP) for CEQA	Release of NOP ¹	Notified interested parties and agencies of the CDPR and USACE intent to prepare an EIS/EIR.	May 23, 2002 to June 21, 2002
	Public Review Period	30-day public scoping period on the Study to provide for public comments on the scope of EIS/EIR.	May 23, 2002 to June 21, 2002
Scoping Meeting - NOP	Scoping meeting was held	Presented information on the Study and provided opportunity for public and agency comments in a public forum.	May 29, 2002
Notice of Intent (NOI) for NEPA	NOI published in the Federal Register	Initiated the NEPA public scoping process and served to inform other cooperating agencies of the USACE's intent to prepare an EIS/EIR.	June 6, 2002
Scoping Report for CEQA NOP Process		Reported public and agency comments on the proposed Project and environmental issues of concern to the public and agencies. This report includes comments made during the scoping process for the CEQA Notice of Preparation.	June 6, 2002

Event/Document		Purpose	Approximate Date
	Up	coming Events and Documents	
Draft IFR	Release of Draft IFR	Presents impacts for the Proposed Project and its alternatives	January 2017
	Public Review Period	CEQA: 45-day minimum review period for State agencies. NEPA: USACE requires a 45-day public review period.	January - March 2017
	Draft IFR Public Meeting	Allows for public comment on the draft document	15 February 2017
Final EIS/EIR	Release of Final IFR	Final IFR, with response to comments, issued by CDPR and USACE	January 2018
		Final IFR is filed with USEPA	
	Decision on the Study	USACE issues the Record of Decision	October 2018

Note: 1. The NOP was mailed to interested parties, federal, State, and local regulatory agencies, and elected officials.

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Appendix A – Agency Coordination and Public Involvement

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2	Appendix A1
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4	Notice of Preparation and Notice of Intent
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Appendix A – Agency Coordination and Public Involvement

SUPPLEMENTARY INFORMATION: A method of modifying esterases by substitution with histadine of at least one amino acid within 6 A° of an active site serine provides esterases useful for detoxifying organophasphates.

Luz D. Ortiz,

Army Federal Register Liaison Officer.
[FR Doc. 02–14227 Filed 6–5–02; 8:45 am]

DEPARTMENT OF DEFENSE

Department of Army, Corps of Engineers

Intent To Prepare an Environmental Impact Statement for the Malibu Creek Enrivonmental Restoration Feasibility Study, Los Angeles County, CA

AGENCY: Department of Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of intent.

SUMMARY: The Los Angeles District of the U.S. Army Corps of Engineers will prepare an Environmental Impact Statement (EIS) to support the Malibu Creek Environmental Restoration Feasibility Study, Los Angeles County, CA. Approximately two-thirds of the watershed is in Los Angeles County while the remaining one-third is in Ventura County. The feasibility study area is the Rindge Dam, which is located 2 miles upstream of Malibu Lagoon, and the areas immediately upstream and downstream of the dam. This study will investigate feasible alternatives to restore the Malibu Creek ecosystem, primarily by removing Rindge Dam. Also, feasible alternatives for the removal of sediment behind the dam and the beneficial use of that sediment will be investigated.

The Draft EIS (DEIS) will analyze the potential environmental impacts (beneficial and adverse) of a range of alternatives, including the proposed action and the no action alternative. The Los Angeles District and California Department of Parks and Recreation will cooperate in conducting this feasibility study.

ADDRESSES: District Engineer, U.S. Army Corps of Engineers, Los Angeles District, ATTN: CESPL-PD-RQ (B. Hulkower), P.O. Box 532711, Los Angeles, CA 90035–2325.

FOR FURTHER INFORMATION CONTACT: Ms. Bonnie Hulkower, Environmental Coordinator, telephone (213) 452–3861, or Mr. Jason Shea, Study Manager, telephone (213) 452–3794.

SUPPLEMENTARY INFORMATION:

1. Authorization

This feasibility study was authorized by a resolution adopted by the U.S. House of Representatives Committee on Public Works and Transportation, dated 5th February 1992, which states, in part: "that the Board of Engineers is requested to review the report of the Chief of Engineers on Point Magu to San Pedro Breakwater, California Beach Erosion Control Study, published as House Document 277, 83rd Congress, 2nd Session, and other pertinent reports, to determine whether any modifications of the recommendations contained therein are advisable at the present time, in the interest of shore protection, storm damage reduction, and other purposes along the shores of Southern California from Point Mugu to the San Pedro Breakwater and nearby areas within Ventura County and Los Angeles County, California.

2. Background

Malibu Creek is located approximately 30 miles west of downtown Los Angeles, California. The drainage area covers approximately 109 square miles of the Santa Monica Mountains and Simi Hills. The feasibility study area currently includes the Rindge Dam, which is located 2 miles upstream of Malibu Lagoon. The non-federal sponsor of the feasibility study is the California Department of Parks and Recreation.

The Rindge family constructed Rindge Dam in the Mid 1920's. The purpose of the dam was to provide approximately 574 acre-feet of water storage for agricultural needs. Rindge Dam is a concrete arch structure 90 feet in height with an arc length of 175 feet at its crest. Sediment carrier by Malibu Creek has deposited behind the dam and filled the reservoir, rendering the structure useless as a water storage facility. It is estimated that approximately 700,000 cubic yards of sediment lies trapped behind the dam.

Rindge Dam no longer serves the purpose that it was originally created for. It neither provides water storage nor flood control protection due to sedimentation behind the dam. During peak events, the entire flow of Malibu Creek rises over the dam's crest. However, the dam does provide bank stability protection since its construction created a milder slope along the Malibu Creek. This requires some consideration as removing the dam could potentially cause the channel banks to erode.

Presently, the dam is considered to be a contributing factor of the declining numbers of steelhead trout in the Malibu Creek Watershed. If no action is taken to secure passage for the steelhead trout to reach the upper watershed and its tributaries, the dam will continue to obstruct this endangered species from reaching the upstream portion of the watershed, thereby limiting the amount of spawning and rearing habitat.

3. Alternatives

The feasibility study will focus on addressing the problems and needs caused by Rindge Dam with the primary objective of the feasibility study being to restore the Malibu Creek ecosystem. Other objective that are considered appropriate may involve possible beneficial use of the sediment behind the dam for beach nourishment or other environmental restoration.

In general, alternative plans will investigate reasonable alternatives to restore Malibu Creek, primarily by removing Rindge Dam. Feasible alternatives for the removal of sediment behind the dam and the beneficial use of that sediment will also be investigated. Significant beneficial impacts to the riparian ecosystem (especially to steelhead trout) are expected from restoration alternatives identified in the feasibility study.

4. Scoping Process

Participation of all interested Federal, State, and County agencies, groups with environmental interests, and any interested individuals are encouraged. Public involvement will be most beneficial and worthwhile in identifying the scope of pertinent, significant environmental issues to be addressed, offering useful information such as published or unpublished data, providing direct personal experience or knowledge which informs decision making, and recommending suitable mitigation measures to offset potential impacts from the proposed action or alternatives.

A public scoping meeting was held on May 29, 2002, from 7 until 9 p.m. at the Las Virgenes Municipal Water District Training Room, 4232 Las Virgenes Road, Calabasas, CA, as advertised in local newspapers. The purpose of the scoping meeting was to gather information from the public or interested organizations about issues and concerns that they would like to see addressed in the DEIS. The Los Angeles District is accepting comments delivered or sent in writing to the address above. The scoping period will conclude August 5, 2002.

5. Availability of the DEIS

The DEIS is expected to be available to the public for review and comment beginning in the spring of 2004.

Luz D. Ortiz,

Army Federal Register Liaison Officer. [FR Doc. 02–14230 Filed 6–5–02; 8:45 am] BILLING CODE 3710–KF–M

DEPARTMENT OF EDUCATION

Submission for OMB Review; Comment Request

AGENCY: Department of Education.

SUMMARY: The Leader, Regulatory
Information Management Group, Office
of the Chief Information Officer invites
comments on the submission for OMB
review as required by the Paperwork
Reduction Act of 1995.

DATES: Interested persons are invited to submit comments on or before July 8, 2002.

ADDRESSES: Written comments should be addressed to the Office of Information and Regulatory Affairs, Attention: Lauren Wittenberg, Acting Desk Officer, Department of Education, Office of Management and Budget, 725 17th Street, NW, Room 10235, New Executive Office Building, Washington, DC 20503 or should be electronically mailed to the Internet address Lauren Wittenberg@omb.eop.gov.

SUPPLEMENTARY INFORMATION: Section 3506 of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires that the Office of Management and Budget (OMB) provide interested Federal agencies and the public an early opportunity to comment on information collection requests. OMB may amend or waive the requirement for public consultation to the extent that public participation in the approval process would defeat the purpose of the information collection, violate State or Federal law, or substantially interfere with any agency's ability to perform its statutory obligations. The Leader, Regulatory Information Management Group, Office of the Chief Information Officer, publishes that notice containing proposed information collection requests prior to submission of these requests to OMB. Each proposed information collection, grouped by office, contains the following: (1) Type of review requested, e.g. new, revision, extension, existing or reinstatement; (2) title; (3) summary of the collection; (4) description of the need for, and proposed use of, the information; (5) respondents and frequency of collection; and (6) reporting and/or

recordkeeping burden. OMB invites public comment.

Dated: May 30, 2002.

John D. Tressler,

Leader, Regulatory Information Management, Office of the Chief Information Officer.

Federal Student Aid

Type of Review: Extension of a currently approved collection.

Title: Lender's Request for Payment of Interest and Special Allowance (JS) *. Frequency: Quarterly, Annually. Affected Public: State, Local, or Tribal

Gov't, SEAs or LEAs (primary)
Businesses or other for-profit.

Reporting and Recordkeeping Hour.

Reporting and Recordkeeping Hour Burden:

Responses: 17,200. Burden Hours: 41,925.

Abstract: The Lender's Interest and Special Allowance Request (Form 799) is used by approximately 4,300 lenders participating in the Title IV, Part B loan programs. The ED Form 799 is used to pay interest and special allowance to holders of the Part B loans; and to capture quarterly data from lender's loan portfolio for financial and budgetary projections.

Requests for copies of the submission for OMB review; comment request may be accessed from http:// edicsweb.ed.gov, by selecting the "Browse Pending Collections" link and by clicking on link number 2022. When you access the information collection, click on "Download Attachments" to view. Written requests for information should be addressed to Vivian Reese, Department of Education, 400 Maryland Avenue, SW, Room 4050, Regional Office Building 3, Washington, DC 20202-4651 or to the e-mail address vivan.reese@ed.gov. Requests may also be electronically mailed to the Internet address OCIO RIMG@ed.gov or faxed to 202-708-9346. Please specify the complete title of the information collection when making your request.

Comments regarding burden and/or the collection activity requirements should be directed to Joe Schubart at (202) 708–9266 or via his Internet address *joe.schubart@ed.gov*. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339.

Student Financial Assistance

Type of Review: Revision.
Title: Federal Family Education Loan
(FFEL), Direct Loan, and Perkins Loan
Discharge Applications.

Frequency: One time.
Affected Public: Individuals or household.

Reporting and Recordkeeping Hour Burden:

Responses: 70,200. Burden Hours: 35,100.

Abstract: These forms will serve as the means of collecting the information necessary to determine whether a FFEL or Direct Loan borrower qualifies for a loan discharge based on total and permanent disability, school closure, false certification of student eligibility, or unauthorized signature. The school closure discharge application may also be used by Perkins Loan borrowers applying for a closed school discharge. Public comment should be made on the 4 forms included for this package. The forms for the Permanent Disability Discharge Form is being cleared separately.

Requests for copies of the submission for OMB review; comment request may be accessed from http:// edicsweb.ed.gov, by selecting the "Browse Pending Collections" link and by clicking on link number 1877. When you access the information collection, click on "Download Attachments" to view. Written requests for information should be addressed to Vivian Reese, Department of Education, 400 Maryland Avenue, SW, Room 4050, Regional Office Building 3, Washington, DC 20202-4651 or to the e-mail address vivan.reese@ed.gov. Requests may also be electronically mailed to the Internet address OCIO_RIMG@ed.gov or faxed to 202-708-9346. Please specify the complete title of the information collection when making your request.

Comments regarding burden and/or the collection activity requirements should be directed to Joe Schubart at (202) 708–9266 or via his Internet address *joe.schubart@ed.gov*. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339.

[FR Doc. 02–14156 Filed 6–5–02; 8:45 am]

DEPARTMENT OF EDUCATION

[CFDA No.: 84.351B]

The Cultural Partnerships for At-Risk Children and Youth Program; Notice Inviting Applications for New Awards for Fiscal Year (FY) 2002

Purpose of Program: The Cultural Partnerships for At-Risk Children and Youth Program, authorized under Subpart 15 of Part D of Title V of the Elementary and Secondary Education Act (ESEA), as amended by Public Law

Malibu Creek/Rindge Dam Ecosystem Restoration Feasibility Study

SCH Number: 2002051135

Document Type: NOP - Notice of Preparation

Project Lead Agency: Parks and Recreation, Department of

Project Description

The Draft EIS/EIR will analyze the potential impacts (beneficial and adverse) on the environment of a range of alternatives, including the proposed action and the no action alternative. The Corps of Engineers and the California Department of Parks and Recreation will cooperate in conducting this feasibility study. This study will focus on addressing the problems and needs caused by Rindge Dam and will investigate the following objectives: -Feasibility alternatives for the restoration of the Malibu Creek riparian ecosystem (especially for steelhead trout), primarily by removing Rindge Dam, -Feasibility alternatives for the removal of sediment behind the dam, and -Beneficial use of the removed sediment for beach nourishment or other environmental restoration purposes.

Contact Information

Primary Contact:

Suzanne Goode Department of Parks and Recreation 818 880-0364 1925 Las Virgenes Road Calabasas, CA 91302

Project Location

County: Merced City: Merced Region: Cross Streets: Latitude/Longitude: Parcel No:

Parcel No: Township: Range: Section: Base:

Other Location Info:

Proximity To

Highways: Airports: Railways: Waterways: Schools: Land Use:

Development Type

Local Action

Project Issues

Aesthetic/Visual, Biological Resources, Geologic/Seismic, Toxic/Hazardous, Water Quality, Traffic/Circulation, Other Issues

Reviewing Agencies (Agencies in Bold Type submitted comment letters to the State Clearinghouse)

Resources Agency; Department of Conservation; Cal Fire; Office of Historic Preservation; Department of Water Resources; **Department of Fish and Wildlife, Region 5**; Department of Fish and Wildlife, Marine Region; **Native American Heritage Commission**; State Lands Commission; Office of Emergency Management Agency, California; **Caltrans, District 7**; State Water Resources Control Board, Division of Water Quality; Regional Water Quality Control Board, Region 4

CEQAnet HOME NEW SEARCH

UNITED STATES OF AMERICA

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U.S. ARMY CORPS OF ENGINEERS

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PUBLIC MEETING FOR THE
MALIBU CREEK (RINDGE DAM) ECOSYSTEM RESTORATION
FEASIBILITY STUDY

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CALABASAS, CALIFORNIA

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WEDNESDAY

MAY 29, 2002

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The Public Meeting was held in the Training Room Las Virgenes Municipal Water District, 4232 Las Virgenes Road, Calabasas, California, at 7:00 p.m.

PRESENT:

JIM HUTCHISON, U.S. Army Corps of Engineers
JASON SHEA, U.S. Army Corps of Engineers
SUZANNE GOODE, State of California, Department
of Parks and Recreation

1 P-R-O-C-E-E-D-I-N-G-S 2 7:00 p.m. 3 Good evening and welcome to the MR. HUTCHISON: 4 Malibu Creek (Rindge Dam) Feasibility Study Public Workshop. 5 My name is Jim Hutchison. I'm from the U.S. Army 6 Corps of Engineers and I am Chief of the Watershed Group in our 7 Planning Division and tonight I have the pleasure of introducing 8 Suzanne Goode. She's the Senior Ecologist from the State Parks 9 Department and Jason Shea who's also from the Corps of Engineers 10 in the Watershed Studies Group. He is the Study Manager for this 11 feasibility study. 12 And just a couple of things quickly. We're going 13 to have a brief presentation tonight. Suzanne's going to start 14 off and then Jason's going to take over afterwards and we'd like 15 to get through that presentation first before we open it up for 16 questions and answers. 17 Not too full here tonight. So, we want to give you 18 as much time as possible to give us any feedback on comments, on 19 any opportunities that we should consider, 20 information needs, and certainly this is only the beginning of 21 our feasibility study efforts. So, there will be ample 22 opportunity to contribute at anytime.

We're going to make this information available to you tonight somehow, someway. We're talking about putting the information on a website. We do have a recorder, too. So, we

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1 are going to make sure that we've got a transcript from here of 2 what's being said tonight. 3 We're going to ask if everyone can come on up and 4 speak into the microphone or I will put the microphone as far as 5 the portable will reach tonight. This is just for recording 6 It helps us out quite a bit. I'm going to go around 7 afterwards and take down people's names if they'd like to speak 8 after they do speak to make sure that we've got the names spelled 9 correctly on the transcript. 10 And that's it. With that, I'm sure that everybody 11 knows Suzanne. Thank you. 12 MS. GOODE: Thanks, Jim. 13 I'd like to welcome everybody here. At long last, 14 our study has gotten underway. We've been talking about it for a 15 number of years and as Jim mentioned, I'm the Senior Resource 16 Ecologist for our State for Angeles District and I'd like to 17 also have from State Parks, point out we our notable 18 superintendent Mr. Hayden Soam, who is standing in the back of 19 the room. Many of you already know him. 20 So, we're here representing the owner of Rindge 21 We are the owner of Rindge Dam which is just a few miles Dam. 22 downstream from here. 23 So, with that, I'd like to talk about why we're 24 here, why we think this is an important study, and how we got to 25 the point where we are today.

We're at our public workshop and this is a shot of Malibu Creek above the dam in its natural state and this is what we would hope to see possibly as an outcome of this study process and the implementation of the project is a natural stream stretch all the way down.

This is what we're here all about. This is really a project that has a number of environmental benefits if it is ultimately carried out.

We hope to have environmental benefits and one of the environmental benefits that we hope to achieve is to assist this species, the Steelhead trout and Steelhead are very significant for a number of reasons. They are anadromous species of fish. That is a species of fish that lives part of its life cycle in the ocean and part of its life cycle in fresh waters. Unlike salmon, however, the Steelhead will come up to fresh water to spawn and then will return to the ocean rather than dying as salmon do. So, that is an important difference between these different anadromous species.

And the Steelhead that we have here in Malibu Creek along with Steelhead in other Southern California coastal streams are part of what is called, and here it says, ecologically significant unit actually an evolutionary significant unit.

These Steelhead are distinct genetically from Steelhead in other populations and that is very significant because having discovered this, fish scientists have been able to

figure out that the Steelhead that we have in Southern California are actually the ancestors to all -- the ancestral tie to all of the Steelhead on up the rest of the Pacific coast and we were not able of discovering this several years ago because we didn't have the technology available to analyze the genetic material.

And these Steelhead are very significant because they're able to withstand and live in significantly warmer temperatures that we have in Southern California compared to the rest of the Pacific coast and given the fact that global warming appears to be happening, this could have some very important implications should the Steelhead in streams further north become unable to live in their streams due to global warming.

Now, this is all sort of speculation, of course, but it's nice to know that we have a species that is adapting to warmer climates that might be able to live in an expanded habitat later on provided that we can save them now that is.

These are some California evolutionary significant units. This shows various Steelhead populations up and down the coast that -- and within each population area, those fish are considered to be closely related. Evolutionary significant unit is a population that has evolved together and have similar characteristics that set them apart from the other populations or the other ESUs.

So, you can see ours is the southernmost one.

Malibu Creek was thought to be the southernmost

Steelhead stream in the United States, in the world until recently some other fish have been discovered in Topanga Creek and in other creeks further down Orange County.

ancestral to all of the other Steelhead and they're also an excellent indicator species. We don't like to manage park lands or wilderness areas for a specific species. That's not really the way to do because you may manage for one species and it may not benefit another species and you may make decisions based upon what is going to help a single species that may be detrimental to the ecological system as a whole.

However, having said that, if you are going to select species that you want to try and favor or at least see how healthy your ecosystem is, some of these key species that are top predators, at the top of their food chain, species that don't have a very high reproductive potential, for example, service indicator species and if you're able to have an ecosystem that can support an indicator species that's sort of like the canary in the coal mine. As long as that species is present, you know that you have some kind of a healthy system or at least a reasonably healthy system compared to systems that cannot support indicator species.

So, Steelhead is such, an indicator species. It's current status, however, is not good at least to the summer Steelhead population that we're dealing with here. It has had

extreme drops in populations. I don't have particular numbers for you, but we've heard anecdotal accounts that from the early part of the century, we've seen pictures of people hauling out huge numbers of these magnificent fish up to two feet long from our local streams and now, we really don't know exactly how many we have.

Our populations estimates have varied widely. We haven't seen any Steelhead in Malibu Creek recently. I believe the last confirmed sighting was in, somebody can correct me, perhaps 1994 or was it 1996. I think it was 1994.

However, one that that's very usual about these particular Steelhead in our ESU is that not only are they well adapted to warm water, they're also a little bit plastic in their behavior. They're not quite as picky as some of the fish further up north are and that is probably related to the fact that our environment here is much more variable.

Our climate varies a lot more from year to year than it does up north and sometimes we have huge deluges. An El Nino year, for instance. Other years like this year, we had hardly any rainfall at all and given that and the fact that we also have earthquakes where streams may be blocked, these particular fish in this ESU are a little bit more adaptable.

So, they don't necessarily have to go to the stream that they were born in or that they were spawned in originally in order to reproduce. If they cannot get up into their

ancestral stream, it's been shown that they will go to the next nearest stream and so, the fact that we don't have any that we know of in Malibu Creek this year or last year or what have you does not mean that they're gone forever. They may simply be using another stream that for whatever reason that year has more space or it's easier for them to go to and we have every reason to believe that if Malibu Creek becomes more hospitable or provides more habitat than it currently does that we will begin to get these fish in this creek again.

And that's why it's important for us in Santa Monica Mountains to not only consider Malibu Creek but also to consider Topanga Creek and other creeks. Solstice Creek which used to have Steelhead. The National Park Service is working with the County and with -- to make that creek available to Steelhead once again because they're blocked from going into Solstice Creek.

So, all of these efforts are important and will help the population of fish that we have here in general not just any one particular stream but all of them.

And they set summer habitat laws and degradation.

We have fill in of streams. There are many obstructions that block their passage up to the spawning areas such as dams and other water diversions. We have development. We have impaired water quality. We have loss of riparian vegetation that is so necessary for the basis -- the bottom of the food chain starts

with the riparian vegetation that falls into the creek and then rots and forms the bottom of the food chain for very small creatures that then are moving up into the food chain are ultimately consumed by the fish.

The aerial there shows -- this is an aerial photograph of Malibu Creek and you can see down at the lower right-hand corner, Malibu Lagoon and then following the creek on up the arrow indicates the location of the dam.

We're very fortunate in this case in that the dam was pretty close to the ocean and so, if the decision is made that the dam is dismantled, one of the other, I forgot to mention, very important environmental benefits that we might be able to achieve if we remove the dam is to recover the sediment behind the dam. As you may know, our beaches are starved of sediment. That's another bad thing that happens when we build all of these dams, the impediments in streams, is that the sediment that normally would go to the beach and form our nice wide beaches and protect the shore from erosion has been depleted and deprived and the streams are actually starved of sediment because all the sediment is trapped behind a lot of these obstructions. So, fortunately, in Malibu Creek, the dam is close to the ocean.

This shows the map of the Malibu Creek Watershed.

On the left, it shows existing land use in 1993. I don't know if you can see it, but the red is all developed and the light

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pink is agricultural and the green is local park. We actually have quite a bit more park land as you're well aware in this watershed. The green just shows local parks and then on the right is the potential land use based upon the maximum allowable uses under current zoning ordinances and general plans.

And so, right now, we have -- our watershed is kind of teetering on the brink of about 12 percent developed and if

And so, right now, we have -- our watershed is kind of teetering on the brink of about 12 percent developed and if you get much higher than that, you can get into very irrefutable harm to the watershed when you get these paved surfaces.

So, right now, we have a pretty good watershed and it's to be hoped that perhaps not all of this maximum development occurs. Meanwhile, there are things that we can do.

This shows the extent of existing dams throughout California, major dams. So, I know that Jason feels this is job security because maybe there will be more studies like this to do, but we have quite a few impaired watersheds up and down the coast and even further inland in California. So, you can imagine that this is not a pretty picture for any fish that are dependent upon swimming far inland for spawning.

And the priority watersheds for Steelhead and salmon restoration are indicated there and just to show you where we are, that's not exactly Malibu Creek Watershed, but it's basically the Santa Monica Bay Watershed. So, that's where we're looking at trying to make an improvement.

And for those of you who would rather not look at

aerial photographs, there's something you're all familiar with. The Thomas Guide once again shows you where the dam's located and there is a very famous of the dam taken by Mr. Jim Hutchison himself and this is actually a very minimal structure as dams go and some people are rather attached to it because it having been built in the 1920s could be considered to be an historic structure and part of the study as Jason will describe to you a little bit later will include a determination of whether this structure is eligible for the National Register of Historic Places and if a decision is made to actually remove the dam and if it is eligible for the National Register, then there will have to be litigation that is done to somehow mitigate the loss and this will have to be determined through cultural studies that will be done as part of the feasibility study that we're starting on. And this shows the dam at high flood stage. seen it even higher than this, but this is pretty -- I'm pretty sure this is right after a very large rain storm has just stopped. MR. BROWN: In '69, there were cottonwoods clustered all over the upper the woods of that dam. MS. GOODE: Really. Cottonwoods in 1969. you can see a very large clump on the upper right and I'm proud

to report that those clumps even though they're still there are

not dead.

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MR. BROWN: They aren't dead.

MS. GOODE: And this is another shot of the dam in the dry season. Taken on a little bit drier day perhaps later in the season. You can see all of the sediment. The dam does not hold any water. That's a perched creek on top of the sediment and I believe it goes back for the better part of a mile before it reaches the natural grade again and you can really see in that photo. Then in this photo, which is a little bit hazier, but it's taken from up above looking at the dam and you can see there that there's a hundred foot drop.

Dam's a hundred feet tall and then behind the dam is completely enclosed in sediment. That's Malibu Canyon Road up above the dam.

So, it's in a pretty hard to reach spot, but just to remember why we're looking at this and why we think it's important, I think these beautiful creatures speak for themselves. It's the mission of the California Department of Parks and Recreation to preserve significant natural and cultural resources for future generations and we hope that we'll be able to play a role in preserving this very important species and learn to look at things from the fish's point of view.

We look down to the water and think that everything's okay, but imagine if you're one of these fish trying to travel upstream to spawn and then you come upon a hundred foot dam.

1 And so, now without further ado, I will turn it 2 over to Jason who will describe to you exactly what we're doing, 3 the details of how this study will proceed. 4 Let me just say that I wanted to thank our Oh. 5 Our partners are (points to the screen). partners. 6 State Parks is 50 percent sponsoring this study and the Army 7 Corps is the other 50 percent and we have other local partners. 8 And we want to thank and acknowledge Los Angeles 9 County and Susan Nissman who is Supervison Zev Yardoslavsky's 10 field deputy was unable to make it this evening and she asked me 11 that Supervisor Yardoslavsky is convey to you very 12 enthusiastic about the study and supports the process that we're 13 now embarking upon and hopes that someday if we do decide to 14 remove the dam that there will be beach sand available for our 15 beaches and so they acknowledge a \$100,000 contribution from Los 16 Angeles County towards the study. 17 Our other partners include the Regional Water 18 Quality Control Board, the Department of Fish and Game, Mountains 19 Restoration Trust, the California Coastal Conservancy, and Heal 20 the Bay. 21 And we also have moral support from a number of 22 other organizations that are represented here today and I believe 23 that those people will make statements. So, I will leave it to 24 them.

Thank you.

MR. SHEA: Hopefully, this diagram will make a little bit more sense to you by the end of this presentation.

I'm going to briefly describe to you our study area, civil works process, our reconnaissance study findings, and the important aspects of the feasibility study, which is just beginning.

So, the main focus for me today here is to get input from the public, for the locals, any concerns that you have that you may not see addressed in this presentation. I welcome all responses, all comments today and throughout the study.

Again, this is the famous picture of the dam. Suzanne did a pretty good job of describing the details of the dam. So, I'm just going to skip by this and generally talk about the civil works process.

First a reconnaissance study. It's called a 905(b). We were authorized by Congress to do a reconnaissance study in 1998 which we did and it did recommend a feasibility study. There was federal action to the analysis. At the time, the local sponsor didn't have the funding to support. The feasibility study's 50/50. So, a couple of years down the line around 2000/2001, they called us. We go it up and going again and we developed a project management plan for feasibility and I'll get into a little bit of details of what happens after the feasibility study, the final design and eventually the project construction.

Again, the 905(b) analysis was completed in 1998.

We identified several concerns back then and since then have added to this list. We've possibly added some more to this list.

I'd like to point out a few of these.

Flooding impacts downstream, we don't like to impact any of the structures downstream. We don't induce flooding by our projects. We don't want to adversely impact the habitats of the estuary downstream either.

This is a system. So, we have to look at the habitat benefits throughout the whole system from up above the dam all the way down to the ocean.

I'd also like to point out cultural resources. Suzanne mentioned that we have to follow some guidelines to see if the dam's historic. I'd like to point out I got a letter from Ron Rindge. He called me yesterday and said it was on the way. He couldn't make it. He has applied to get this dam listed on the National Register of Historic Places. That's something we will be looking at in our feasibility study and as Suzanne mentioned, we will have to mitigate if we do remove the dam and what we sort of envisioned early on is some kind of interpretative center up on top of Malibu Canyon Road overlooking the dam site with history, a plaque; if we indeed remove the dam.

We did identify some very general goals in the feasibility study. By no means is this a limiting list. We will be establishing more goals as we identify more problems early on

in the study phase. But, just in general, we're looking to protect and restore the sensitive species including the Steelhead, looking for beneficial use of the sediment. Suzanne mentioned the beach. There's also the marketability prospect for sand that's not suitable for the beach. Maintaining and improving the water quality and then improving the quality of life through education, recreation and aesthetic opportunities.

We have three very general objectives that we're developing for the feasibility. Again, this is not a limiting list. We could find more objectives tonight. In general, we wanted to restore the ecosystem, which is a very general objective which now goes down to more specific objectives as we go on.

We want to restore the corridor and then beneficial uses of the sediment.

We have identified several constraints. Location of the dam is a constraint. As you saw in the pictures, there's a steep slope. It's a valley. It won't be easy to remove that sediment. There's also just one road between the dam and the ocean, Malibu Canyon Road, which is a highly traveled two-lane highway or two-lane road. It's not even a highway. So, those are some of the constraints we'll have to face.

We have a limited water supply and that may come into play if we decide that a slurry alternative is important. You need quite a bit of water for a slurry alternative.

1 Again, the impact to the existing conditions 2 downstream. 3 There's opposition. As I mentioned, Ron Rindge 4 sent me a letter. That was a letter of opposition. He does not 5 support the removal of the dam. 6 By the way, that letter I will include as part of 7 There will be a written the transcript for this public meeting. 8 transcript. Any written comments I receive, I'll include. 9 And water quality issues may be a constraint. 10 want to make sure the water quality is suitable for whatever 11 habitat benefits we're claiming. 12 Feasibility study, this is where we are now. We 13 actually signed the cost sharing agreement in summer 2001. 14 feasibility study is \$2.1 million. It's cost shared 50/50 with 15 the local sponsor, California State Parks. Their 50 percent can 16 be either cash or in-kind services which means they can perform 17 the work in lieu of cash. 18 We follow a six step planning process. Basically, 19 we identify problems and opportunities. We look at existing and 20 future conditions, formulate alternatives, evaluate, compare, and 21 finally select and recommend a plan. 22 So, the important aspects of the feasibility study 23 I'm just going to highlight briefly. Surveying and mapping is 24 already underway. We'll map the entire study area which we have 25 outlined as the 500 year FEMA flood plan for the ocean all the

1 way up above dam just about the confluence with Cold Creek. All 2 mapping will be GIS based. 3 Hydrology and hydraulics, sediment transport, this 4 This effort will focus on how much water flows is important. 5 through the creek, discharge and frequency analysis. This will 6 be important for to create habitat benefits. 7 The hydraulic analysis will develop cross sections 8 and develop computer models. One model will be the creek all the 9 way upstream and downstream. See how the creek reacts as it is 10 now and how it will react when proposed projects are in place. 11 Geotechnical investigations, there were 12 geotechnical investigations done a few years back. We got that 13 data and we are using it. However, we do need to do more. 14 wasn't enough for our analysis to characterize a sediment. 15 We'll also test for hazardous and toxic waste. At this point, we 16 don't anticipate anything being found in there, but we will test 17 for it. 18 Environmental studies which is the main focus of 19 this feasibility study. Listed here again as I mentioned habitat 20 and restoration, endangered species, beneficial uses of sediment, 21 and water quality is our main focus. 22 The habitat evaluation we anticipate will be a 23 modified HEP which is Habitat Evaluation Procedure. 24 procedure that uses habitat benefits. The Corps of Engineers has

to economically justify a project before construction.

19 case, our benefits are not monetary. They're habitat. HEP procedure helps us develop a number for the value of habitats so that we can claim benefits and compared projects. Determining what project's alternative is the most beneficial per dollar spent. I'd like to point out here that a lot of the biological surveys and other information that we would be doing normally, are available from Mark at Heal the Bay and Melissa

from the Watershed Advisory Committee. Both have been very cooperative in giving a lot of data and Mark's group will continue to do some monitoring. So, we'll probably be able to credit locals with some in kind work. We're going to work together with Mark and Melissa so we don't duplicate any of the biological efforts in the watershed.

Just a picture of upstream. It shows some habitat.

Cultural resources was mentioned twice already. Basically, the Corps has to comply with Section 106 of the National Historic Preservation Act which includes evaluating the entire study areas for historic resources including Native American resources.

If there's any input that any of you have, any Native American resources in the area, we would like that input as well. We're not looking just specifically at the dam. looking at the whole system.

The NEPA-CEQA process is required for federal

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1 We issued a Notice of Intent for preparing an EIS. projects. 2 That will come out in the Federal Register next week. 3 officially starts the 60-day scoping period. That's not to say I 4 I'll accept comments all throughout the won't accept comments. 5 entire study phrase, but the official scoping period runs 60 days 6 and that will be part of the transcript for the scoping meeting. 7 Towards the end of the feasibility study will be another scoping period which is required. 8 The final public 9 meeting and public comment period. Between now and then, we will 10 have more public meetings. Probably during our alterative 11 analysis, we will show the public what we have, all alternatives. 12 But it's required to have one at the end. I just wanted to point 13 that out. 14 The Record of Decision when that's signed that 15 signifies the end of the feasibility study. 16 Scoping is where we are now. It's mandatory for 17 federal projects. We encourage early agency participation. 18 assists us in developing our alternatives for plan formulation. 19 The EIS/EIR must contain a statement of purpose and 20 need, description of alternatives, how those alternatives can 21 potentially affect the environment, the consequences and the 22 means to mitigate those consequences. 23 We have a list of several alternatives. I'd like 24 to point out this is again that this is a preliminary list. 25 is not limiting. We will be developing alternatives throughout

feasibility up through this initial phase.

I'll describe these and I will accept any comments.

If there's any other ideas for alternatives, let us know now or if you have ideas you want to write down, give us a call -- or send them to us or e-mail them to us.

I'd like to point out the no action alternative. That's the baseline for preparing all the alternatives that actually have construction activities. It basically describes what will happen to the study area in the next 50 years of there's no Federal action and we use it as a baseline for comparison.

Several of the alternatives involve removing the dam, obviously, and stabilizing the sediment. In this case, we're showing stabilizing the sediment upstream. The location there is arbitrary and could be anywhere. There could be upstream sites, far upstream in the watershed.

Another alternative would be to remove the dam, stabilize the sediment downstream at the beach possibly by slurry or conveyor methods. We could go to downstream sites if there's any plan where we could sort, market some of the material, possible benefits for market use. Some material may not be suitable for the beach.

Phased natural transport could take up to 25 years.

That's where you slowly notch the dam, let the sediment flow naturally downstream. It takes quite a while, but we will be

looking at that one as well.

And a combination, based on the other methods mentioned. We'll develop a matrix and find out the best methods.

There's also another alternative where you remove the dam and allow all the sediment to just flow down the stream. I'd like to point again that all the alternative we will take into account the impacts downstream with ecosystem and flooding. The sediment if it was released like that, it could raise the flood plain. We don't want to impact the flood plain. We don't want to cause any adverse impact for the environment.

The fish ladder. If the dam were to stay in place, we could possibly develop a fish ladder or a portion of the dam even. This is an example of a pretty small fish ladder, but I wanted to get a closeup shot. Here's a more realistic shot of what a fish ladder may look like in this area because it had steps where the fish can stop and then go up again.

The pool and riffle structure is something we did near Olympia, Washington, a Corps project. Where we keep the sediment in place throughout the area, in and around the dam site. This is a much smaller project, but the same idea. They create smaller steps so the fish can still pass and in that case, they don't have to remove any of the sediment. This project has been successful. Iit's been over a year now and the fish are

1	spawning upstream. It's been a success. There's a lot more
2	vegetation on the right there. This was taken immediately after
3	construction.
4	PARTICIPANT: Can I interrupt you right there?
5	What's the likelihood of that surviving a 150 year flood?
6	MR. SHEA: I can't tell you off hand, but I can
7	tell you that we will look
8	PARTICIPANT: You'll look into the that.
9	MR. SHEA: The same thing goes for the fish ladder,
10	you know.
11	PARTICIPANT: Yes.
12	MR. SHEA: We know that the fish ladder would have
13	to withstand whatever storm it is designed for.
14	The milestone schedule, we go by these milestones.
15	F1 is the start of study. F2 is where we are now. F3,
16	anticipate late 2002/early 2003. That will be the baseline
17	conditions. That'll also list the preliminary alternatives and a
18	future without project conditions.
19	At the end of 2003, we'll have the alternatives
20	identified and we'll be screening between the F3 and the F4. The
21	F4 is actually where we list all the alternatives. The F5, we
22	document the methodology of how we got to select a plan. F6 is a
23	draft report. Then we have a public hearing. The F9 is the
24	final report to Congress. It ends the study.
25	And then we'll go to our post feasibility actions

1 which most importantly is project authorization. We're hoping to 2 get the study done in time for the Water Resource Development Act 3 of 2004 so we can get authorization for construction. We need 4 new authorization after the feasibility study. 5 Then we go on to pre-construction engineering and 6 That's a little more detailed design of our plan. design. 7 and specs and then construction or de-construction as the case 8 may be. 9 Again, public participation, now, in the future, 10 You can contact me by e-mail or by during the whole study. 11 phone. Suzanne as well. We have a mailing list. Everyone who 12 is here tonight will be on the mailing list, but you can spread 13 the word and if they'd like to get the mailing list, just let us 14 know, either myself or Suzanne. We'll get you on the mailing 15 list so you know of any upcoming meetings. 16 We are hoping to have a website specific for this 17 project and when we do, we'll post the meeting summaries. We'll 18 put reports on the website and we'll have a link from both of 19 these sites. It may be on one of these sites. It may be on the 20 Watershed Advisory Community site. It hasn't been determined 21 yet, but we will have one up soon. 22 So, with that, I open up the public comment 23 Jim's going to say a few words before we start. 24 MS. GOODE: If I could just say one more thing, on

your handout, your handout that shows how to contact us has my

1 incorrect telephone number and, you know, I love getting phone 2 calls. So, it's 880 not 888. 880-0364 and the 818 area code. 3 Just a couple more things quickly. MR. HUTCHISON: 4 I want to say thank you to both of you (the Carson's) for 5 bringing in some historic photos. I guess these are compliments 6 of Ron Rindge of the dam area before the construction of the dam. 7 And there's two other people here from the Corp of 8 Engineers, Alex Watt and Bonnie Hulkower and they work in 9 Planning Division in our Environmental Resources Branch. So, 10 they'll be some of the points of contact for preparing the 11 environmental impact statement that goes with this feasibility 12 study. 13 And just a couple of things quickly, also, this 14 feasibility study is a public process. We do have certain more 15 formal milestones where we come in and give presentations, but it 16 doesn't preclude you from getting involved at any point. 17 welcome the participation, the feedback. That's what gets us 18 through a successful feasibility study. So, it's really 19 important that we do continue to hear from you. 20 We're going to set up some sort of mechanism for an 21 easier exchange of information now and in the future, too, and 22 we'll look at a website for that and for dissemination of that 23 information to keep you updated on our process. 24 With that, can I get a quick show of hands just to 25 find out how many people might want to speak tonight?

Thanks.

I ask that we somewhat limit our time at first and I'll be happy to come back to anyone that might want to speak a little bit more. Certainly, this isn't the only opportunity.

There are sheets over there that are the copies of the presentation tonight if you want to take that with you and there's also a comment sheet there for anyone that couldn't attend tonight. If you know of someone that might want to send us a written comment, feel free to do that.

You've got the e-mail addresses. Feel free to send us an e-mail or give us a phone call and with that, let me open it up.

I'm just going to arbitrarily go around. I'd like you to please state your name at the beginning. I'm going to come by afterwards and make sure I have your name printed correctly for our transcript and we'll just continue on as quickly as we can.

We'll try and answer questions tonight. We may not be able to answer all of them. If we can't, we'll do what we can to follow up as soon as possible to address the questions.

MR. CARSON: Okay. My name is Bill Carson and I live at 2323 Trading -- Center in Malibu.

I'm here for three reasons. One is Ron Rindge -I'm never sure that you all would get -- get his paper. So, I've
got another one for you. I think a lot of people have that --

have that, you know, wrong -- when he built that dam and he in his little paper describes a large number of what he considers as adverse impacts for the dam removal.

One of the ones that struck me was he said you take out all that silt and -- the dam and now the road falls -- now the Canyon Road falls down. Who knows? Maybe it does. Maybe you ought to look at that.

The second reason I'm here is for the -- Canyon Property Owners' Association. We're downstream -- downstream homeowners who have a 104 homes in our area and many -- many of our homes are right on the creek and any change in the hydraulics and the silting, we're against and without, you know, the appropriate mitigation, I think we're not sure there -- plenty of it can be done. Like not doing it.

While I'm going over the 25 year period, this would be more acceptable. No matter what we're arguably opposed to the removal of the dam unless the mitigation measures are in place that protect all the downstream owners.

And the third reason I'm here for me so I can counter and my personal concern is that this targeted dam removal is really premature. This isn't a critical Steelhead habitat up here. The critical Steelhead habitat is down below the dam and, you know, it's hard to think that the justification for removing the dam is for Steelhead when we haven't conclusively shown that you could even get the water quality here improved on the -- the

1 water quality is awful and, you know, down there, you've got all 2 those exotic fish and -- that are eating the Steelhead roe if we 3 don't have any Steelhead and the lagoon breaching always a 4 problem, you know. Particularly, not being -- is the Steelhead 5 spawning period. 6 And one thing that really bothers me is average 7 water flow has triple down the creek in the last 40 years and you 8 wonder what impact that really has on the habitat. 9 And my recommendation is always before going ahead 10 is that we should prove that there is really a viable Steelhead 11 habitat that can be made. I think it should be done on the lower 12 Obviously, I look at that as the no action creek, you know. 13 alternative and the no action alternative can be done with just a 14 few dollars. It doesn't take 18 million. With no action, we can 15 get the Steelhead back. My kids have the greatest time in the 16 world catching Steelhead in this creek off our little --17 So, with that thanks. 18 MR. SHEA: Thank you. I just want to address a 19 couple of your comments. 20 The structures issue: we will look at the stability 21 of the road. It's already been in conversation. To make sure 22 they'll be no road collapse in the valley. 23 The downstream impacts as I mentioned in the 24 presentation, we don't want to impact downstream flooding and we

don't plan to and we will be -- any plan we have we'll have to

1 mitigate flooding. We're not going to induce any flooding 2 downstream. 3 I would also agree with you that saying this is 4 dam removal study is premature. This is an ecosystem restoration 5 Dam removal is one of several alternatives that we're study. looking at, but we will evaluate all the alternatives and then 6 7 the study process will provide whatever methodology we use. 8 MR. HUTCHISON: Mr. Carson, thank you. 9 I think I'll sit down. MR. GOTTLIEB: Dave 10 I've been a board member of the Resource Conservation District of the Santa Monica Mountains for 20 years. 11 12 I've been studying the watershed here. I've been 13 chairman of or chairperson, excuse me, of the Advisory Committee 14 of the Malibu Watershed Effort especially during its formative 15 years and I'm also active in the Southern Steelhead Coalition 16 which is a subset of --17 And I just wanted to say that there have been 18 habitats that have been restored, a watershed, and are being 19 restored. It's a real conservation victory actually that this is 20 happening every year with grant funds. I know the Resource 21 Conservation District has been very active in that and we've 22 restored habitat in the Las Virgenes Creek area within the last 23 five years. Within the last two years, there's been almost and I 24 emphasize almost complete removal of the -- of which is a threat

to Steelhead.

1 As far as water quality goes, the reason 2 -- the categorical reason that the water below the dam is so 3 polluted and may be less fit for Steelhead survival is because of 4 Because it gets concentrated and water can't get 5 through during certain months and the Steelhead are concentrated 6 in that area below the dam and that's where the pollutants do get 7 concentrated and taking the dam down would improve water quality. 8 I also want to comment that you talked about 9 negative impacts on hydrology without talking about the positive 10 The possible positive impacts on the hydrology, the 11 whole hydrologic model of Malibu Creek. 12 Aspects like the natural -- which benefits the 13 recreationalists that we were talking about. 14 Because it nourishes the reef and the --15 MR. HUTCHISON: Mr. Gottlieb, thank you. 16 MR. BROWN: I'm David Brown. I'm representing the 17 Santa Monica Mountains Task Force and the Sierra Club. Sierra 18 Club has been on record for several years in favor of the 19 responsible removal of Rindge Dam and I think that's where we all 20 are as far as it being done responsibly if that's what it comes 21 to. 22 I think Suzanne gave us a really good vision here 23 that I think we need to elevate what we're doing here above how 24 it's going to affect somebody this year or next year. We're 25 talking about restoring possibly the world's greatest game fish to a canyon less than half an hour from Los Angeles. Come on, it's incredible that they're still there and it's incredible that we have this opportunity and I'm for grabbing it, but grabbing it in a sensible responsible way.

There are many alternatives without talking about taking out the dam, but believe me the dam -- by the way, I think one of the things the Corps can determine, I don't think -- I don't perceive the dam as providing any flood control benefit at this point. It's totally full. Water just goes spilling right over it. So, we're not subjecting people to flooding if the dam is removed or altered or presently lowered.

The people who has built near Malibu Creek will eventually be flooded out. It's hard reality. Nobody created that reality except God. The maximum stronghold in that creek in a capital storm event is 45,000 cubic feet a second. Those houses that have been built on the edge of the creek will probably not survive that no matter what we do to the dam. So, don't blame the dam for the flood hazard at the cross creek area. In any case, I won't get into that because hopefully the environmental document will give us the tools we need to deal with this in the most responsible.

What I'm going to suggest to the Corps are a number of sources of information that they need to gather. One is get the rainfall data that the flood control district has been accumulating in the Malibu Creek watershed for many, many years.

They have records going back to the early part of the 20th century and these -- I personally took out of their records all of the storms that drop more than ten inches in 24 hours.

The storm that I referred to Suzanne earlier the storm of I believe January 1969 dropped 30 inches of rain at Malibu Lake in eight days. So, we need to know that although this may be perceived as a stream in a semi-arid environment, it is capable of enormous volumes of rainfall and then flood water under the right conditions. Now, that needs to be considered in deciding how to deal with the dam and the sediment and everything else.

In 1980, we experienced flood control 38 cubic feet a second. I believe some of the houses next to the creek lost their back yards in that event.

Another thing that needs to be looked at here, the recurring rule in Malibu Creek. First of all, Malibu Canyon, of course, is an unusual canyon. It's not a v-shaped mountain canyon. It's -- I think it's very nature needs to be understood in analyzing this. Malibu Creek is a fully formed stream before it even enters the mountain of -- Park and it's got this canyon right through the Santa Monica Mountains as they were uplifted and that means that you don't have the same configuration in this canyon that you would have in a typical mountain canyon and you have v-shaped canyon with a rock -- a solid rock.

By the way, I don't look at Malibu Canyon

wilderness being in danger of being affected by removal of the sediment as it's founded on pretty solid rock as a means to determine. There are some landslides downstream of the dam in the mountainside, but that's a different issue.

This tends to focus the flood flows. They don't have anywhere to spread out. Building down across creek, then they spread out, but in the canyon, they are completely focused within the stream bed in the immediate vicinity and -- and that changes the nature of the whole habitat here. We don't have the dense forest that we have in various other Rocky Mountain canyons. But, we do have some unusual and significant species. I do think we do need to do a floor analysis of what's going to be affected by any activity, removing the sediment and the habitat.

We have white alder which is found in only about a half a dozen canyons in the Santa Monicas. We have wild grape -- good stands of wild grape. We have literally ash which is a natural type of the Oregon and Arizona ash as far as I can tell which is found only in Malibu Canyon and one place in Zuma Canyon in the south arm it.

So, we need to know that there are areas where the -- area and habitat, but it's there and it needs to be inventoried if we're going to do anything that might affect it.

We need to realize it's a resource that could be a factor.

And remember the whole canyon is owned by the

public. Mr. Rindge has a right to, you know, advocate that the memory of his grandfather be commemorated in this dam and so on. It's his privilege as a free American, but we the people own the canyon and the dam and that's what makes this an unusual opportunity here to restore a canyon because we paid millions and millions of dollars to buy that blooming canyon from the Adamson family and Mr. Rindge's relatives and so on. We need to remember that it's public property.

Now, the rainfall data, you need to definitely get the best possible rainfall data. You do need to look at the geology of the canyon. It's pretty stable in most places, but there are a couple of very big landslides in the lower canyon below the dam that you need to be aware of although I don't know whether you would affect them.

The questions were raised in the past by

-- in other discussions of this, how stable is the dam itself.

There are folks downstream that are concerned about the impacts of removing the dam. What happens if we leave it in place. Is there a danger that this dam will eventually disintegrate?

Crumble away to the point where it will become a hazard and it might collapse in a heavy storm. Built that dam a million years and, you know, we don't -- we want to make sure. I think we need to have that information to make an informed decision, too.

The question of the historic designation of the dam, will there be public input on that? It seems to me this is

a public process. There ought to be a public process where the public gets to weigh whatever historic value the dam has against the enormous historic value of restoring a Steelhead run. That Steelhead run is an historic resource.

I teach history. It's my profession and I know what's historically significant and I never perceived that dam as being historically significant, but I do find it very significant that we still have the Steelhead run. The dam is impeding the Steelhead run and possibly some people will say endangering.

I think that's -- oh, one other thing. Within the canyon historically as far as I can tell by analyzing the vegetation there is a perennial flow from approximately just above the head of the sediment behind the dam down quite a ways down to some distance below the dam that was perennial. The vegetation has the characteristics of that area supported by perennial flow. So, shouldn't we restore that area. One of the benefits may be to restore a perennial stream that might in itself be a point of resource in nurturing young Steelhead and in -- in creating a habitat.

And when I say perennial, I mean perennial in all seasons. There's some streams in the Santa Monicas that just run and even this year, you know, when we got virtually no rain and this appears to be one of the -- presence of all there seems to be an indicator of a perennial flow.

So, you may want to, you know, look at historic

1 records and analyze data and see what information you generally 2 don't have. 3 That will hold me for now. Thank you. 4 MR. HUTCHISON: Thank you very much for your 5 I really appreciate all the comments that we're comments. 6 getting so far tonight and I want to make sure we continue in 7 So, again, I'd like to make sure that we have the 8 time for everyone to speak who wants to speak tonight. I'll be 9 happy to come back to folks, too if they want to speak up or add 10 to what they've already provided to us later on. Thank you. 11 I will respond briefly on a couple of MR. SHEA: 12 We will respond in writing to everything, but just points. 13 briefly, flood control. I think the issue there is the impact 14 with the sediment. We understand that. 15 MR. HUTCHISON: Yes, I agree. 16 MR. SHEA: As far as information, our hydrology 17 folks will be gathering available data. So, I'm sure they will 18 be addressing the flood control issue then. I mean it's great to 19 get that much data to improve our modeling. 20 As far as environmental issues, we won't look at 21 just Steelhead benefits. We will look at every species. All 22 throughout the whole system. The way it will impact every 23 species and hopefully restore their habitat and remove some 24 exotics. 25 Dam stability, we'll look at the dam stability for

1 the project life which is 50 years. Make sure it's still 2 standing. 3 And yes, there is public input on the historic 4 significance and I'll find out more details about that process. 5 MR. HUTCHISON: Thank you. 6 MR. HAMILTON: I am Ben Hamilton and I'm a member 7 of Surfrider Foundation, Malibu Chapter and also a member of the 8 Malibu Surfing Association. I have lived in the area from 1962 9 and I've been surfing Malibu since 1958. My partner who often 10 surfs with me has been surfing it since the mid-1940s and I often 11 surf with Bill Moore who's been surfing here since 1931 if I 12 remember correctly and he still surfs Malibu. Surfs it well. 13 Surfs it better than I do. 14 We are interested, of course, in the entire 15 ecosystem, but particularly than end of it that affects us. When 16 I was young before I became a biologist, I got my degree at the 17 University of -- and then at Occidental College and I will be 18 soon going out with John Stevens on the -- in a couple of weeks 19 with Brook Hayes here and several other people and we will be 20 discussing this --21 And one of the things which I noticed that we have 22 failed to do is to protect those creatures in the surf zone at 23 Malibu. Not just the surfers because of the poor water quality, 24 but also the marine creatures.

When I was young here, during the most of the year,

when the sand was clean from the rocks, the rocks were brilliant with colors. You didn't have to go to Hawaii to see what looked like a tropical paradise. We had a paradise here. Not tropical, but very, very beautiful. Lots of species.

If I brought a group of students down, it would take us three/four hours and in that time during the low tide, we could key up 60 or 70 species. Now, we key up 16/15. You have to get a lot of people working to try to get more and what you see is not a rich condition. It's too much fresh water and the water is of very poor quality.

Too much imported water kills marine creatures. It changes the habitat.

What we're looking at here is succession and I know Sierra Club has done a fantastic job upstream, but we need to do a lot better job getting the surf zone. We need to inventory as he said down there. We need to go get old data from the Steven's Group at Moore Laboratories Zoology, the -- Research Group. Down at --

Not just people at UCLA who have been employed by the Las Virgenes Water Control District. Conflict of interest. Plain, blatant and simple and when it comes to auditing records, I think we're beginning to get some proof, you know, about what happens when people overlook data and they don't put adequate fines to deter and steer an organization towards more responsible behavior.

1 Thank you and I look forward to removing the dam. 2 MR. HUTCHISON: Thank you very much for your 3 comments. 4 My name is Brook Hayes and I thought MR. HAYES: 5 you'd like a management consultant to oceanographers view of the 6 project and from oceanography's point of mind, I will -- letting 7 that sediment go down to -- it would be a major disaster. 8 Because in 1969 Malibu beach was just completely changed. 9 What I would recommend is that in the next ten 10 \$50 million worth sand we're going to have about 11 replenishment projects and almost all of that sediment would 12 qualify. The stuff that was pulled out of the Lobo Creek near I 13 think it was Marina Del Rey was used up and down the coast and in 14 the Redondo Beach beach replenishment projects. 15 So, the first thing I would suggest is that the 16 sediment be used as a -- the cost benefit. In other words, get 17 about \$50 million worth of beach replenishment. Basically, the 18 cost of just removing the sand and then reconsider the beach 19 replenishment all the way from Point Mandu down to San Diego, 20 because there's enough sediment there to probably provide 21 benefits throughout the whole Southern California body. 22 Also, from a management consultant's view, I'd like 23 to suggest that we also look at the potential opportunity if we 24 did decide that it was too costly to move it down that maybe we 25 put in some slots with some reinforced structure down below to

1 still hold the dam up because I rather expect that it's going to 2 be an extremely expensive project to move a dam especially 3 considering the impasse on the road and the people and everything 4 else. 5 So, one option I would consider would be is to --6 somewhat first get a \$50 million benefit from it and then put in 7 some sort of slotting underneath the dam that allows the river to 8 go through without having to completely remove the dam. So, with 9 that in mind, I hope that will be of some help to an already 10 -- project. 11 MR. HUTCHISON: Thank you, Mr. Hayes. 12 MR. SHEA: Jim, I'll mention the Coast of 13 California Study. I'd just like to point out that we do have a 14 We have a Coastal Planning Section and coastal team member. 15 they're currently doing a Coast of California Study and we are 16 merging all data together. I don't think they'd let me impact 17 their projects. 18 MR. HUTCHISON: Would someone else like to speak"? 19 MR. PRITCHETT: Thanks. Part of you know me. 20 David Pritchett. Working on a variety of Steelhead Trout 21 projects in Southern California, Malibu Creek and also with the 22 Southern California Steelhead Recovery Coalition. 23 Largely here tonight are members or participants 24 and as we've been talking about at any of our meetings, this is 25

biggest most prominent projects

in Southern

California. Perhaps one of the top two or three.

I want to commend the Corps and a little response here is for having this project be successful so far.

I perhaps may be the only one here besides our friends at the Corps who's also participating in the Matilija Dam Study on the Ventura River and my suggestion is to go ahead and advertise in your study for Malibu Creek that you're going to take the good parts of that study and use them as a model to show the efficiencies and how we are not repeating things and how you're taking advantage in this study which is very, very similar but a little smaller.

Similar to that I did not take out from the presentation and I'm a little concerned about the public participation process. Certainly through the NEPA process and your Corps planning process, you have a few mandatory public meetings, but I'd really like to see you again use the model for the Matilija Dam Study and have some working groups of interested stakeholders.

And I know the other study is really complicated. So, you can follow planning light. Maybe only have three or four working groups instead of, you know, nine or so like the Matilija Dam Study, but for instance, the habitat evaluation is something that requires public input to come up with a good method that shows the habitat gain from removal of the dam and the other parts of the project as part of the habitat evaluation procedure.

1 If historic significance of the dam is an important 2 issue and it has started to become so, perhaps that's a theme of 3 a working group. 4 and Geo-technical studies project alternative 5 analyses I think should have a routinely meeting public group 6 even if it's, you know, five people and, you know, maybe an 7 oversize steering committee or something like. I did not pick up 8 public from the presentation how we can qet constant 9 participation so everyone in the region can own the project not 10 just have the government doing something unto the people and sort 11 of take it or leave it. That you can up with a lot of problems 12 in the law branch analysis. 13 So, with that I'll close my remarks more on process 14 and the eyes of Southern California are upon us. 15 Thank you. 16 MR. HUTCHISON: Thank you very much. 17 MR. SHEA: One item I forgot to mention, Dave 18 caught me on that. We have recently put together a Rindge Dam 19 Committee. It's the only working group now. We're small group. 20 As we progress, I imagine we will break off into others there 21 will be a habitat evaluation group, but right now, we're too 22 small to break off. 23 As for Matilija Dam, we have much of the same study 24 Even for the Corps on all studies, we are getting some team. 25 lessons learned and cost savings, in fact. But, for habitat

1 lot of lessons learned on evaluation, there were a what 2 methodology to use and we are using that data for this study. 3 We will eventually have to submit two reports to 4 Congress. We want to make sure that they're consistent. 5 I just wanted to reiterate I'm the MS. GOODE: 6 keeper of the mailing list for the Rindge Dam Committee. So, 7 I'll be taking the sign-up sheet and adding all of your e-mail 8 addresses to that. If you do not have e-mail, please include a 9 mailing address. 10 Dave has pointed out to me that I haven't been 11 astute reaching people without e-mail. So, I will attempt to 12 improve on that. So, if you don't have e-mail, give me your 13 mailing address and we'll inform you of all meetings of the 14 Rindge Dam and as it gets larger which I expect it will, then we 15 can begin to break into working groups as Dave suggested. 16 MR. HUTCHISON: Thank you, Suzanne. Mark. 17 MR. ABRAMSON: Just really quick. I'm Mark 18 Abramson with Heal the Bay. I just want to say thank God we're 19 finally starting this feasibility study after I don't know how 20 many meetings we've sat in and how many public workshops. 21 I'm just -- and then Heal the Bay's delighted that we're finally 22 starting it and, you know, I hope this goes forward quickly, 23 efficiently and everyone's ready to participate. 24 And I just want to reiterate what Dave Brown said. 25 What a special opportunity this is to Southern California.

1	Again, we're 35 miles west of LA, of Central LA and we have this
2	incredible habitat, this incredible resource. You know,
3	Steelhead Trout, wow. I mean who would have thought that we'd
4	have Steelhead Trout up here. Sans Bill Carson who's been here
5	for awhile and some of the older folks who have been here for
6	awhile and seen the trout.
7	I would love someday and I hope someday to be able
8	to catch I mean even eat the Steelhead Trout. I don't know.
9	MR. HUTCHISON: Okay. We'll scratch the eating
10	portion from the transcript.
11	Is there anyone else who would like to speak
12	tonight?
13	MR. AVERY: I'm Paul Avery. I'm a member of
14	California Trout and I'll be reading a brief statement from them.
15	I'm also the Conservation Director of the Camino Valley Fly
16	Fishers and I represent them for the Southern California
17	Steelhead Coalition.
18	California Trout have a long history of involvement
19	and support for the restoration of Malibu Creek Watershed. I'm a
20	newcomer to it only about five years. The has been since
21	1984.
22	So, for almost two decades, it advocated removal of
23	Rindge Dam in an effort to restore both the Malibu beaches and
24	the now endangered population of Southern Steelhead.
25	We recognize the political and economic realities

to be faced with the study. There's no question there. Any plan to remove the dam must certainly consider as has been noted so many times here the downstream environment and the public must be confident that the chosen alternative would pose no threat to private property or the downstream habitat.

We encourage the Corps and State Parks to go with one of those alternatives that incorporate the most promising potential to restore Southern Steelhead while recognizing the importance of public acceptance and support for those alternatives.

The concept of incremental removal of the dam we believe offers cost effective and socially acceptable benefits. Although this alternative is time intensive, it may be accomplished with the least disruption to the public and at a reasonable cost.

If it took decades for this reservoir to fill with sediment, perhaps it is logical and even acceptable for the public to spend a decade or two removing it.

This really sticks in my throat. I think Suzanne talked. We've got -- it's difficult to say another study is needed, but crucial to this alternative is the completion of a thorough sediment transport analysis for the Malibu Creek Watershed. A sediment transport model must be conducted to determine safe sediment levels that can be applied in this system. Southern California watersheds regularly subjected to

1 massive sediment levels resulting from fires and demonstrate a 2 remarkably ability to recover from these catastrophes. 3 On a different note, it has been suggested that the 4 Rindge Dam be preserved as an historic structure. We disagree 5 with this claim observing that prehistoric structures are 6 memorialized but no longer exist. As has been mentioned, a 7 portion of the dam can certainly be kept remaining in place such 8 as the spill -- superstructure and a number displays be designed 9 to foster public awareness and appreciation for these structures. 10 For a conclusion, the Rindge Dam today serves no 11 useful purpose. It provides no flood control, no economic benefit, no public safety, and no ecological benefit. 12 13 Jim Hutchison said a total nuisance and now is the time to remove 14 it. 15 Thank you. 16 MR. HUTCHISON: Mr. Avery, thank you. 17 Anyone else like to speak tonight? 18 MR. DOYLE: Well, my name is Tom Doyle and I'm a 19 life member of the Malibu Historical Society and I've been here 20 since about 1945. 21 A word about the dam, Malibu Dam was constructed in 22 1924 to provide water for the -- without -- Malibu by -- in 1926, 23 the first of the beach users in the Malibu colony most people are 24 in motion pictures, the actors, directors and so forth. 25 Water for the project was from wells for the

domestic use and from the Malibu Dam, fire protection and irrigation. Water from the dam was brought down in an eight-inch high pressure pipeline and connected to the mains in front of the houses and cottages. At the time it became under the Malibu Water Company as part of the old public utility who served the rest of Malibu for many years.

Interestingly enough, we've heard the name Ron Rindge mentioned and he has written a very interesting series of papers which I won't present it any longer because we can't present it twice. But, his first job when he was going to college was walking the pipeline and repairing it and they would drive him up there and leave him. He would -- that's where you get that and that's where he used to walk the pipeline, eight inches. If there was a leak, he was to stop and fix it and he said he could hear the leak from a long ways away but it was a high pressure pipeline and he carried repair equipment and done it. So, he knows it well. For a long time, he worked on that job.

Now, the residents of Malibu for many years when you first came to Malibu if you bought land you made sure you got into the Malibu Water Company's District so you got water. If you bought vacant land, you were stuck with making a well and sometimes that works. Sometimes they didn't, but all the owners of the land who were in a service district of the Malibu Water Company still have an interest in the facilities which include

the Malibu Dam and must be considered in the future of the dam perhaps by vote. I don't know, but the State Parks is the present custodian of the dam.

And it's an interesting dam. It's a perfect arch. If you are an engineer, you'd get all fluttery when you look at it because it just happened to be a perfect arch and it does at this time contain according to the studies about 10 million gallons of water in the main reservoir. What good it is, I'm not sure, but at that moment, it sits there.

Las Virgenes has an extraordinary dam and they carry the water supply of I think almost a year's water supply in reserve. Malibu has 24 hours water supply and they have the dam and it was designed for fire protection and so forth.

Now, what the future of it will be should be considered in light of what it's original purpose was. But, as Lauren Green says the removal of the dam before successfully reintroducing Steelhead below the dam is economic lunacy. Clean up the waters of Malibu Creek first and then see if the Steelhead can be brought back to historic populations below the dam. If there are no Steelhead below the dam, there are no Steelhead to go upstream even if the dam is removed. Even our taxpayer friendly fish ladder would not be installed until the Steelhead once again thrive over the dam.

Ron wrote an interesting book and the interesting book was on Andy Sublet. Andy Sublet was the last man killed by

1 a grizzly bear in LA County and he was killed as he was hunting 2 for a grizzly bear and a grizzly bear attacked him and his dog 3 and he fell severely wounded by the grizzly bear right at the 4 pond at the foot of where the dam is today and that was where the 5 grizzly bear would come and would look for lunch from the Steelhead. 6 7 MR. ABRAMSON: I Imagine coming up that waterfall. 8 MR. DOYLE: Well, in any event, the grizzly knew 9 where the Steelhead were and they weren't above the dam. They 10 were below the dam. Anyhow, that did them in because that was 11 the end of the Steelhead. 12 So, let us hope that the owners of Malibu still 13 have an interest in that. Las Virgenes has an enormous lake. 14 Will be considered. 15 Thank you. 16 MR. HUTCHISON: Thank you, Mr. Doyle. 17 MR. ABRAMSON: I just want to say the current 18 waterfall within Malibu Creek is within respectable limits to 19 support Steelhead Trout. So, I just wanted to stall that rumor 20 and also, we've mapped Upper Malibu Creek above the dam and 21 recorded all the barriers or potential barriers of it's passage 22 and there's nothing significant currently above the dam that 23 would prevent fish from getting over it. 24 MR. HUTCHISON: Thank you.

MR. PRITCHETT:

25

-- what Mark said. Several years

ago, when we were doing one of these studies of the creek, who -
I think it was -- Watershed Council brought two people from State

Fish and Game down from Sacramento and it was a very hot day as I

remember in the late summer and, you know, they were really

baking hot days in the low lying areas. They took the water

temperature in Las Virgenes Creek just below the freeway and said

that it was 68 degrees or something like that. It was within the

range -- temperature range of Steelhead.

And the one thing that people are -- are not focusing on here when they say well, gee, you know, let's get the fish below the dam first and then the main spawning areas are above the dam and the fish did go above the dam. I have all accounts of people who lived at Lobo Canyon during part of the century, but they were taking Steelhead out of Lobo Creek near West Lake with pitchforks. So, anyway, we've got some evidence at least that they ran way up into the watershed.

And I think taking down the dam increases the number of spawning areas and feeding areas that they will have access to. So, I think we need to consider that in talking about bringing them back. A two and a half mile stretch of creek and that ought to be enough to support them.

MR. HUTCHISON: Thank you. Continuing on.

MR. CARSON: I was interested in the comments by the biologist about too much fresh water being there and I just wanted to make the comments that currently imported into this

1	area is 20,000 acre of water of which 15,000 goes flying down the
2	creek and what are these? You know more than I do.
3	MR. HUTCHISON: Jay, remind me, what are the
4	geographic limits the study?
5	MR. SHEA: Right now our limits of the study are
6	the 500-year FEMA flood plain. So, that is the flood plain
7	downstream from the dam site that also includes the footprint of
8	the deposition above the dam. It extends about one mile upstream
9	of the dam site.
LO	PARTICIPANT: It goes further than Cold Creek?
11	MR. SHEA: It goes up to Cold Creek.
12	MR. HUTCHISON: Beyond the limits of Cold Creek?
13	MR. SHEA: Yes, just above that.
14	MR. ABRAMSON: So, those are the limits right now.
15	Cold Creek to the ocean?
16	MR. SHEA: Cold Creek to the ocean.
17	MR. ABRAMSON: And they're tied to the Coast of
18	California?
L9	MR. SHEA: They're to be tied into the Coast of
20	California study along the shore line.
21	MR. HUTCHISON: Anyone else like to speak?
22	MR. MINER: My name is Eric Miner. I'm with the
23	Fly Fishers. I have a couple actually, I have questions more
24	than I have anything to ask or any comments.
25	How many of you have ever seen Steelhead Trout

1 down there? Okay. 2 How many of you have ever -- be honest, how many of 3 you have ever caught Steelhead down there? 4 PARTICIPANT: My kids have. 5 MR. MINER: Okay. I caught them for several years 6 when it was legal and I have been fly fishing for years and I 7 have never in all the places I've fished never caught fish like 8 the Steelhead down there. 9 I've said it long before I ever came to a meeting, 10 those fish were mutants. They have put up with so much crud and 11 they've lived and they've made it through and I have been down 12 there and stood at the base of that dam, that beautiful, lovely 13 dam, and caught -- I'm sorry and caught 15 or 18 -- down there 14 only landing two or three and hooking 18. They're just an 15 unbelievable strength. 16 And I understand the dam has historic value and 17 those kinds of things, but we cannot -- we 18 -- I have three little kids and I would not want to tell my two 19 boys and my little girl, you know what we -- you know, we killed 20 off a strain or we sent them somewhere else to save a dam. 21 I mean we have an opportunity here. There's a few 22 of us in here I think we have some passion and we have an 23 opportunity to actually do something that might, you know, make a 24 big difference in a lot of different areas. 25 Okay. I'll admit. I -- Steelhead Trout.

1 care if I catch one again. I'm just there to see them, you know, 2 proliferate. 3 I know that there's all kinds of other issues that 4 are going on in vegetation and that kind of thing, but I think 5 that we should really take a hard look and weigh -- I mean not 6 look -- I mean we need to look farther than five or ten years 7 down the road. 8 And I mean obviously, there's a guy who's not here 9 tonight Steve Casey. Many of you may know who he is. 10 Casey caught a Steelhead and Steve's my size. 11 Steelhead as long as his arm. I mean these fish are unbelievable 12 and it may seem silly for a few of us in this room, a few here in 13 this room that were here fighting for fish, but, you know, if we 14 don't, nobody else will. 15 Thank you. 16 MR. HUTCHISON: Thank you very much. Would anyone 17 else like to speak tonight? 18 I want to thank everyone for coming tonight. 19 Really appreciate all the comments that we received. 20 We'll follow up. We'll have a transcript prepared 21 and somehow, someway, we're going to get that out as public 22 information to you guys. 23 Right now, it looks like we're going to have some 24 sort of a website developed. It's a work in progress. We're 25 going to figure it out.

ĺ	54
1	Dave pointed out a few really good comments on what
2	we're doing for Matilija Dam and we're going to follow up in
3	similar format.
4	So, there will be ample opportunity to participate
5	to find out what's going on and get a status report.
6	So, thank you once again.
7	(Whereupon, at 8:35 p.m. the public meeting was
8	concluded.)
9	
10	
11	
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14	
15	
16	
17	
18	
19	
20	

Christopher Parkening P. O. Box 261880 Encino, California 91426-1880

November 4, 2002

Mr. Jason Shea, Study Manager U.S. Army Corps of Engineers Los Angeles District Attn: CESPL-PD-RQ (B. Hulkower) P.O. Box 532711 Los Angeles, CA 90035-2325

Dear Mr. Shea,

I am writing to you regarding the Rindge Dam on Malibu Creek. I am a Professor of Music at Pepperdine University and drive Malibu Canyon Road frequently. Also, for many years I have been an avid fly fisherman for steelhead. I want you to know that I totally support the removal of the Rindge Dam on Malibu Creek for the following reasons.

- It would be helpful in abating the erosion of Malibu area beaches.
- Access to spawning grounds would result in an increase in steelhead numbers, a species on the Federal "endangered" list.
- Water quality would be improved in the area above the dam.
- Incremental removal would avoid potential traffic and pollution programs.

I hope you will respectfully consider the removal of the Rindge Dam. It would be the best decision for the state of California and a blessing to those who appreciate the beauty of Malibu Canyon.

Most sincerely,

Christopher Parkening

Constoyen Packening 1 AD

CP/sd

music52@earthlink.net

Mr. Jason Shea, Study Manager U.S. Army Corps of Engineers Los Angeles District P.O. Box 532711 Los Angeles, CA 90035-2325

Sept. 10, 2002

Ref; Malibu Creek Ecosystem Restoration Feasibility Study

Dear Mr. Shea.

I am writing you today as a member of the Conejo Valley Fly Fishers to express my support for this feasibility study and the eventual removal of the Rindge Dam. Our club has been an active participant in the restoration of steelhead trout to the Malibu Creek watershed for many years and we greatly appreciate the interest that the Corps has expressed in furthering these goals.

As you know, southern California steelhead contain the parent genetic material for all west coast steelhead and have developed unique life cycle abilities that have allowed them to persist in the warmer environment of southern California streams. They are at the greatest risk of extinction, and are the only population of steelhead to be listed as "endangered" by the Federal government.

The construction of the dam blocked many miles of quality spawning and rearing habitat that has been documented to exist above the dam, and recent water quality monitoring in this area has documented good to excellent water quality parameters for steelhead. Since the dam was erected, steelhead populations have declined precipitously and access above the dam in the key to their recovery.

Great economic benefits may also be derived by removal of the dam. The majority of sediment behind the dam is not contaminated and is suitable for beach replenishment.

We encourage the Corps to thoroughly study two methods of dam removal. The first involves incrementally removing the dam in stages and allowing natural processes to transport the sediment to the ocean. The second method involves a slurry system using sea water to transport the sediment downstream through a pipeline. This method has many advantages in that it does not rely on a reliable supply of precious fresh water and can be operated on a nearly year round basis in drier years.

I thank you for your involvement in this study, and the Conejo Valley Fly Fishers will continue to support your effort to remove the Rindge Dam as an integral component of restoring the Malibu Creek ecosystem.

Sincerely,

KIT KORF 2970 DIANA CT NEWBURY PARK CA. 91320-3115 August 14, 2002

Thomas W Doyle P.O.Box 235 Malibu, Ca 90265

To: U.S.Army Corps Of Engineers Los Angeles District 911 Wilshire Blvd P.O. Box 532711 Los Angeles, Ca 90053

Attention Mr Jason Shea

RE: Addendum to public input on May 29, 2002 regarding study on Rindge Dam.

Dear Mr Shea:

I am enclosing a picture showing the construction of Malibu Canyon Road in the early 1950's. It shows the grading of the road and the method of disposal of the dirt. As you can see most of the dirt went to the creek bottom and then into the dam. This was done by L.A. County.

Water is the single most valuable asset attached to land

The Malibu Water Co a privately owned Public Utility distributed the water from the dam. Land sold in Malibu, if in the water district, was entitled to receive water from the Malibu Water Co. The Malibu Water Co was the holder of the water rights in Malibu Canyon, for the Malibu property owners. These rights still exist today and must be considered in your deliberations for the present and future property owners of Malibu.

emo asay

Sincerely

Thomas W Dovle

Malibu Historical Society (life member)

1/6/13 Mitten Hear, Study Myr US. Cory of augmeent 201 a eigeles, district 16.807 532711 Pilh ryeles, (H96135-232) Ref Rivlge Limbemana C idas kin Alea: I wor well like tradurente to inchrove the stream for Steepherd habitat - and Munual of all Such kund which live suitered their witheren . selicus There's inc in The Yuka that should go Too Turuly! When True, Sinularinge

Rindge Dam - Alternate Proposal To

Improve habitat, provide flood control and preserve the dam

This proposal suggest an alternate implementation for the removal of the dam that improves the habitat for the restoration of steelhead trout, allows the accumulated silt to get to the ocean and restore the beaches, provides an element of flood control and preserves the dam.

One alternative in the study plan is to gradually reduce the height of the dam until the creek bed is restored to its natural state. Rather than slowly demolish the dam a series of weep holes at various elevations would be drilled through the dam. The size is yet to be determined but would be on the order of 2 to 3 feet in diameter and space perhaps 10 feet apart. When the rains come the silt close to the weep holes would sluice out and drop to the Creek bed.

When the weep holes no longer carry silt, a lower set of holes can be drilled or alternatively unplugged. In this way the silt eventually gets to the ocean and restores the beach. As the silt layer lowers upper weep holes can be plugged.

Analyses should be performed to determine aggradation of the stream bed, particularly in the lower populated area.

When all silt is removed the weep holes at the base should be enlarged and converted to "fish friendly"



Rindge Dam

culverts. The culverts should be dimensioned to provide a maximum flow of 2500 cubic feet per second at a velocity of 6 feet per second or the maximum flow and velocity that steelhead can withstand without danger.

The dam would **not** be a storage dam but remain empty, except in the high storm periods. Reducing the flow rate has a number of advantages, namely

1. In the lower Creek flow rates are within the tolerance band of fish

- 2. Considerable aggradation would be possible without flooding homes in the lower creek
- 3. Pools and spawning areas would be easier to maintain
- 4. Habitat destruction from flows greater than 2500 cfs would be eliminated.

Considerable care needs to be taken in the design of the spill ways at the base of the dam to assure proper channeling and "fish friendly" passage under the dam. Existing pools below the dam can be expanded to improve habitat. It may even be desirable to retain some water to nourish the spawning pools in the dry season.

Obviously this is a preliminary look at the alternative, however, I believe it offers an extraordinarily cost effective solution that caters to all stakeholders desires.

I encourage the Corps and Parks and recreation to carefully look at this approach

C. W. Carson

Dear Mr. SheA

I am writing to urge you to make every effort to have the rindy a Dam removed.

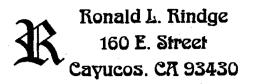
As of the present Date it serves intuelly no useful purpose and is of great definant to the survival of the endangued strellund.

The sectional ochinal the dam would help to replenish the beaches and be of beneat to many people.

Please emission the removed of this

Plane inside the removel of Mis ecological susaster & restor the malitude creek ecosystem.

> Dærk gen Amss. Myster



November 24, 2003

Arnold York, Publisher The Malibu Times 3864 Las Flores Canyon Road Malibu, CA 90265

RE: "Malibu Receives F in History", The Malibu Times, November 20, 2003

Dear Mr. York:

This letter is **not** a "Letter to the Editor". Rather, it is intended to give sources of information about the cultural history of Malibu in the event your writers do follow-up stories on the above subject in future months.

The early history of Malibu is that of the Chumash Indians, documented extensively in books and archaeological reports conducted by UCLA over many years. Written California history began with Cabrillo's voyage of discovery as documented in a summary log of his 1542-1543 expedition.

Attached are copies of two letters sent in 2002 to the Army Corps of Engineers, briefly listing cultural resources of the central Malibu area:

1. June 25, 2002, Addendum No. 4: Cultural Resources (Cultural sites in the lower Malibu Creek watershed).

2. August 21, 2002: Addendum No. 5: Cultural Resources paper entitled, Art & Architecture, Prose & Poetry Relevant to the Malibu Creek Watershed by Ronald L. Rindge.

Some of the books about the history of Malibu include:

- Happy Days in Southern California by Frederick Hastings Rindge (1857-1905), privately published in 1898, reprinted by the family in 1972 and 1984.
- 2. Songs of California and Other Verses by Frederick Hastings Rindge (1857-1905), as edited and published by John F. Rindge in 1999. Reprinted and published in smaller format by the Malibu Lagoon Museum in 2001.
- 3. The Malibu by W. W. Robinson and Lawrence Clark Powell, 1958.
- 4. The Rediscovery of the Pueblo de las Canoas by Ronald L. Rindge. 1985. published by The Malibu Lagoon Museum.
- 5. The Malibu Story by the Malibu Lagoon Museum. 1985.
- 6. Ceramic Art of the Malibu Potteries 1926-1932 by Ronald L. Rindge et. al. 1988. The Malibu Lagoon Museum.
- 7. A Brief History of Malibu and the Adamson House by Bill Dowey. 1995. The Malibu Lagoon Museum.

- 8. The Determined Mrs. Rindge and Her Legendary Railroad: A History of the Hueneme, Malibu & Port Los Angeles Railway by David F. Myrick. 1997. Ventura County Historical Society Quarterly, Vol. 41, No. 3.
- 9. More About Malibu Potteries 1926-1932 by Ronald L. Rindge et. al. 1997. The Malibu Lagoon Museum.
- 10. Maritime Stories of Point Dume and Malibu by Judge John J. Merrick and Ronald L. Rindge. 2000. The Malibu Lagoon Museum.
- WW II Homeland Defense: U. S. Coast Guard Beach Patrol in Malibu, 1942-1944 by Ronald L. Rindge. 2003. Published by Ron and Sue Rindge, Cayucos, CA.

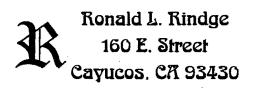
A large part of the history of Malibu is related in the above references. References not listed exist for additional information.

Sincerely,

Donald L. Rindge

cc. Mayor Ken Kearsley, City of Malibu
Sandy Mitchell, Malibu Lagoon Museum
Woody Smeck, NPS-SMMNRA
Hayden Sohm, State Parks
Jodi Clifford, USACE
Louis T. Busch
Tom Doyle
Glen Howell
Judge John J. Merrick
John F, Rindge

Enclosure - two letters cited above: 6/25/02 and 8/21/02.



June 25, 2002

U.S. Army Corps of Engineers Los Angeles District 911 Wilshire Blvd. P.O. Box 532711 Los Angeles, CA 90053

RE: Addendum No. 4 to public input for the Malibu Creek (Rindge Dam) Ecosystem Restoration Feasibility Study - Cultural Resources.

Attention Mr. Jason Shea

Dear Mr. Shea:

After speaking with you yesterday about my Addendum No. 3 e-mail on the subject referenced above, I thought this Addendum No. 4 might be helpful to your study. Thank you for clarifying the scope of your study only covers the segment of Malibu Creek from Piuma Road to the sea. I now understand that the cultural resources of the upper Malibu Creek watershed, including the four dams west of Malibu Canyon Road, are not part of your study.

The following are historic sites I can think of within the geographic area of your study that may be relevant to cultural resources identified in your report, commencing at Piuma Road on the north and going south to the sea at Malibu Lagoon State Beach:

<u>Item</u>	Cultural site	Era
1.	Segment of Chumash "Trail to the sea"	500 to 1300 A.D.
2.	Portion of Crater Camp, area SE of Piuma Rd. & Malibu Creek	1920's
3.	Sheriff's Honor Camp site, area SW of Piuma Rd. &Malibu Creek	1942 - 1952
4.	Segment of Malibu Canyon Road to the sea	1942 – 1952
5.	"Pink Lady" mural over south opening of tunnel	October, 1966
6.	Homesteading of area adjacent to Malibu Creek	1862 - 1905
7.	Rindge Dam and water system to Malibu delta	1924 – 1967
8.	Sheriff's Honor Camp site, above & SW of Rindge Dam	1942 - 1952
9.	Andrew Sublette/Grizzly Bears encounter	Dec. 17, 1853
10.	Serra Retreat foundation & Malibu tile	1929 to present
11.	Humaliwu, Malibu Lagoon State Beach	3000 BC - 1800 AD
12.	Pueblo de las Canoas, Malibu Lagoon State Beach	Oct. 10, 1542
13.	Adamson House, Malibu Lagoon State Beach	1929 to present
14.	U.S. Coast Guard Headquarters Station N-5, M. L. State Beach	1942 - 1944
15.	Malibu Pier, Malibu Lagoon State Beach	1905 to present

I include Malibu Pier in the above list due to water and sediment flow emanating from nearby Malibu Creek. All items, except No. 5, should be listed in the <u>California Historic Properties</u> <u>Directory (or Inventory)</u>, maintained by the State Historic Preservation Officer. Some sites are on the National Register or are designated a California Historical Landmark or California Point of Historical Interest. This geographical area has many important historic sites. Some I do not know or have slipped my mind as of this writing. The upshot of all this is that the area of your study represents the history of man in the SMMNRA from the Chumash to the present. If you have any questions on any sites listed above, I will try to answer them.

Sincerely,

Ronald L. Rindge

Cc: Assemblywoman Fran Pavley
Woody Smeck, NPS - SMMNRA
Margaret Lopez
L. T. Busch
B. Carson
T. Doyle

Ronald L. Rindge 160 E. Street Cayucos, CR 93430

August 21, 2002

U.S. Army Corps of Engineers Los Angeles District 911 Wilshire Blvd P.O. Box 532711 Los Angles, CA 90053

RE: Addendum No. 5 to public input for the Malibu Creek (Rindge Dam) Ecosystem Restoration Feasibility Study – Cultural Resources

Attention: Mr. Jason Shea

Dear Mr. Shea:

Addendum No. 4 dated June 25, 2002 detailed historical events in your study area from the Chumash Indians thousands of years ago to the present time. Collectively, this area comprises an historic district of man's presence in the watershed. Enclosed is a brief paper entitled, "Art & Architecture, Prose & Poetry Relevant to the Malibu Creek Watershed". Please include these elements of cultural resources in your study.

Sincerely,

Ronald L. Rindge

cc Woody Smeck, NPS – SMMNRA

Danald X Dindge

Hayden Sohm, State Parks

Assemblywoman Fran Pavley

Patty Young, NPS

Margaret Lopez, OHP

The Malibu Times

L. T. Busch

B. Carson

T. Doyle

Art & Architecture, Prose & Poetry Relevant to the Malibu Creek Watershed by Ronald L. Rindge

In addition to historical events involving the human species, cultural resources relevant to Malibu creek and canyon include art & architecture and prose & poetry. In the field of art, a rich heritage exists in paintings of earlier and more recent years. Several examples, by no means exclusive, are: "Malibu Creek" by William Wendt in 1897; "Malibu Canyon" by Elmer Wachtel in the 1920s; "Canyon Light –Malibu Canyon" by Frederick W. Becker; "Malibu Lake" by Hanson Puthuff (n.d.); "Early Morning – Malibu Lagoon" by Walter Barron Currier in 1929; "Wonder of it All – Malibu Canyon" by Emil Kosa, Jr.; "Malibu Canyon" by Mian Situ and "Malibou Lake" by Tim Solliday.

In the late 1940's, Paul Dubosclard crafted a series of serigraph postcards that included Serra Retreat, Malibu Lagoon and Malibu Pier. More recently, Malibu artist Julie Van Zandt May executed a grand scene, "Malibu Lagoon, 1542", exhibited at the Malibu Lagoon Museum. She has painted scenes of Malibu Creek, Serra Retreat, Malibu Pier, The Adamson House and Point Dume, among other Malibu subjects. Ceramic Art at the Adamson Home is on display as part of the Malibu Lagoon Museum dating back to 1929-1930 as well as at Serra Retreat of the same era. A tile mural, "Cabrillo at Malibu, 1542", by Janet Minnigh is on display in the entry lobby of the Malibu Court building in the civic center. This was a 1976 bicentennial project of the Malibu Historical Society.

Architectural highlights are found at the Adamson House designed by famous architect, Stiles O. Clements. Mr. Clements also designed the mansion on Laudamus Hill in Malibu Canyon for May K, Rindge. Remnants from the September 25, 1970 fire that destroyed the original structure that became Serra Retreat in 1942 are limited to the concrete foundation of rooms and exterior walls, steps and pathways. Even the Rindge Dam contains art deco elements incorporated into its design exemplified by cast corbels supporting the walkway across the top of the dam and the five steps at both ends of the walkway suggesting a ziggurat profile as found on the apex of the tower of the 1926 Los Angeles City Hall.

Frederick H. Rindge writes about Malibu in his 1898 book, <u>Happy Days in Southern California</u>. His **prose** on "Ranch Life", "In our Canons", "Desolation and Charity", "In the Saddle" and "The Storm" contains overt or subtle references to Malibu Canyon on his ranch in the 1890's. Mr. Rindge's collection of **poetry**, <u>Songs of California and Other Verses</u>, was published in 2001 by the Malibu Lagoon Museum after being recast from a larger format book compiled by John F. Rindge in 2000. "The Brook", written in March 1905, is descriptive of Malibu Creek.

This brief review is only a sampling of the cultural treasures about the Malibu Creek watershed crafted by so many gifted artists, architects, ceramists, writers and poets over more than one hundred years.



June 14, 2004

Rindge Dam Subcommittee

Attention: Melina S. Watts, Malibu Creek Watershed Coordinator

Dear Members:

I have lived and worked in the Malibu area for over half a century, fished and swam in the Malibu Creek prior to when Las Virgenes sewer discharge began, and my love for the area and its preservation historically and environmentally is very important to me.

The Rindge Dam was built in 1924 – 1926, and it has been placed on the National Register of Historical Places along with the designation of California State Landmark by its connection to the historic Adamson Home, which is now managed by the State Parks Division of California. The Rindge Dam has served the Adamson Rindge grounds with agricultural irrigation from the dam. The dam is an integral part of the history of Malibu, and along with the Adamson Home is under the care of the State Parks Authority for the preservation of public interest. Besides being a historical place, State and National, the dam, in itself, meets all of the requirements, for a historic monument and should not be dismissed lightly. It is a part of the history of Malibu, and is tied into the Adamson House; and on the grounds on the historical Adamson Home there is presently a two-inch water value with a round iron tag, which is stamped, "DAM WATER" that was used to irrigate the gardens and agricultural property.

A display of the Rindge Dam is being put together for the new Malibu Museum: pictures of construction and historical data.

Thank you for taking the time to read this letter, and joining our committee in maintaining the integrity of the Rindge Dam.

Yours truly.

Louis T. Busch

ouis T. Busch

LTB/awr

Enclosed: two current pictures of iron tag stamped "dam water" enclosed. Cc: Gooff Gee, Dorothy Stotsenberg, Tom Doyle, Ann Payne, Ronald Rindge



June 15, 2004

Fax to:

Melina S. Watts, Malibu Creek Watershed Coordinator

Fax#

310 455 1172

Fax from:

Louis T. Busch

foris T. Busch

Fax #:

310 456 8085 Telephone 310 456 6477

Dear Melina:

Nice talking with you yesterday and thank you for offering to copy my letter and two photographs, being faxed, for the Rindge Dam Committee.

Look forward to meeting you in person in the near future.

Yours truly,

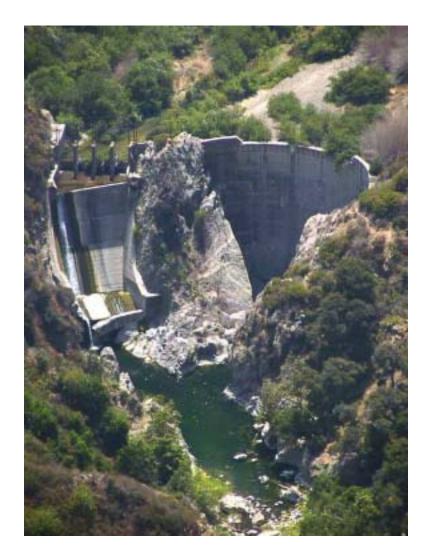
Louis T. Busch

LTB/awr

By facsimile: letter dtd 06/14/2004 w/ two photographs

Rindge Dam Removal

A Review of Regional Ecologic and Economic Benefits And Options for Removal



Prepared by:
Suzanne Dallman, Ph.D.
and
Jim Edmondson, California Trout

Southern California Steelhead Coalition August 3, 2002

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Cover photo by David Pritchett Maps by Suzanne Dallman Additional manuscript review by David Pritchett

Executive Summary

Rindge Dam, located on Malibu Creek in Southern California, has been an obsolete facility for over forty-five years. It serves no beneficial functions, such as flood control, water supply, or hydropower generation, because it is completely filled with sediment. To the contrary, it stores materials critically needed to replenish the eroding and economically important beaches of the Santa Monica Bay, while restricting one of the most important runs of steelhead along the Pacific coast to a small fraction of the total potential habitat within the Malibu Creek watershed.

In 1997 the southern steelhead trout was listed as endangered by National Marine Fisheries Service, under the federal Endangered Species Act. The key to restoring southern steelhead in Malibu Creek is to remove Rindge Dam and allow these fish, for the first time since 1926 when the dam was completed, to gain access to their historic spawning and rearing habitat.

Since the U.S. Bureau of Reclamation published its appraisal report on options to remove Rindge Dam (USBR 1995), and the US Army Corps of Engineers conducted its reconnaissance study to determine federal interest in the restoration of Malibu Creek (Corps 1998), additional information has surfaced that is relevant to current steelhead recovery planning for Malibu Creek:

- Recent research has determined that the creek's steelhead are tolerant of high sediment loads in the stream, and such events following a large wildfire in the watershed do not degrade the species or the creek's vegetation and instream habitat (Spina and Tormey 2000).
- Water quality monitoring in the upper sections of Malibu Creek demonstrate good conditions for steelhead once they arrive (Heal the Bay 2001).
- California's statewide steelhead recovery plan, adopted in 1996, identifies removing Rindge Dam as the single best restoration approach (McEwan and Jackson 1996).
- Traffic restrictions and increasing congestion on Malibu Canyon Road may render infeasible the Bureau of Reclamation's recommendation to excavate the sediment behind the dam and transport elsewhere by trucks.
- In an analogous case, removing San Clemente Dam on the Carmel River, the short-term risks of dam removal to steelhead are outweighed by the long-term benefits (NMFS 2001).

The United States Army Corps of Engineers (Corps) has begun exploring ways to address fish passage issues by launching the *Malibu Creek Environmental Restoration Feasibility Study*, in partnership with California Department of Parks and Recreation (Corps 2000). The purpose of this paper, adopted by the 224,000-member Southern California Steelhead Coalition, is to provide this additional information for the Corps to consider as it begins its feasibility study. It is to be recorded as public commentary in response to the Corps' public scoping meeting held May 29, 2002 regarding the focus and scope of this feasibility study.

This paper concludes with five recommendations supported by the Southern California Steelhead Coalition, summarized briefly below:

- 1. Focus on feasible and realistic options at the project outset, rather than reconsidering options dismissed by other studies.
- 2. Complete critical baseline sediment studies early on, such as stored sediment composition, sediment transport studies and potential disposal sites.
- 3. Build partnerships with local, state, and federal agencies.
- 4. Involve the public in decision making before issuing the final report.
- 5. Develop and adhere to a project schedule to achieve the study deadline for completion by 2004 as stated at the May 2002 public scoping meeting.

If these recommendations are followed, a no-cost or "win-win" dam removal project may be realized through partnerships with local, county, state and federal agencies dedicated to recovering the fish, enhancing the beaches, and protecting the area's economy.

1.0 Introduction

Rindge Dam is located on Malibu Creek, in Los Angeles County, California, approximately 2.6 miles upstream of the Pacific Ocean (**Figure 1**). Rindge Dam is a 102-foot high and 140-foot wide steel-reinforced concrete arch dam with a reservoir now completely filled with sediment. According to the California Department of Fish and Game, the dam is the major obstacle to restoring the creek's federally endangered steelhead population, which face "pending extinction" (McEwan and Jackson 1996). An evaluation of alternative measures for removing or modifying the dam is the subject of an ongoing Malibu Creek Environmental Restoration study by the US Army Corps of Engineers (Corps), in partnership with the dam owner, the California Department of Parks and Recreation (State Parks).

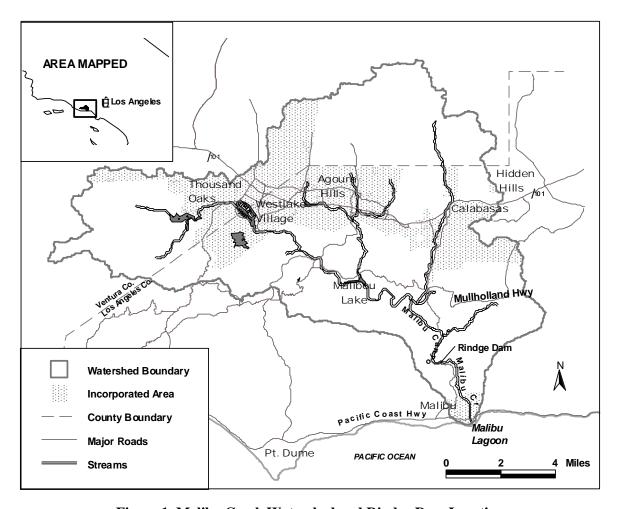


Figure 1. Malibu Creek Watershed and Rindge Dam Location

Completed in 1926, Rindge Dam was built for agricultural water supply and originally impounded 574 acre-feet (AF) of water with the spillway gates raised (Taylor 1945). It was owned by the Rindge family and operated by the Marblehead Land Company from 1933 to 1966. Upon completion of the dam, the reservoir rapidly filled with sediments, capturing

approximately 70% of Malibu Creek's annual sediment transport. Storms in the late 1930s damaged the spillway gates, reducing the maximum storage capacity of the reservoir to 475 AF. By 1940, about half of the reservoir capacity (200 to 250 AF) had been displaced by sediments and by 1945 84% (400 AF) of the original reservoir capacity was filled with sediment (Taylor 1945). The reservoir was completely filled with sediment by 1955. In the early 1960s water deliveries stopped, and California Department of Water Resources decommissioned the dam in 1967. The dam now impounds approximately 800,000 cubic yards of sediment (**Figure 2**), with the majority of this suitable for nourishing the eroding beaches of the Santa Monica Bay (Law Crandall 1994). Rindge Dam provides no flood storage, no hydroelectric generation, and no water supply. Thus the dam is obsolete, providing no beneficial functions, and has been a barrier to the upstream migration of fish for over seventy-five years.



Figure 2. Rindge Dam and Sediment-filled Reservoir

Malibu Creek currently supports a small run of steelhead within the Southern California Evolutionarily Significant Unit, a biological unit of steelhead that was listed as endangered under the federal Endangered Species Act in August 1997 (Federal Register 1997). The annual run of Malibu Creek steelhead historically was a wild, self-sustaining population, which required no stocking (Busby et al, 1996). The stream also supported a popular recreational fishery (Kreider, 1948).

Steelhead runs in Malibu Creek are now greatly reduced from historic levels. The population is estimated to be in the dozens (Franklin and Dobush 1989), whereas historic runs in the creek have been estimated as high as 1,000 steelhead (Nehlsen et al. 1991). Given this decline, their current high risk of extinction, and the desire to recover steelhead

populations, potential opportunities for achieving significant enhancements to steelhead habitat must be evaluated. The evaluation of alternatives for addressing the ecological damage caused by Rindge Dam provides an important opportunity to achieve potential long-term enhancements, recovery of steelhead in the Malibu Creek, and ultimately contribute to achieving the goal of the Endangered Species Act – to delist the species (Edmondson 2001).

Purpose of this Paper

This paper is intended to stimulate discussion by providing an outline of issues and background information intended to inform the *Malibu Creek Environmental Restoration Feasibility Study* led by the Corps. The purpose of this paper, adopted by the 224,000-member Southern California Steelhead Coalition, is to provide additional information for the Corps to consider as it begins its feasibility study. It is intended as public commentary in response to the Corps' public scoping meeting held May 29, 2002 regarding the focus and scope of this feasibility study. It discusses the importance of carefully evaluating the options for removing Rindge Dam in view of information that has surfaced since the Bureau of Reclamation's 1995 *Rindge Dam Removal Study*.

If the dam is not removed, as the State of California concluded, recovery of Malibu Creek steelhead is unlikely (McEwan and Jackson 1996). Access to many miles of high quality stream habitat necessary to the species recovery would remain blocked, and the steelhead would remain confined to a small habitat area and thus vulnerable to all watershed disturbances, such as catastrophic fire, toxic spills, or other disasters. With the potential of increased surface water temperature due to global warming, and the unique tolerance of southern steelhead to warmer water, restoring this population has taken on more critical importance in order to ensure preservation and recovery of the species throughout its Pacific Coast range. With economically important Santa Monica Bay beaches eroding, the use of Rindge Dam sediments to nourish these beaches creates a unique "win-win" ecological and economic nexus that may achieve multiple public benefits.

Section 2 of this paper provides additional discussion about stream conditions and the multiple benefits that may be gained by removing Rindge Dam. Section 3 discusses prior proposals and new information obtained since these proposals that is relevant to current dam removal considerations. Section 4 reviews conceptual approaches to managing the impounded sediment and removing the dam, while limiting the downstream risk to the ecosystem and to property owners. Section 5 explores the issue of costs associated with dam removal. Section 6 provides a summary and recommendations for addressing information needs for evaluating the removal of Rindge Dam.

2.0 Current Conditions and Benefits of Dam Removal

Both NMFS and California Department of Fish and Game (DFG) have cited barriers to upstream habitat as a major factor in steelhead decline (NMFS 1996, McEwan and Jackson 1996). Like most dams, Rindge Dam and its impoundment significantly affect stream habitat for steelhead and other aquatic species by fragmenting habitat and disrupting ecosystem function (Heinz Center 2002). It also has restricted the flow of sediment

downstream to replenish in-stream gravels and beach sand. Resource agencies and the public generally agree that steelhead would benefit if Rindge Dam and all of its impounded sediment were removed. However sediment removal is a costly and complex issue. If not handled properly, dam removal can pose a substantial though temporary risk resulting from the downstream movement of sediment and the associated potential for increased flooding or damage to existing habitat (Heinz Center 2002). In an analogous case, removal of San Clemente Dam on Carmel River, National Marine Fisheries Service (NMFS) determined the short-term risk to federally listed steelhead from dam removal was outweighed by the long-term permanent benefits (NMFS 2001).

Distribution of Instream Steelhead Habitat in Malibu Creek

The 2.6-mile stream reach from Malibu Lagoon to Rindge Dam contains some spawning and rearing habitat in the gorge just downstream of the dam, with good cover and appropriate stream morphology. Franklin and Dobush (1989) identify availability of adequate summer habitat as a limiting factor for the production of juvenile steelhead in the Malibu Creek. Such habitat is normally found in the headwaters of coastal streams, not in the lowermost mainstem reach as now in Malibu Creek. Franklin and Dobush investigated less than 30% of total stream habitat, from the outlet of Malibu Creek to the confluence with Cold Creek above Rindge Dam. They concluded that major benefits for recovery could be realized by providing access above the dam, potentially tripling the existing population. Their assessment of these lower stream reaches found that over 86% of the potential spawning habitat and 65% of the potential rearing habitat lie above Rindge Dam. If steelhead gained access to this habitat, spawning and rearing habitat would increase 590% and 180%, respectively, over what is currently available to steelhead. For this reason that the authors of the *Steelhead Restoration and Management Plan for California* concluded that removing Rindge Dam is the key to steelhead recovery (McEwan and Jackson 1996).

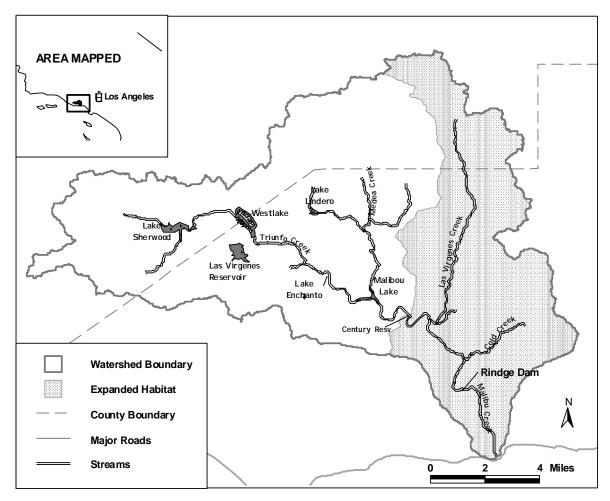


Figure 3. Additional Steelhead Habitat from Rindge Dam to Century Dam Based on assessments by Franklin and Dobush (1989)

Temperature Tolerance and Distribution in Malibu Creek

Water temperature is one of the critical water quality factors in determining suitability of stream habitat for a coldwater species such as steelhead. Sustained water temperature above 68°F (20°C) is the benchmark used by California State Water Quality Control Board in determining compliance with the federal Clean Water Act (USEPA 1973). Southern California steelhead, which have had to adapt over millennia to the Mediterranean climate, are thought to possess unique abilities to remain healthy in the highest range of water temperatures for the species throughout its entire range along the Pacific Coast (McEwan and Jackson 1996, Swift et al. 1993).

During the summer of 1989, water temperature studies were conducted for California Trout on Malibu Creek below Rindge Dam (Trihey 1990). Because this study was conducted in the middle of a five-year drought cycle, its results are meaningful in suggesting the upper threshold of steelhead tolerance to extreme conditions. Trihey found that during July and August 1989, mean water temperatures below Rindge Dam varied between 69.8°F and 73.4°F (21°C and 23°C). Maximum water temperatures exceeding 80°F (27°C) were also

briefly recorded. Trihey concluded that during normal or above normal precipitation periods, stream water temperatures would vary from 68°F to 71.6°F (20°C and 22°C). Neither Franklin and Dobush (1989) nor Trihey observed any adverse effects to steelhead below Rindge Dam during this warmer period, thus confirming the unique temperature tolerance of Southern California steelhead.

Heal the Bay has conducted water quality studies for the past several years at sites that would become available to steelhead if Rindge Dam were removed (Heal the Bay 2001). Their results at these upstream sites (**Figure 4**), upper Cheeseboro Creek (*site 6*) and Cold Creek (*site 3*), demonstrate more suitable water temperature conditions for steelhead than below Rindge Dam, with lower mean and maximum water temperatures documented. Other water quality parameters, such as dissolved oxygen and pH, were also well within steelhead tolerances (Ambrose and Orme 2000, USEPA 1977).

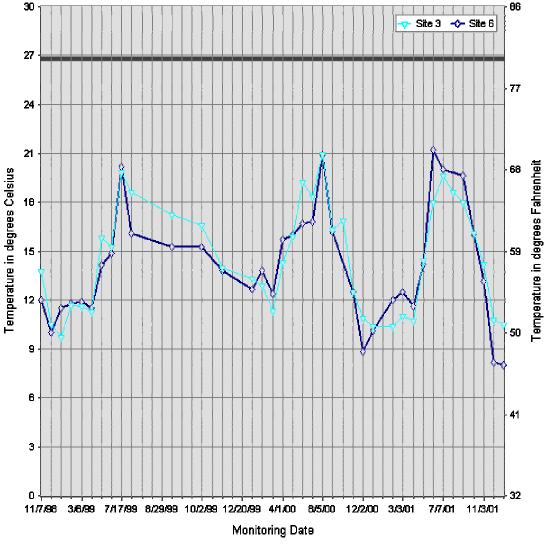


Figure 4. Recorded Stream Temperature 1998 – 2001Source: Heal the Bay

According to a new study by Defenders of Wildlife and the Natural Resources Defense Council (O'Neal 2002), trout, salmon, and steelhead could disappear from many U.S. waterways due to rising temperatures caused by global warming. The study suggests that habitats for coldwater species, such as steelhead, could shrink as much as 17 percent by 2030, 34 percent by 2060, and 42 percent by 2090 if emissions of heat-trapping pollution such as carbon dioxide are not reduced. The report predicts widespread habitat losses that vary by region. For coldwater species, the most severe losses appear in the South, Southwest and Northeast, with the biggest impact likely in California (O'Neal 2002).

Given these predictions, Malibu Creek steelhead may be particularly important as genetic stocks that are better adapted to warmer water conditions then more northerly populations (Swift et al. 1993, NMFS 1995, Moore 1980). Thus steps to recover steelhead in Malibu Creek by addressing their most limiting factor, the removal of Rindge Dam, can provide a unique opportunity to preserve steelhead throughout their Pacific Coast range. As no proven methods yet exist to replicate the unique genetics of Malibu Creek steelhead, their potential role in species recovery may become critical.

Beach Restoration in the Malibu Area

A recent report by California Department of Boating and Waterways and State Coastal Conservancy (2002) reveals the tremendous economic benefit of restoring beaches. California's shoreline is greatly influenced by a century of intense development and human activity. Dams impact 38% of California's coastal watershed area. The majority of beach sand is normally delivered California's beaches by rivers, but dams prevent over one quarter of the average annual volume of sand supplied by streams from reaching the beaches. Shrinking beaches will lead to diminished recreational opportunities, lost revenues from tourism, degraded wildlife habitat, reduced wetlands, and increased damage from coastal storms. Removing dams or bypassing sediment around dams, such as Rindge Dam, could significantly reduce the sediment deficit along much of California's coastline (Department of Boating 2002).

California's beaches experienced an estimated 659 million visitor-days in 2001, more than twice as many as the visitor-days at all U.S. National Parks combined. Of the state's top ten recreational destinations in 1991, three were beaches. Visitors to California beaches spent over \$61 billion in 2001; approximately 36% of this was by out-of-state visitors. California's beaches generate over \$15 billion annually in tax revenue (Department of Boating 2002). The beaches in Malibu are of enormous economic, recreational and aesthetic value. If Malibu represents just 0.5% of this statewide economic generation, its local beaches annually provide \$305,000,000 to its economy, while generating \$75,000,000 in tax revenue.

Since the 1930s, over 31 million cubic yards of sand have been placed on the Santa Monica Bay beaches for widening and replenishment. Many of the beaches made wider by past nourishment programs have begun to retreat and will continue to do so without replenishment. To protect and restore this economic resource, the Department of Boating and Waterways has estimated that the State of California needs to invest \$120 million in

one-time beach nourishment costs and \$27 million in annual beach maintenance costs. Through cost-sharing partnerships with the Corps, federal funding for these shoreline projects could significantly reduce the state's burden (Department of Boating 2002).

The Corps has determined that the beaches of the Santa Monica Bay are now in need of beach nourishment. From Point Dume south to Will Rogers State Beach, 89 recreational beach acres exist (Corps 1994). Geotechnical studies of Rindge Dam sediments have determined that over 60% of the 800,000 cubic yards of sediment behind Rindge Dam would be suitable for local beach nourishment (Law Crandall 1994). If these sediments were to be placed on the downstream beaches, this would triple the total public beach area while avoiding other extremely costly forms of beach nourishment. Thus using the retained sediment for local beach nourishment is a "win-win" proposition.

Regulatory Relief Resulting from Recovery

A primary purpose of the federal and state Endangered Species Acts (ESA and CESA respectively) is to recover listed species to levels where they are no longer endangered or threatened. When they reach that status, they can be delisted under the ESA or CESA. During the period between when a species is listed and when it is delisted, regulatory burdens on landowners and managers come into play, requiring environmental assessments, permits, and agency consultations for federally-regulated actions that might impact the species or its habitat.

In the case of steelhead, this regulatory burden would increase significantly if the federally listed steelhead were to gain a CESA listing. This would affect all land use planning, zoning, permitting and use within the 109-square mile Malibu watershed. However, actions taken to recover steelhead will likely provide a healthy, functioning ecosystem that would benefit other species. This would help to relieve the current regulatory framework and reduce the chance of additional species becoming endangered, thus reducing the potential for additional regulatory burdens on government and the public.

Recognition of Historic Status of Rindge Dam

The Rindge family would like the dam to remain as an historic monument (Rindge 1998, Heinz 2002). Although an historical monument designation does not require that the monument still exist (Pers. Comm. C. Watanbe, DFG staff 2002), State Parks, California Department of Fish and Game, Los Angeles County Fish and Game Commission, and the Southern California Steelhead Coalition, favor dam removal in a "win-win" way.

Rindge Dam is comprised of two components, the thin arch retaining wall built to impound Malibu Creek flows, and its spillway (**Figure 5**). The spillway is quite prominent, with the dam's construction date stamped in its concrete, and original metal spillway gate structures still intact. A dam removal operation could remove the thin arch retaining wall while preserving the spillway for historic reference. This approach may be a less costly dam removal method that would still restore ecological health to the creek, while also addressing the concerns of those advocating historic designation.

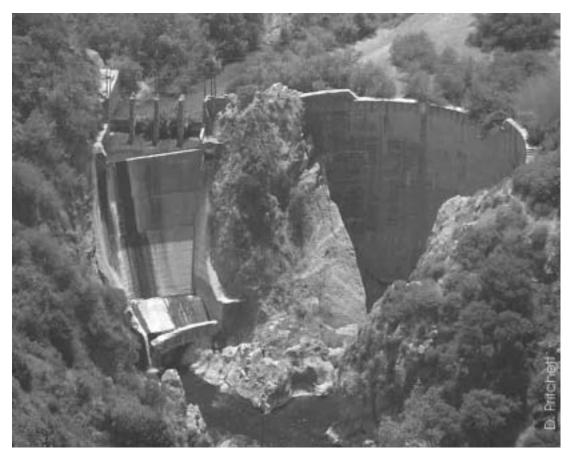


Figure 5. Rindge Dam, with Spillway to the Left

3.0 Prior Options (Re)considered for Rindge Dam

1991 Fish Ladder Proposal

With a grant from the Santa Monica Mountains Conservancy in 1988, California Trout contracted with consultants for scientific investigations of Malibu Creek, including steelhead habitat, water temperature range, fish population size and structure, sediment studies, and the installation of facilities to provide for steelhead passage above Rindge Dam (Franklin and Dobush 1989, Keegan 1990, Trihey 1989). Based on these studies, State Parks proposed the "Malibu Creek Steelhead Project" to install a fish ladder at the dam, also to be funded by the Santa Monica Mountains Conservancy. However, access to the fish ladder for installation and maintenance would be difficult. The costs of operation and maintenance were considered excessive, far exceeding the ladder construction costs over time. Additionally, with peak flows occasionally reaching as high as 30,000 cfs, concerns were raised that this \$600,000 investment could be washed out to sea. The fish ladder proposal was suspended in 1992 (Gibbons 1992, Schmidt 1992).

1995 Bureau of Reclamation Dam Removal Study

With the suspension of the 1991 fish ladder concept, the US Bureau of Reclamation, in cooperation with California Department of Fish and Game, conducted a study to examine other options to provide steelhead passage above Rindge Dam (USBR 1995). Reclamation evaluated seven different options and determined that a fish ladder, hydraulic dredging, and notching a portion of the dam were not appropriate solutions. They developed three feasible dam removal alternatives for detailed evaluation.

Alternative #1 was to excavate the sediment and truck it to Malibu Beaches or a local landfill. The dam would be blasted in vertical segments as the excavation took place. The cost for this alternative over its projected two-year duration was estimated at \$17.5 million (1995 dollars), with nearly half of the costs (\$7.9 million) designated for trucking the sediment to a disposal site.

<u>Alternative #2</u> was to demolish the dam, excavate the sediment, and construct a conveyor system to transport the material downstream to an engineered fill site. The cost for this alternative over its one-year duration was estimated at \$12.8 million (1995 dollars).

<u>Alternative #3</u> was to remove the dam in segments over a number of years and rely on natural stream flow erosion to transport the sediment to the ocean. The cost for this alternative over its 8 to 18 year duration was estimated at \$4 million (1995 dollars).

Reclamation's appraisal report identified a number of deficiencies in the data that needed to be addressed before a final project alternative and costs could be identified. The lack of key information on sediment transport, differences in Reclamation's estimated amount of impounded sediments over that identified by Law Crandall (1.6 million vs. 801,500), and the need to elevate costs estimates 25% for "unknown contingencies" were acknowledged by Reclamation as study weaknesses. The report recommended that further analysis of sediment transport be conducted before an alternative was selected. Additionally, Reclamation recommended that the environmental, social and economic impacts of dam removal be investigated further.

Traffic Congestion Concerns

The 1995 Reclamation study, while favoring Alternative #1, raised the issue of possible traffic congestion on Malibu Canyon Road and Pacific Coast Highway (PCH) resulting from trucks transporting the sediment away for the reservoir during a two-year period. Due to the limited scope of Reclamation's appraisal study, further analysis concerning traffic implications of trucking sediment was not done.

California Department of Transportation (Caltrans) imposes restrictions on trucks on Malibu Canyon Road, limiting dump trucks to three-axle vehicles with a maximum capacity of ten cubic yards (Pers. Comm. Caltrans staff 2002). Trucking sediment from Rindge Dam would result in 160,000 to 258,000 round-trips, depending on the time span and amount of additional sediment inflows, on the already traffic-burdened local roads. Caltrans also limits

such truck traffic to non-peak commute hours (9 AM to 3 PM). Excavation and trucking of sediments would be also be restricted to the six month dry period (May through October), further exacerbating heavy summer beach traffic.

The average number of vehicles per day (vpd) traveling through Malibu Canyon is about 24,000 vpd, measured south of Mulholland Drive (LACDPW 2001). The current traffic load at PCH and Malibu Canyon Road, at over 40,000 vpd, is approaching its 48,000 vehicle per day limit (Pers. Comm. Caltrans staff 2002). Although adding 330 to 400 trucks per day to that intersection would not in itself be prohibited, the proposal of placing a fully-loaded, slow moving dump truck at the rate of one every minute could create major traffic problems. The potential for public backlash against trucking sediments through the canyon, and potentially the dam removal project overall, renders such an approach infeasible.

Use of Rindge Reservoir for Water Storage

In response to proposals for removing the dam, Mr. Ron Rindge, grandson of the dam builders, has stated that the reservoir should be resurrected to provide for flood control and fire suppression (Rindge 1998). Dredging the reservoir to restore a portion of the project's water storage capacity would not only continue to prevent fish migration past the dam, but would need to be repeated periodically as the reservoir refills with sediment. Given the difficulty of accessing the reservoir, the costs associated with dredging and sediment removal to maintain reservoir storage capacity, and the resulting increase in truck traffic, this does not seem to be a viable action, nor would it meet the ecological restoration goals of the Corps' Feasibility Study.

Effects on Steelhead Populations During Dam Removal

Studies on the impacts of dam removal have concluded that the release of fine-grained sediments might adversely affect downstream habitats for the duration of the removal project (Heinz Center 2002). The actual impacts would depend on the stream flow, and the rate at which the dam is removed and sediments are transported. Although increased sedimentation could adversely affect steelhead habitat in downstream reaches in years immediately after dam removal, short-term sedimentation associated with dam removal would likely not be catastrophic to Malibu Creek steelhead.

Steelhead spawning downstream from the dam is limited to a small area, but would have some capacity to cope with such impacts. Where conditions are generally unfavorable for redd construction, steelhead behavioral adaptation has been recorded. Steelhead spawning in two different tributaries having similar size, flow characteristics, and fish densities, but differing in sedimentation levels, dug redds 48% larger and 25% shallower in the more heavily sedimented stream. Females spawning in the more heavily sedimented stream spent more time and effort excavating redds to create favorable incubation conditions and buried their eggs less deeply (Everest et al. 1987).

Tolerance of Malibu Creek Steelhead to High Sediment Episodes

The impact of fine sediments on steelhead was recently studied in Malibu Creek. In November 1993, a major wildfire burned significant portions of the Malibu Creek watershed (**Figure 6**). There was concern by members of the Malibu Creek Watershed Council that sediment produced during the post fire wet season would degrade critical pool habitat, thereby adversely affecting the population of steelhead downstream of Rindge Dam.

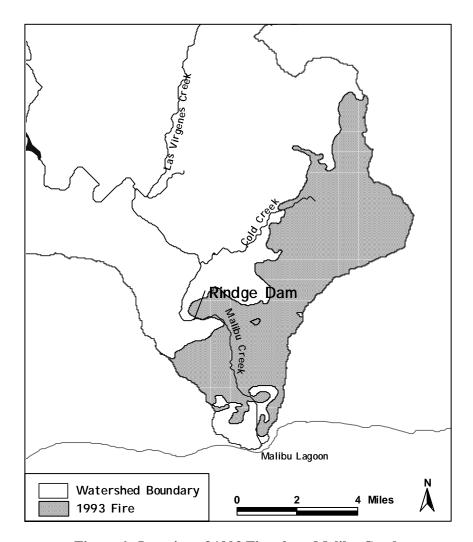


Figure 6. Location of 1993 Fire along Malibu Creek Fire data courtesy National Parks Service, SMMNRA

Monitoring of stream habitat below Rindge Dam following the first runoff wet season did not reveal significant changes in channel characteristics that would be expected to adversely affect steelhead. (Spina and Tormey 2000). Pool frequency, pool depth, and substrata type (boulders, cobbles, gravel, fines) were not significantly changed after winter storms began their natural geomorphic process of eroding fire-denuded soils and transporting these sediments loads through Malibu Creek. Riparian vegetation bordering Malibu Creek below Rindge Dam were also largely unaffected, thereby maintaining its functional and ecologic values to the stream system and its wildlife. Adult steelhead were observed by the

researchers spawning immediately following the post-fire data collection (Spina, personal communication 1994).

The amount of soil erosion and sediment deposition that could have been produced during the first post fire wet season may have been reduced by a variety of factors including burn characteristics, below-average precipitation, and earthquake-induced recruitment of cobble and gravel. However even with low precipitation totals for the year, peak flows above the 2,450 cfs average occurred on February 12, 1994 (LACDPW 1998). In addition, no evidence indicates that the post-fire sediment transport through Malibu Creek has had any significant effect on Malibu Lagoon (Spina and Tormey 2000).

Spina and Tormey's findings suggest that Malibu Creek is capable of transporting high sediment loads under below-normal precipitation periods, without significant adverse effects on the stream or steelhead. Since the 1993 winter, more normal or above-normal precipitation periods have occurred, yet there is still no evidence that these events have caused harm to the stream or to steelhead.

Transfer Options for Steelhead Populations During Dam Removal

The welfare of steelhead during the period when dam removal is conducted may be of concern, should there be a decline in steelhead habitat conditions below Rindge Dam from incomplete sediment transport of fines and other small strata. This is not likely to be a problem, as direct observation (Spina and Tormey 2000) demonstrates that under high sediment transport periods, habitat did not significantly decline, and adult steelhead were observed spawning following the high sediment transport period. However, should conditions warrant protective measures, there are options available for capture and relocation of steelhead, as outlined below.

NMFS recently set a precedent by issuing a permit for the capture of endangered steelhead in Mission Creek in southern Santa Barbara County, and their transfer to alternative habitat during stressful periods (Federal Register 2002). Issuance of this permit, as required by the ESA, was based on a finding that such issuance (1) was applied for in good faith; (2) would not operate to the disadvantage of the listed species which are the subject of the permit; and (3) is consistent with the purposes and policies set forth in section 2 of the ESA. This permit was issued in accordance with, and is subject to, part 222 of title 50 CFR, NMFS regulations governing listed species permits.

During the dam removal process in Malibu Creek, if it were determined that downstream steelhead were in jeopardy, a rescue and transfer of fish to suitable steelhead habitat elsewhere in Santa Monica Mountains coastal streams could be performed (for example Topanga, Solstice, or Arroyo Sequit). Should this become necessary, trained volunteers for such a "rescue" are readily available, and organizations such as California Trout or the Southern California Steelhead Coalition are capable of mobilizing volunteers to assist with this work on an emergency basis.

4.0 Conceptual Approach to Removing Rindge Dam

The removal of on-stream dams has been an important tool in the restoration of many stream ecosystems (Bednarek 2001, Heinz 2002). Since 1912, more than 465 dams have been intentionally removed nationwide, the vast majority since 1980 (American Rivers et al. 1999). Most dam removal decisions have been made for reasons of safety, economic consideration, or ecological restoration. Of the 465 cases reviewed by American Rivers, the average height of removed dams was about 21 feet. However, more than 40 dams were 40 feet or taller, including 4 dams that were at least 120 feet tall. Thus, there are precedents for removing a dam on the scale of Rindge.

The American Society of Civil Engineers (ASCE 1997) provides case studies and engineering guidelines for the retirement and removal of dams and hydroelectric facilities. ASCE reviews steps for conducting environmental review, sediment management, and conceptual plans for removing on-stream dams. Their research shows that the costs of sediment management and environmental review are the principal costs of dam retirement and removal. Case studies demonstrate several approaches to handling stored sediment. Some projects use conventional excavation and trucking; others rely on natural river erosion. Still others are approached with bank and stream stabilization programs that leave as much sediment in place as possible. Geology, topography, and project design influence the approaches used to remove the on-stream structures and sediment (ASCE 1997, Heinz 2002). Research currently underway by the Corps-led Matilija Dam removal study will also provide useful information for decisions regarding Rindge Dam removal.

Incremental Dam Removal

A promising alternative for removal of Rindge Dam likely would involve reducing the dam spillway elevation incrementally at a rate consistent with the creek's capacity to remove sediment from the project area and transport it downstream at dependable rates. Staged removal is a common dam removal approach when sediment management is largely accomplished through stream erosion (ASCE 1997, Heinz 2002). When a combination of sediment management methods are used, staged removal is an appropriate approach to dam removal because it provides a high level of safety at the dam site during removal when floods may inundate the dam and control sediment release rates.

Concrete dams have been removed in lifts from top to bottom using diamond wire saw cutters. One method for providing safe working conditions and control over sediment release rates is to first cut a weir in the dam, and then remove a lift from the entire dam width. A well-developed plan for removing a similarly constructed dam on Elwha River in Washington has been developed. The Glines Canyon Dam on Elwha River is a 210-foot high gravity arch reinforced concrete dam built in 1927 that is similar to Rindge Dam. The plan for Glines Canyon Dam removal calls for cutting a 15-foot deep notch to accommodate projected stream flow, then incrementally cutting and removing 7.5-foot high blocks across the entire width of the dam. The incremental notching procedure maintains the dam's structural integrity during the removal process.

Malibu Creek Sediment Transport

Natural precipitation events provide the energy to transport sediments through the stream system to the ocean. Malibu Creek is a "flashy" stream system, with periodic high stream flows that transport sediments, most commonly occurring from January through March. The largest peak stream flow recorded for Malibu Creek is 33,800 cfs on January 25, 1969, with flows exceeding 2,000 cfs expected to occur once every two years (Trihey 1989).

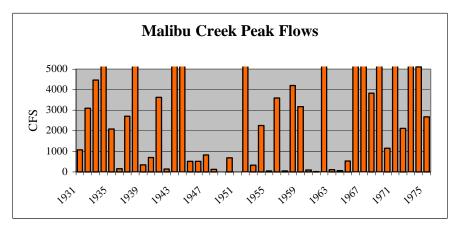


Figure 2. Malibu Creek Peak Stream Flows 1931 - 1975

As reported by Trihey, the estimated annual sediment yield for Malibu Creek is 45,800 cubic yards. Based on the report by Taylor (1945) that Rindge Dam had lost 400 AF its storage capacity just 18 years after completion, average sediment captured annually at Rindge Dam from 1926 to 1944 would have been 35,850 cubic yards. Since approximately 1967, when the reservoir's water storage capacity was replaced with sediment, the sediment transport rate of the creek has remained slightly below its natural capacity (Department of Boating 2002). Sediment transport analysis conducted by Trihey (1989) indicated that high creek sediment loads might degrade or fill pools in Malibu Creek. Empirical evidence reported by Spina and Tormey (2000) indicate that this may not occur, at least under moderate flow conditions. Further studies are needed to better characterize the sediment transport capacity of the creek.

Sediment Management

At this time, the most effective and efficient method of removing Rindge Dam is unknown. However, like most other dam removal projects, the management of impounded sediment would probably be the most significant cost and engineering challenge. The release of large portions of the 800,000 or more cubic yards of stored sediment behind Rindge Dam has the potential to impact downstream habitats and adjacent properties either positively or negatively. Yet, until hydrologic and sediment transport modeling is completed, one cannot accurately assess appropriate management of this sediment. According to Dr. Brian Cluer (2002), "The most important assessment during the feasibility stage is to determine the capacity for downstream sediment transport and digestion." Detailed sediment transport modeling is needed in order to estimate changes in water elevation and any associated flood risk, and the temporal scale of sediment removal.

The development of a cost-effective plan to remove Rindge Dam will require a focused effort to resolve the potential problems of sediment transport to the lower creek. Sediment transport models must be interpreted to integrate efforts to reduce sediment loading by dredging or slurrying impounded sediments to off-stream sites. The modeling effort must also address possible mitigation measures such as annual monitoring of the bed elevation of the stream channel and active channel maintenance by mechanical removal or aggregate mining.

Solutions to sediment issues may be include a number of options:

- Sediment buildup in lower Malibu Creek, if it were to occur as a result of dam removal, could be mechanically removed as needed from downstream areas.
- A flexible, staged removal plan would allow some control over the volume of sediment released during a given year.
- An integrated effort could be implemented to reduce sediment loading by dredging and conveying or slurrying impounded sediments to off stream sites.
- As sediment loading is most likely to occur close to the mouth of Malibu Creek, costs for excavation and beneficial local beach nourishment would be reduced. Costshare agreements or funds from existing beach nourishment programs could be utilized.

5.0 Costs Associated with Dam Removal

Value of Sediments

The plan for managing sediment during the removal of the Rindge Dam will require careful analysis comparing the costs of immediately dredging and storing sediments at off-stream sites and the costs of channel maintenance and/or aggregate mining in downstream reaches. Based on the 1994 Law Crandall report, there appears to be potential economic value in the reservoir sediments, in spite of transportation costs between the source and the market. Geotechnical studies indicate that the stored sediments are uncontaminated, with 70% suitable for beach nourishment (Law Crandall 1994). Los Angeles County Department of Beaches and Harbors has expressed interest in this material for beach replenishment. Additionally, landscaping and construction rock and sand are valued at \$10 to \$20 per cubic yard in 1995 dollars. This suggests that a large portion of the costs of sediments not removed by natural processes could be offset by sorting and selling the marketable materials, or transported to the local beaches to offset taxpayer costs of beach nourishment.

Critical sedimentation zones in the Malibu Creek channel may also be managed. Accumulations of sediment could be mechanically removed from the channel during dry seasons, in preparation for winter floods. These materials would also have potential economic value and would require less transportation costs to reach nearby markets. With such economic partnerships, costs for dredging the reservoir or maintaining the channel in the lower creek could be less than that for impoundment dredging and sediment storage at upper valley sites. The potential savings from collaboration between State Parks, Coastal

Conservancy, County of Los Angeles and other Santa Monica Bay beach management agencies, as well as aggregate suppliers, must be fully explored.

Public Willingness to Pay for Removing Rindge Dam

With State Park's acquisition of the dam and surrounding land from the Rindge family, the dam became public property. To determine the public's enthusiasm to fund its removal, Burks (1997) conducted a "Willingness to Pay" (WTP) survey, in the form of a random telephone survey of West Los Angeles residents. Citizens were asked if they would be willing to voluntarily contribute to a fund for Rindge Dam removal through their monthly utility bill.

The study conservatively estimates that over \$17 million could be raised in one year to fund removal of the dam. Although not a definitive study, the WTP survey results appear to show significant interest of Los Angeles area residents in the restoration of Malibu Creek watershed for endangered steelhead, which could translate into additional funding for dam removal.

6.0 Summary and Recommendations

A proper and thorough assessment of the options for removing Rindge Dam provides an opportunity to take a major step in the restoration of the Malibu Creek's ecosystem, recovery of Southern California steelhead, and provision of low cost beach nourishment at the regional, economically important coast. Rindge Dam serves no purpose and is an obstacle to migratory steelhead, a federally listed endangered species. Over 85 percent of the potential rearing habitat and two-thirds of the potential spawning habitat within just a portion of Malibu Creek watershed occurs above Rindge Dam (Franklin and Dobush 1989).

The removal of on-stream dams is an important tool in the restoration of stream ecosystems. Since 1912 more than 465 dams have been removed nationwide, and several of these were larger than Rindge Dam. Case studies in dam removal indicate that the costs of sediment management and environmental review are the principal costs of a dam removal project. Stored sediments can be removed using one of several approaches. Some projects use conventional excavation and trucking or conveyor systems; others rely on natural stream erosion; still others are approached with bank and stream stabilization programs. Geology, topography, and project design influence the approaches used to remove the on-stream structure and sediment (Heinz Center 2002).

The most feasible method of removing Rindge Dam is yet to be determined, but the management of impounded sediment will probably be the most significant cost of removing Rindge Dam. Given the need for beach nourishment downstream, placing the majority of the sediment there is both ecologically appropriate and economically beneficial. As the Corps begins its feasibility study, a series of recommendations are offered by the Southern California Steelhead Coalition to maximize the effectiveness and efficiency of this examination and use of public funds. These are offered based on the past good efforts of

Reclamation, other resource agencies, watershed stakeholder interests, and additional information described in this report.

Recommendation #1: Focus on Feasible and Realistic Options at the Project Outset

The 1995 Reclamation appraisal study reviews seven potential dam removal options. They determined that several of those options (building a fish ladder, leaving parts of the dam in place, or removing the dam in one step and allowing natural sediment transport) were not practical. These project options do not require further detailed study.

Information presented in this paper concerning the area's problematic traffic congestion indicates that Reclamation's most favored alternative, excavating and trucking the sediment, is now infeasible and unrealistic. Yet, new research on the sediment transport following the 1993 wildfire reveals the tolerance of steelhead to higher sediment transport episodes, and the benign impacts to the downstream riparian, instream, and lagoon habitats. These direct observations, had they been available to Reclamation's study team, may have modified their options. NMFS decision to permit temporary relocation of fish when necessary provides remedies in the event that sediment transport does pose risks to steelhead populations.

Therefore, we recommend the Corps focus its attention on four feasible alternatives for detailed analysis:

- 1. Remove dam incrementally and allow a phased natural transport of sediments to nourish local beaches.
- 2. Remove dam and stabilize sediments upstream/downstream and restore the stream channel function.
- 3. Remove the dam and transport the sediments to the ocean using mechanical means such as a conveyor or slurry line system.
- 4. Remove the dam using some combination of the three alternatives above.

Recommendation #2: Complete Critical Baseline Research Early On

We commend the Corps for its study intent and approach shared at the public scoping meeting held on May 29, 2002. Three key studies appear to warrant top priority:

- 1. Expand on the findings of the Law Crandall 1994 report to confirm the amount, type and toxicity, if any, of sediment stored behind Rindge Dam.
- 2. Conduct sediment transport and hydrologic modeling to determine the speed, public safety, and environmental benefits/consequences from a phased dam removal approach.
- 3. Form a task force of land/resource management entities (such as State Parks, Coastal Conservancy, Coastal Commission, County of Los Angeles, City of Malibu, Santa Monica Mountains Conservancy, Native Americans) to identify if and where suitable sediment disposal sites may occur.

We urge the Corps to take all necessary measures to complete these critical studies by June 30, 2003 so that other work can proceed, and to avoid any delays in progress due to budgetary or other financial matters beyond their control.

Recommendation #3: Expedite Initial Recommendations and Build Partnerships

The Corps has an exceptional opportunity to partner with local, state, and federal agencies involved with protecting and maintaining local beaches. Partnerships with these agencies bring additional resources that provide mechanisms to fund the Corps evaluation work, and ultimately a successful dam removal project. We also believe the Corps has a unique opportunity to partner with NMFS to restore Malibu Creek steelhead so that they may help maintain steelhead along the entire western coast of the United States.

Building these critical relationships takes time. As such, it is imperative that the Corps should, once their initial recommendation on dam removal options is developed, sponsor the necessary forums with key agencies and special interests to leverage these unique circumstances.

We recommend that on or before June 20, 2003, the Corps identify the key parties and implement monthly task force meetings to maximize opportunities.

Recommendation #4: Involve the Public in Decision Making and Alternatives Analysis

One of the shortcomings of the 1995 Reclamation appraisal report was a failure to include non-government representatives as an "equal partner" in the alternatives analysis. Contemporary resource management of public resources calls for including strategic non-government participation and empowerment in the pre-decisional and final decision process. Accordingly we recommend that a local non-government representative of the Malibu Watershed Council, the Southern California Steelhead Coalition, and the Citizens Advisory Committee to the California on Salmon and Steelhead be incorporated into the Corps proceedings no later than December 31, 2002.

Recommendation #5: Project Management Schedule

To provide assurances to the public that the Corps' Malibu Creek Restoration study is progressing, cost effective, and will be ultimately successful, requires a high level of project management and scheduling. Accordingly we recommend that the Corps, in conjunction with its project partners, develop and adhere to a project schedule to achieve the study completion deadline by 2004 as stated at the May 2002 public scoping meeting.

Much good work has been dedicated towards a healthy Malibu Creek Watershed and local needs. Particularly important has been the leadership of Congressman Brad Sherman, California State Parks from Mr. Russ Guiney and Ms. Suzanne Goode, Los Angeles County Supervisor Zev Yaroslavsky, and California Department of Fish and Game. Implementing the recommendations in this paper will not just honor their good work, but lead to the ultimate goal they share.

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DEPARTMENT		LAST NAME
Assemblymember Fran Pavley	Louise	Rishoff
CA Department of Fish and Game	Maurice	Cardenas
CA Department of Fish and Game	Scott	Harris
CA Department of Fish and Game	John	O'Brien
CA Department of Fish and Game	Morgan	Wehtje
CA Department of Parks and Recreation	Nat	Cox
CA Department of Parks and Recreation	Suzanne	Goode
CA Department of Parks and Recreation	Rick	Rayburn
CA Department of Parks and Recreation	Ron	Schafer
CA Regional Water Quality Control Board CA Regional Water Quality Control Board- LA Region	Rod	Collins
Cal Trout	Shirley	Birosik
Cal Trout Central Coast Region	Jim Craig	Edmondson Fusaro
Cal Trout Central Coast Region Cal Trout; Conejo Valley Fly Fishers	Paul	Averv
California Coastal Commision	James	Raives
California Coastal Commision	Gary	Timm
Caltrans	Jennifer	Leung
City of Malibu	Barbara	Cameron
City of Malibu	Yugal	Lall
City of Malibu Public Works	Melanie	Irwin
Coastal Conservancy	Karen C.	Bane
Coastal Conservancy	Mark	Beyeler
Conejo Valley Fly Fisher	Joe	Richards
Conejo Valley, Flyfisher	Larry	Martin
Conejo Valley, Flyfisher	Eric	Miner
County of Los Angeles Department of Beaches and Harbors	Larry	Charness
County of Los Angeles Department of Parks and Recreation	Russ	Guinev
County of Los Angeles Dept. of Pub. Works Watershed Mngmt.	Terri	Grant
County of Los Angeles Forestry Department	John	Todd
Daily News	Bill	Becker
Everest International Consultants,Inc.	David	Cannon
Heal the Bay	Mark	Abramson
LA 8 DRP	Dave	Cowarchi
Los Angeles San Gabriel Rivers Watershed Council	Rick	Harter
Los Virgenes Municipal Water District	Dr. Randal	Orton
Malibu Coastal Land Conservancy	Ozzie	Silna
Malibu Historical Society	Tom & Teri	Doyle
Monitoring Consultant - Malibu Creek Watershed Monitoring and	Jim	Medlen
Mountains Recreation and Conservation Authority	Marc	Shores
Mountains Restoration Trust	Jo	Kitz
Mountains Restoration Trust	Andrea	Warniment
MWH	Suzanne	Dallman
National Marine Fisheries Service - NOAA	Anthony	Spina
National Park Service	Melanie	Beck
Natural Resource Conservation Service	Casey	Burns
Natural Resource Conservation Service	Lisa	Roberts
Nature Trust of the Santa Monica Mountains	Peter	Ireland
Pepperdine University	Lee	Kats
Resource Conservation District of the Santa Monica Mountains	Rosi	Dagit
Resource Conservation District of the Santa Monica Mountains Resource Conservation District of the Santa Monica Mountains	David	Gottlieb Manion
	Sean	
Resource Conservation District of the Santa Monica Mountains	Dan Melina	Preece Watts
Resource Conservation District of the Santa Monica Mountains		Williams
Resource Conservation District of the Santa Monica Mountains Rivers and Mountains Conservancy	Steve Belinda V.	Faustinos
S CA Coastal Water Research Project		Stein
Santa Monica Bay Audobon	Dr.Eric Mary	Prismon
Santa Monica Bay Project	Jack	Topel
Santa Monica Bay Project Santa Monica Bay Restoration Commision	Scott H.	Valor
Santa Monica Bay Restoration Commission Santa Monica Bay Restoration Commission	Stephanie	Katsouleas
Santa Monica Bay Restoration Commission Santa Monica Bay Restoration Commission	Kara	Kaisouleas
Santa Monica Bay Restoration Commission Santa Monica Baykeeper	Heather	George
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Santa Monica Mountains Conservancy / Mountains Rec and Cons.	Judi	Tamasi
Santa Monica Mountains National Recreation Area, National Park	Gary	Busteed
Sawgrass Productions	Colin	Styles (sp?)
Senator Shiela James Kuehl	Laura	Plotkin
Serra Canyon Property Owner's Assoc.	Bill	Carson
Serra Canyon Property Owner's Assoc.		
Sierra Club	David M.	Brown
South Coast Wildlands Project	Kristeen	Penrod
Southern California Coastal Water Resaerch Project	 A. Elizabeth 	Fetscher
Southern California Steelhead Coalition	David	Pritchett
Southern California Wetlands Recovery Projects	Shawn	Kelly
State Coastal Conservancy	Trish	Chapman
Supervisor Linda Parks, Ventura County	Elizabeth	Crawford
Supervisor Zev Yaroslavsky	Maria	Chong-Castillo
Supervisor Zev Yaroslavsky	Ginny	Kruger
Supervisor Zev Yaroslavsky, District Office	Susan	Nissman
Surfrider Foundation	Ben	Hamilton
U.S. Army Corps of Engineers, Los Angeles District	Kerry	Casey
U.S. Army Corps of Engineers, Los Angeles District	Jodi	Clifford
U.S. Army Corps of Engineers, Los Angeles District	Mark	Cohen
U.S. Army Corps of Engineers, Los Angeles District	Kyle	Dahl
U.S. Army Corps of Engineers, Los Angeles District	Ehsan	Eshraghi
U.S. Army Corps of Engineers, Los Angeles District	Rey	Farve
U.S. Army Corps of Engineers, Los Angeles District	Greg	Fuderer
U.S. Army Corps of Engineers, Los Angeles District	Jim	Hutchison
U.S. Army Corps of Engineers, Los Angeles District	Patti	Krueger
U.S. Army Corps of Engineers, Los Angeles District	Pam	Maxwell
U.S. Army Corps of Engineers, New York District	Jason	Shea
UC Coop Ext	Sabrina	Drill
US Fish and Wildlife Service	Chris	Dellith
Ventura County Planning Division	Liz	Chattin
Ventura County Planning Division	Lorraine	Rubin
Water Regional Control Board	Rod	Collins
Wetlands Recovery Project Local Assistance Program	Greg	Gauthier
Wetlands Recovery Project Local Assistance Program	Mary	Loquvam
Wetlands Recovery Project Local Assistance Program	Robert	Thiel
Wildlife Conservation Board	Scott	Clemons
Wishtoyo Foundation	Damon	Wing
Other:	Bruce	Ashlev
	Bryan	Bach
	Tom	Beatty
	Louis T.	Busch
	Michael	Hart
	Brock	Hayes
	Kit	Korf
	Dennis	Leski
	Robert	Lopico (?)
	Donald J.	Mythen
	Christopher	Parkening
	John	Rindge
	Ron	Rindge
	Steve	Schramu
	Michael	Smith
	Brian K.	
	Daniel P.	Stompe Swenson
	Bill	
		Wernett
	John	Whitaker
	Roger A.	Williams, MD



United States Department of the Interior

NATIONAL PARK SERVICE

Santa Monica Mountains National Recreation Area 401 West Hillcrest Drive Thousand Oaks, California 91360-4207

L7425 (SAMO) xN1621

May 27, 1998

Mr. James Hutchison
U.S. Army Corps of Engineers
Los Angeles District
Coastal Resources Branch
P.O. Box 532711
Los Angeles, California 90053-2325

Re: Environmental Restoration and Shoreline Protection in the Malibu Creek Watershed Reconnaissance Study

Dear Mr. Hutchison:

We believe the primary recommendation of the Malibu Creek Watershed Reconnaissance Study to Congress should be to evaluate alternatives for removing Rindge Dam as a continuing impediment to the use of suitable spawning habitat upstream from the dam by the endangered southern steelhead trout.

Following completion of the reconnaissance study, the National Park Service would like to cooperate with the U.S. Army Corps of Engineers, California Department of Fish and Game, California Department of Parks and Recreation, National Marine Fisheries Service, other state and local agencies, environmental groups and the general public in the Santa Monica Mountains National Recreation Area, to prepare a feasibility study environmental impact statement to evaluate alternatives for removing Rindge Dam as a continuing impediment to the use of suitable spawning habitat upstream from the dam by the endangered southern steelhead trout.

As a cooperator, the NPS will provide in-kind services to support tasks associated with developing draft and final feasibility study EIS documents, final construction and design specifications for dam and sediment removal. We are currently seeking additional special funding for this project from several possible sources.

The opportunity to be involved, from the initial stages of a critical, high profile habitat restoration project in southern California, exists today on Malibu Creek in Los Angeles County, home to over 14 million people. The self-sustaining southern steelhead trout population residing in Malibu

Creek is the most jeopardized of all California's steelhead stocks. The present run of steelhead in the lower reaches of Malibu Creek has been drastically reduced. Recognizing this fact, the National Marine Fisheries Service in August 1997 declared this population an endangered species under the Endangered Species Act of 1973 because the population is in danger of extinction throughout all or a significant portion of its range.

The Department of Fish and Game, in 1995, completed a restoration and management plan for California steelhead rainbow trout. This plan identifies the restoration of southern steelhead (those populations occurring south of San Francisco Bay) and their habitats as one of the highest priorities for steelhead management. Southern steelhead were formerly found in coastal drainages as far south as northern Baja California and were present in streams and rivers of Los Angeles, Orange, and San Diego counties. Over the past several decades, the southern limit of steelhead has been steadily moving northward because of extirpation of steelhead runs in these southern streams. At present, Malibu Creek appears to be the southern-most stream containing a known spawning population. Restoring Malibu Creek steelhead and stopping this northward march of extinction is extremely important to restoration of southern steelhead populations.

The single most significant impediment to the restoration of the Malibu Creek run of southern steelhead trout is the existence of 102-feet high Rindge (Malibu) Dam, located in the creek about 2.5 miles upstream from the Pacific Ocean. Constructed in a narrow canyon, the dam was built in 1926 to store water for agricultural irrigation on lands along the coast and at the mouth of Malibu Creek. Heavy silt loads in the creek resulted in sediment deposition in the reservoir. By 1967, the reservoir was completely filled with sediment and the dam was decommissioned by the State of California. The amount of sediment stored behind the dam is approximately 1.6 million cubic yards.

The key to restoration of Malibu Creek steelhead lies in providing access to habitat above Rindge Dam. There has been much discussion on this subject for a number of years and the conclusion reached by CDF&G, CDP&R and NPS biologists, ecologists and engineers is that removal of the dam is the best alternative for restoring access. A study done in 1990 indicated that juvenile steelhead were present in Malibu Creek downstream from Rindge Dam. This finding is particularly significant because this study was conducted during the third year of drought conditions in California. Apparently, successful spawning took place during each of the previous three drought years.

The presence of adult steelhead observed below Rindge Dam in 1947, 1952, 1980, 1986, 1987, and most recently in 1990 and 1993, indicates that steelhead have persisted in Malibu Creek, despite the fact that there is little spawning and rearing habitat available below the dam. A study done in 1989 determined that about 504 square meters of potential steelhead spawning habitat is present in Malibu Creek, about 86 percent of which is located upstream of Rindge Dam. Keegan (1990) estimated that providing passage at Rindge Dam would allow steelhead access to about 5 miles of additional habitat, and a three-fold increase in population size could be realized. The highest quality spawning habitat is concentrated in narrow gorge sections in Malibu Creek between the mouth of Cold Creek and a point about 1 mile downstream of Rindge Dam.

Malibu Creek currently supports about 50 adult southern steelhead trout from the mouth of the creek to Rindge Dam and historically supported runs of 1000 adult steelhead trout throughout its lower reach. It is estimated that if Rindge Dam were removed, and habitat upstream from the dam became accessible to them, the southern steelhead trout population could increase by threefold, bringing it to more than 3,000 individuals. A habitat evaluation performed by the California Department of Fish and Game in 1993 has shown that an additional 7.5+ miles of spawning and rearing habitat exists on Malibu Creek and its tributaries in the event that passage beyond Rindge Dam is achieved.

A study conducted in 1994 for the California Department of Fish and Game by the Bureau of Reclamation indicated that the most biologically and ecologically feasible alternative for removing this impediment to upstream and downstream movement of steelhead trout is the mechanical removal of the dam and all sediment deposited in the reservoir over a time period of several years. A temporary haul road into the canyon upstream of the dam could be constructed. After blasting the dam in 10-foot high vertical segments, concrete and sediment could be hauled offsite for disposal, potentially for enhancement at Los Angeles County Department of Beaches and Harbors and California State Park beaches. The estimated cost for fully implementing this alternative is between \$18 and \$30 million dollars.

The southern steelhead trout population in Malibu Creek is extremely important genetically, aesthetically and ecologically. Rehabilitating the Malibu Creek run of southern steelhead trout will greatly benefit a resource that has declined drastically in recent years and is in imminent danger of becoming extinct. We request that you will add our names to the list of federal, state, county and city agencies who have expressed an interest in being financially involved with this critical interagency restoration project.

If you have any questions, please contact me at (805) 370-2341 or Dr. Nancy Andrews, Chief of Planning, Science and Resources Management at (805) 370-2331.

Sincerely,

Arthur E. Eck

Superintendent

cc: John Reynolds, Regional Director, PWR

Dr. Mietek Kolipinski, Chief, Natural Resources and Research, PGSO-PN
Dan Kimball, Chief, Water Resources Division; Fort Collins, CO, WRD
Frank Panek, Fishery Biologist, WRD Fisheries Assistance Office, Arlington, VA
Terry Thomas, Cluster Representative, GOGA NRAT
Dan Preece, District Superintendent, California Department of Parks and Recreation,

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Appendix A – Agency Coordination and Public Involvement